

# Longevity Industry in Switzerland

LANDSCAPE OVERVIEW 2019



# Longevity Industry in Switzerland

## Science, Technology, Policy, Business, Economics, Frameworks, Society, Trends, Forecasting

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# Institutional Partners



Aging Analytics Agency



Longevity Vision Fund



Longevity.Capital



Longevity Swiss Foundation



Longevity.International



Biogerontology Research Foundation



# Executive Summary

# Longevity Industry in Switzerland: Report Structure

This report is structured so as to introduce readers to key developments in the Swiss Longevity sphere. This is accomplished by highlighting major Swiss players in the field of Longevity, covering pertinent scientific and technological trends and advances, analyzing existing and projected governmental policies and by providing an overview of underlying demographic and economic data.

By utilizing a variety of infographic mind maps, the report first enables readers to quickly identify its core analytical findings and conclusions. Its subsequent chapters then introduce readers to specific areas of the Longevity industry in Switzerland.

**Executive Summary** highlights the key aspects of Switzerland's Longevity sphere. It begins by reintroducing the idea from previous reports, of a 'Longevity-progressive country', and then summarises the combination of factors unique to Switzerland that make it one of the most Longevity-progressive countries on Earth.

It concludes that Switzerland is capable of retaining its position as one of the global leaders in the Longevity industry so long as it focuses on the optimal assembly of its existing resources, and further advances in technological spheres in order to face its economic and demographic challenges.

**Chapter I: Swiss Longevity Industry - Landscape Overview** provides an overview of the Swiss Longevity industry, its developments over recent years, and charts the landscape in depth, identifying key trends and patterns.

**Chapter II: Current State of the Longevity Industry in Switzerland** looks at the inflection point at which Switzerland finds itself in light of demographic and economic projections and government policy as well as latest advances in the country's Longevity industry.

**Chapter III: Anatomy of a Longevity-progressive country** Examines Switzerland's unique political architecture, how it measures up to Silicon Valley as a biotech hub, and why this is conducive to the advancement of the Longevity industry in Switzerland. In particular it examines Switzerland's strengths and weaknesses as a home for precision medicine.

# Longevity Industry in Switzerland: Report Structure

**Chapter IV: Swiss Government Involvement in Longevity** provides an overview of underlying demographic and economic data, examines the National Platform for Palliative Care Strategy: the national strategy by the federal government, in cooperation with the cantons, for promoting palliative care in Switzerland, Elderly Care Banking, the novel banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people, the Masterplan for the Promotion of Biomedical Research, the federal administration's framework for maintaining and developing Swiss biomedical research and technology, and the Swiss Personalized Health Network (SPHN), the initiative to bring Switzerland to the forefront of personalized health research by establishing nationwide interoperability of biomedical information.

The report then offers recommendations to the Swiss government regarding additional policy measures.

**Chapter V: Swiss Media and Conferences on Longevity.** Switzerland is a regular venue for a great many of the world’s major conferences, including those which play a pivotal role in advancing the global Longevity industry. This chapter highlights key media sources and conferences which have given Switzerland’s Longevity industry the greatest exposure, such as the WHO Global Strategy and Action Plan on Ageing and Health by the 69th World Health Assembly in Geneva in May 2016 and the Basel Life Congress, and last year’s Personalized Health Technologies and Translational Research Conference.

It also looks at the media and publicity generated by multinational banks through events such as UBS’s 2018 Healthcare Summit, or Julius Baer’s “Investing in Longevity” forum, or Credit Suisse’s 2018 Global MegaTrends Conference which featured ‘Health and Aging’ as one of four main themes. Switzerland is also the home to the Vontobel Prize for aging Research.

**Chapter VI: Global Longevity Industry Overview** presents pertinent infographic mind maps and summarizes key points from our previous reports. It then illustrates the position of the Swiss Longevity Industry in the larger context of the global Longevity industry.

# Global Longevity Reports by Aging Analytics Agency

In 2018, Aging Analytics Agency (“AAA”) systematised the Longevity Industry for the first time in a series of reports providing a comprehensive assessment of the global Longevity Industry. Their first report, Longevity Industry Landscape Overview 2018 Volume I: The Science of Longevity, standing at 760 pages, identified the emerging technologies and scientific developments which could be utilized against ageing. The first half of that report tied together various progress trends into a coherent narrative, and described the interrelation of biomedical gerontology, regenerative medicine, precision medicine, and artificial intelligence. The second half of the report profiled 650 research hubs, non-profit organizations, leading scientists, conferences, databases, books and journals. The report utilised infographics to illustrate where research institutions stood in relation to each other.

Longevity Industry Landscape Overview 2018 Volume II: The Business of Longevity, standing at 650 pages, offered a more comprehensive look at the key players, companies, investors and influencers which comprise the emerging global Longevity Industry, profiled 100 Longevity companies and 100 investors, as well as the most prominent individual longevity investors and thought leaders. Further, it provided an overview of the Longevity Industry, including its rise in 2016 and rapid emergence in 2017-2018, forecast the key trends and developments in the industry in the coming years, and featured a detailed discussion on the major risks, roadblocks, and other issues which may jeopardize the credibility and success of the industry.

In particular it concluded that these components that would need to work together in order to orchestrate a Fourth Industrial Revolution. It predicted this revolution emerging from **'longevity-progressive'** countries, which it defined not simply as countries with high investment in biotechnology such as the US or China, but countries most capable of integrating AI into their economic, financial, and healthcare systems.

**The following is a case study of one of the most longevity-progressive of all: Switzerland.**



# Why Switzerland?: Demographics

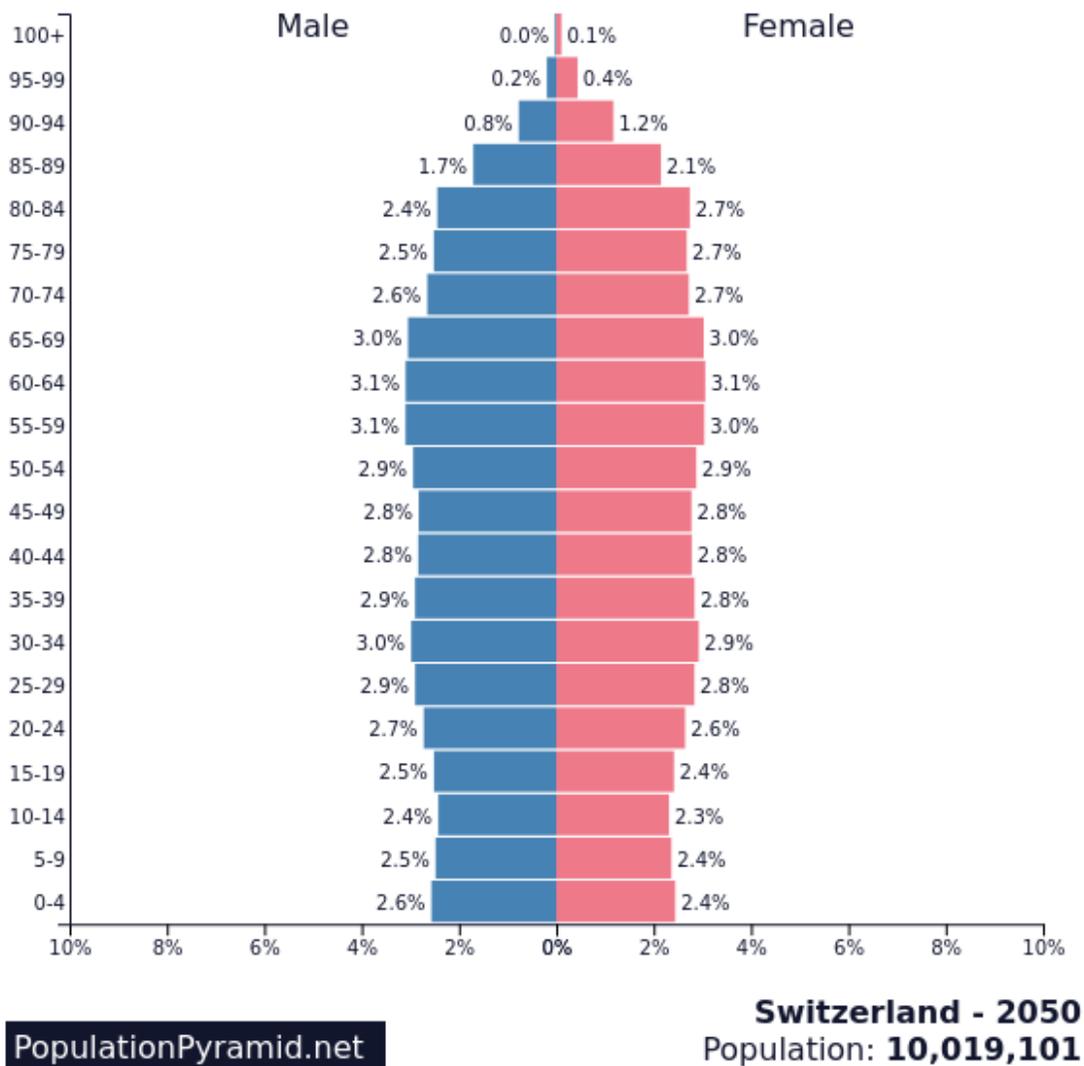
## Demographics:

Longevity progressive countries normally have large aging populations.

The Swiss population is one of the oldest on the planet. This is a consequence of low fertility, increased life expectancy (in 2018 Swiss life expectancy ranked 5th in the world, with an annual life expectancy of 83.489 years) and a societal appreciation for preventative health and healthy ageing.

An aging population has two longevity-progressive benefits:

- **Voting power:** It galvanises government action. The challenges of an aging society make themselves felt at all levels, and this forces governments to confront the global 'silver tsunami' head on.
- **Spending power:** Wealth is concentrated in the hands of the elderly, and more likely to be directed toward solutions which improve the lives of the elderly.



# Why Switzerland?: Political System

## Political system

This **voting power** factor is especially strong in Switzerland because of its tradition of direct democracy and popular initiatives. There are three instruments of direct democracy in Switzerland, all of which are types of referendum: **mandatory**, **popular initiative** and **optional**.

A popular initiative can be launched by citizens (even to demand a change to the constitution). Any Swiss citizen who is eligible to vote can sign a popular initiative and a group of at least seven citizens (the initiative committee) can launch their own popular initiative. Before a vote is held on a popular initiative, the initiative committee must collect 100,000 valid signatures in favour of the proposal within a period of 18 months. The Federal Council and Parliament will recommend whether the proposal should be accepted or rejected. For the proposal to be accepted a double majority is needed. If it is accepted, new legislation or an amendment to existing legislation is normally required to implement the new constitutional provision.



**As a consequence, the Swiss political establishment is acutely aware of the democratic consequences of its demographics, and has therefore taken extensive initiatives to address Switzerland's demographic challenge.**

# Why Switzerland?: Political System

## Swiss government involvement in Longevity

- 2010 **National Platform for Palliative Care Strategy**  
The Confederation and cantons have promoted palliative care in Switzerland in a national strategy.
- 2012 **Elderly Care Bank established**  
St Gallen the first Swiss city to introduce a novel banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people.
- 2013 **Masterplan for the Promotion of Biomedical Research**  
The plan impacts the entire chain, from research and development, clinical research, market entry for biomedical products, and pricing and reimbursement by social security, all the way to the availability of these products in day-to-day healthcare.
- 2014 **Retirement 2020**  
Swiss government advocates that “living longer means working longer”.
- 2016 **Roadmap 2016–2021**  
For developing the next generation of clinical researchers
- 2017 **2017 Swiss Personalized Health Network (SPHN) established.**
- 2018 **Masterplan for the Promotion of Biomedical Research renewed**  
**The VIA project launched**  
The overall goal of the VIA project is to promote the health of older people and to strengthen their self-determination and independence in order to maintain or improve their quality of life and overall well-being, allowing them to continue living at home for as long as possible.
- 2019 **SPHN was chosen by Global Alliance for Genomics to become one of the 7 main international organisations that work to create frameworks and standards to enable voluntary and secure sharing of genomic and precision medicine data.**



# Why Switzerland?: Political System

It is the job of the federal administration to maintain and develop as good a framework as possible for biomedical research and technology, and at the same time to enable people in Switzerland to physically benefit from the achievements of biomedicine and give them affordable access to the latest biomedical products. The FOPH plays a key role in this. It is responsible for the legal framework (for example in relation to human research, therapeutic products, cancer registers and e-patient dossiers), and is charged with ensuring that the healthcare system remains high-quality, effective and affordable.

Besides the FOPH, efforts to promote biomedicine and biomedical research also involve units of other departments, including the following: The State Secretariat for Education, Research and Innovation (SERI), part of the Federal Department of Economic Affairs, Education and Research (EAER) is the federal administration's centre of competence for the domestic and international aspects of education, research and innovation policy. The State Secretariat for Economic Affairs (SECO), also part of the EAER, is responsible for business and economic development across industries, encouraging foreign companies to locate to Switzerland. Swissmedic, the Swiss agency for the authorisation and supervision of therapeutic products, guarantees that only high-quality, safe and effective therapies are marketed in this country. The Swiss Federal Institute of Intellectual Property is the federal centre of competence for all matters related to patents, trademarks, indications of source, the protection of designs, and copyright.

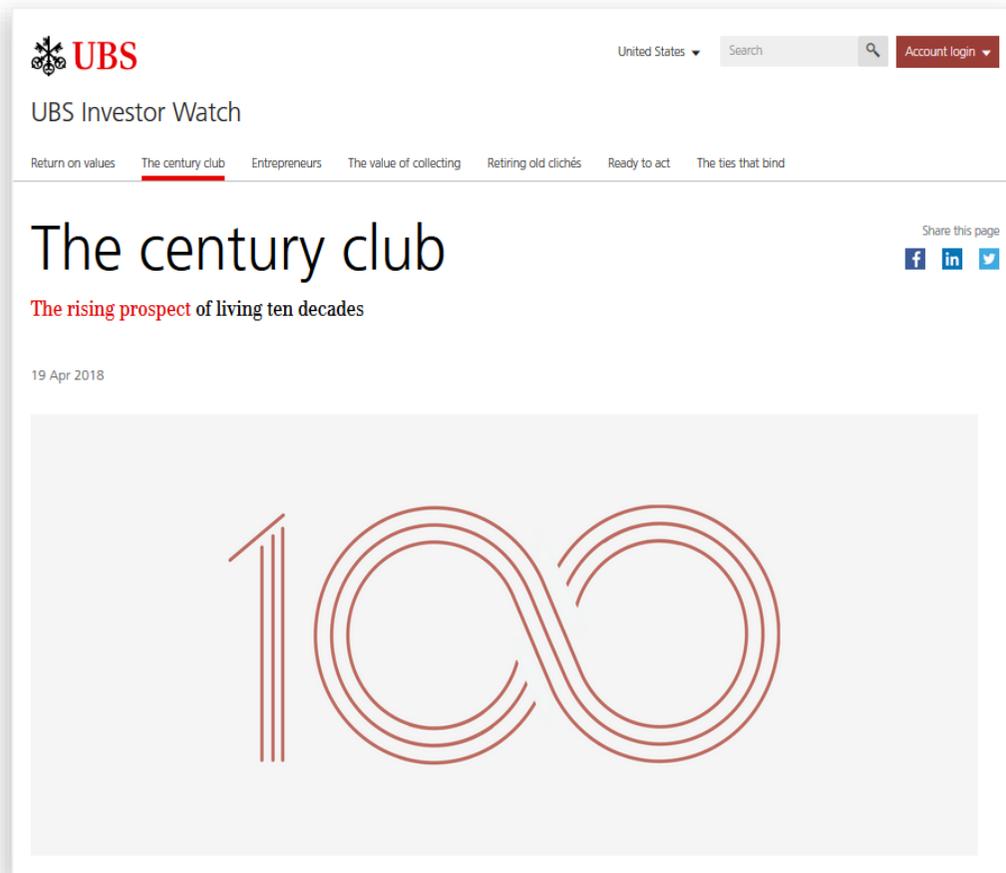
In response to requests from parliament, in 2013 the Federal Council presented a package of measures designed to boost Switzerland as a centre of biomedical research and technology. This **Master Plan** contains more than 20 actions covering the promotion of research and innovation, market entry, health insurance reimbursements, rare (orphan) diseases and intellectual property. The Department of Biomedicine at the FOPH is responsible for coordinating the master plan. The Federal Council decided in December 2018 to continue the master plan.



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

# Why Switzerland?: Finance

Switzerland an international centre of finance where investment banks are acutely aware of the demographic challenge and the incentives to do something about it. Switzerland's financial sector is of significant importance to the national economy, employing about 5% of the total workforce and accounting for 9% of economic output. The financial sector ensures that the Swiss economy is never short of the necessary capital or financial services. Switzerland is also one of the most efficiently regulated and supervised financial centres in the world today.



In April 2018, UBS Investor Watch, the world's largest surveyor of wealthy investors, documented the general state of individual investor optimism regarding the longevity globally. It found that:

- Nine out of 10 believe their health to be more important than their wealth;
- Many investors are anxious about the financial implications of old age, with healthcare costs being a top concern;
- Investors also worry about having less wealth to pass on to successors.

## UBS Investor Watch concludes:

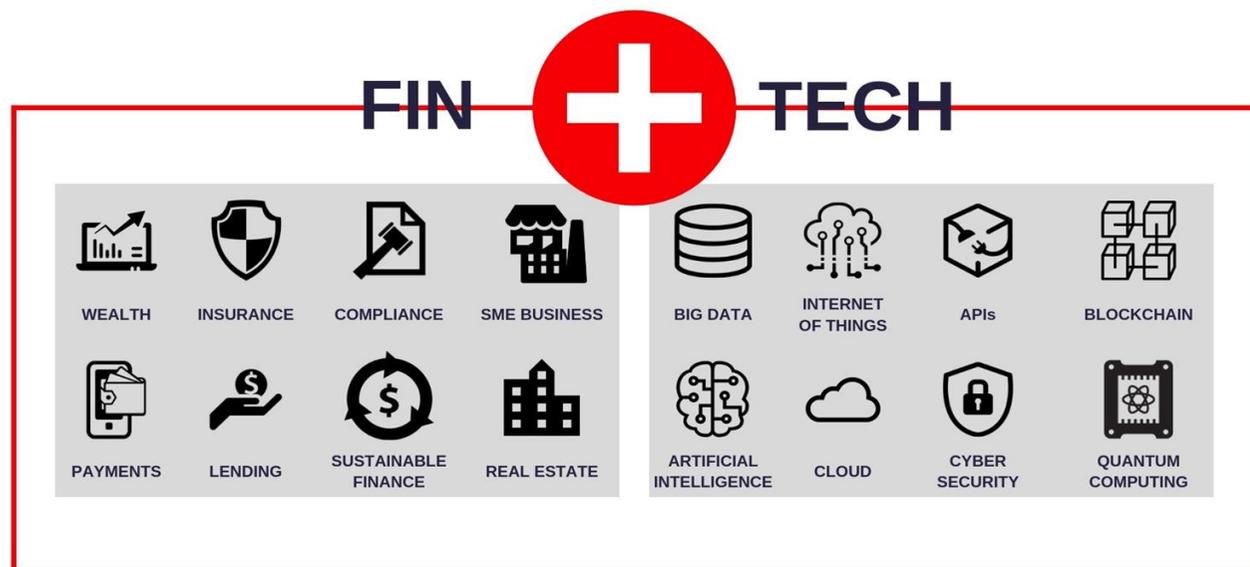
*"Don't let skepticism about living to 100 keep you from planning for it. Life expectancies are rising, and it's a real possibility. In fact globally, nine in 10 investors are already adjusting how they are planning for their life and their legacy."*

# Why Switzerland?: Finance

The digitization of finance, and novel financial systems which treat Longevity as a dividend will play an integral role in the future Longevity industry and economy.

Switzerland in particular has all the elements necessary to become a leading Longevity financial hub, due to such factors as a lean political system that facilitates rapid implementation of integrated government programs, a strong research environment for geroscience, a strong research and business environment for digital health, and most importantly, international financial prowess.

Some specific programmes that Switzerland has the power to develop in the next several years include the development a Longevity progressive pension system and insurance company ecosystem that accounts for both population ageing (which threatens to destabilize the current business models of insurance companies and pension funds) and the potential for widespread healthspan extension, and the development of a national strategy for intensively developing its geroscience and FinTech to a state so advanced that it propels Switzerland into a central role in the internationally competitive Longevity business ecosystem, where it can rise to become a global leader in the specific field of Longevity finance.



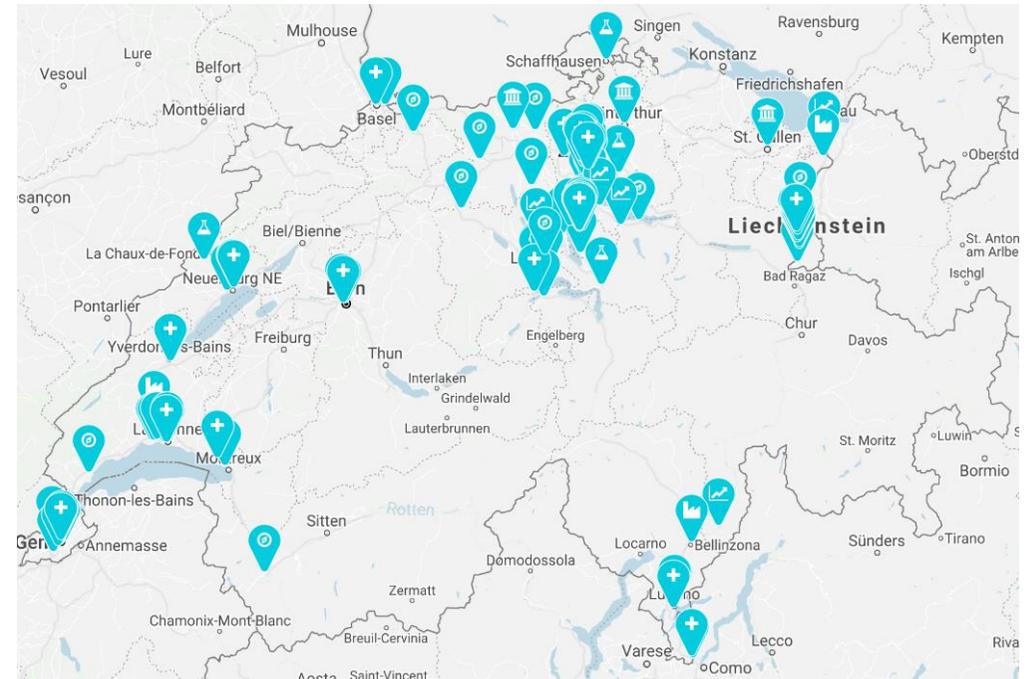
# Why Switzerland?: Finance

Switzerland has made large strides towards accommodating innovation - both domestic and foreign - in the fields of fintech, blockchain and cryptocurrencies in the last few years. Thanks to some impressive recent research, it has now become easier to visualize this progress.

To the right is a map of 350 blockchain companies, educational institutes, legal, consulting and other services spread around Switzerland. Most of them are based in the Zug/Zurich region (the centre of the Crypto Valley universe), but the southern (Italian-speaking) and western (French-speaking) regions also feature entrants.

When Swiss Economics Minister Johann Schneider-Ammann recently proclaimed that the world would soon be talking about “Crypto Nation Switzerland”, this is likely the image he had in mind.

Switzerland is leading the digitization of financial markets and establishing itself as a catalyst for financial innovation on a global level. 10% of all global European FinTech enterprises are located in Switzerland, with 46% of them located in Zurich.



**Blockchain applications linked to medicine or life sciences are especially likely emerge from the Lausanne region.**

Geneva-Lausanne are about 60km or 45min by train from each other, which also makes a small Swiss sub-ecosystem.

# Why Switzerland?: Biotech R & D Clustering

Switzerland sits at a crossroads of European geroscience, and has a strong and productive geroscience community. The Swiss Institute for Bioinformatics for example has recently identified large numbers of genetic markers directly linked to human life expectancy. The top universities in Switzerland for clinical medicine, based on their reputation and research in the field are Zurich, Bern, Basel, Geneva, Lausanne, and the Swiss Federal Institute of Technology. Switzerland is also home to the prestigious Vontobel Prize for Aging Research.

Switzerland has gained prominence among investors as one of the two global hubs that have emerged as hotbeds of innovation for the resurgent biotech industry.

While the two-square-mile patch of South San Francisco bustles with more than 70 biotech firms, many of which are covered in our recent report [Longevity Industry in California](#), an equally influential geography has grown along the Lemanic Arc of Switzerland and into the heart of Basel, where pharma giants like [Novartis](#), [Actelion](#) and [Roche](#) (which acquired California's Genentech in 2009) have their headquarters.

Switzerland sits at one end of the BioValley, one of the leading life science clusters in Europe. The cluster is unique in that it spans across three countries Switzerland, Germany and France. This includes the global life science hub of Basel, Switzerland. BioValley brings together important ingredients for a successful biotech cluster, a concentration of companies, rich availability of skills and experience within Life Sciences and a research base that is world-class.

# Why Switzerland?: Biotech R & D Clustering

The foundation for any leading international cluster is a successful academic base.

There are 100,000 students at 10 universities or research institutions in the cluster. Within the cluster are some of the world's leading universities including University of Basel, Max Planck Institute and Freiburg University. The academic groups and institutions within the cluster have produced an enviable number of Nobel Laureates including Prof Werner Arber (Laureate in Medicine, 1978) and the 2011 Nobel Prize for Medicine winner Prof Jules Hoffmann.

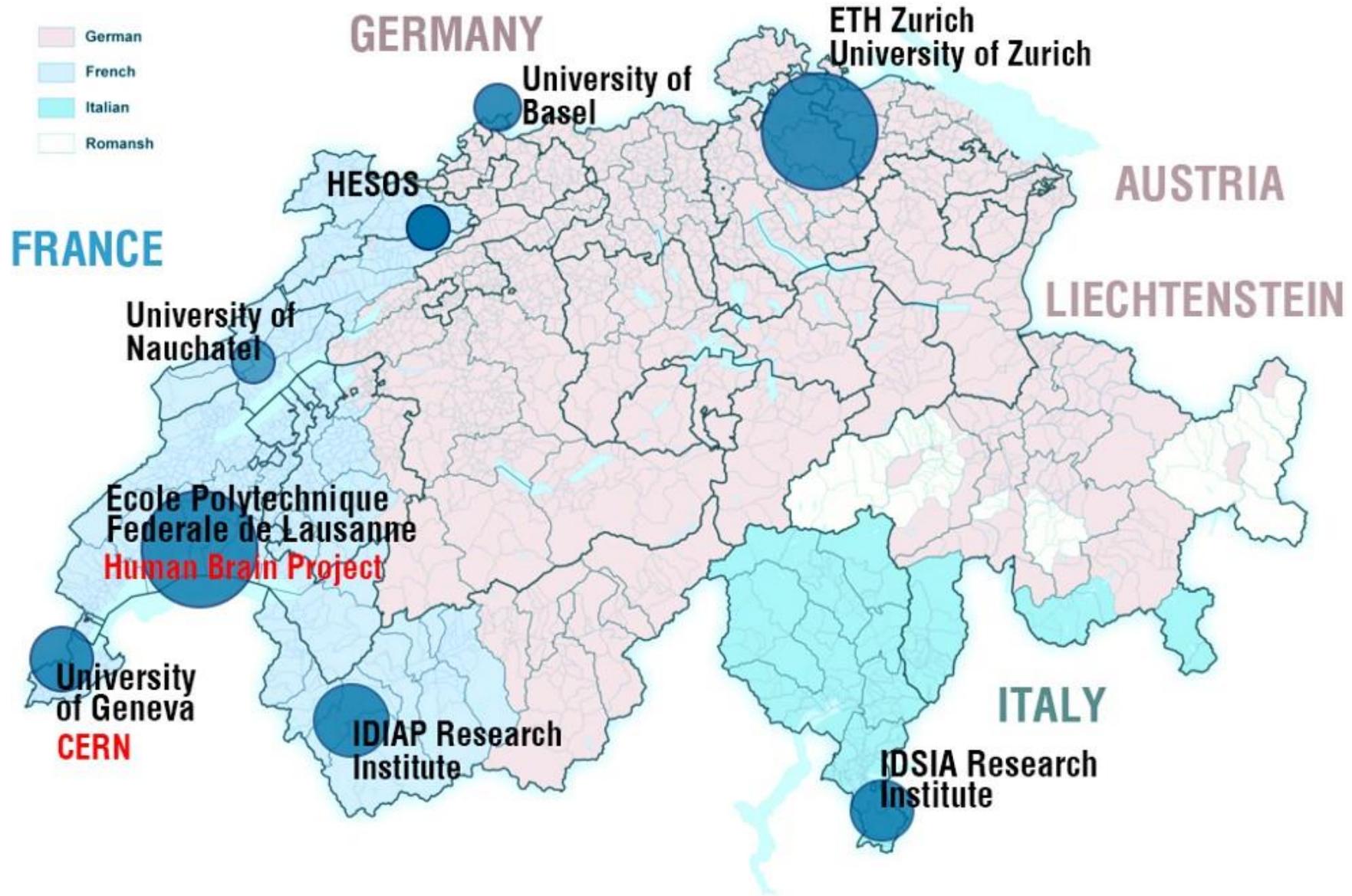
As a direct consequence of being an academic powerhouse the cluster produces a number of spin-out companies. Technology transfer organisations such as Conectus, The Innovation Department at KIT and Unitectra have all helped companies spin out into a variety of related fields. Spin-outs, and private companies are supported by a good financial network including both public and private financing initiatives as well as more traditional venture capital and private equity.

Currently the cluster has in excess of 50,000 people working in the life sciences field. This includes 15,000 scientists (~30%). There are 600 companies in the cluster developing therapeutic, diagnostic or medical devices to address a wide range of diseases in multiple therapeutic classes.

It is not only innovative biotechs that thrive in the cluster. The region houses two of the largest global pharmaceutical companies, Roche and Novartis, and their presence is a further stimulus for the local talent market as people are employed in jobs with other ventures like Basilea Pharmaceutica, Actelion Pharmaceuticals, Transgene, and Santhera Pharmaceuticals.

The entire process of drug development is covered in the region, from research through to clinical and drug development and manufacturing. With companies such as Baliopharm, Auris Medical, Flexion Therapeutics, Vivendy Therapeutics and Piquor Therapeutics are all representative of the business diversity and skill demand present in the region.

# Why Switzerland?: Biotech R & D Clustering



# Executive Summary: Precision Medicine

Although these institutions have excellent reputations in science and education, the public healthcare system is provided by a combination of public, subsidised private and totally private systems, and is organised largely on the level of individual cantons.

This federalist principle until now to a large extent prevented the nationwide coordination and harmonisation of biobanks, electronic **clinical information systems and clinical data management infrastructures that would be necessary for the development of a nationwide personalised health ecosystem** as compared to countries with more homogenous national health systems.

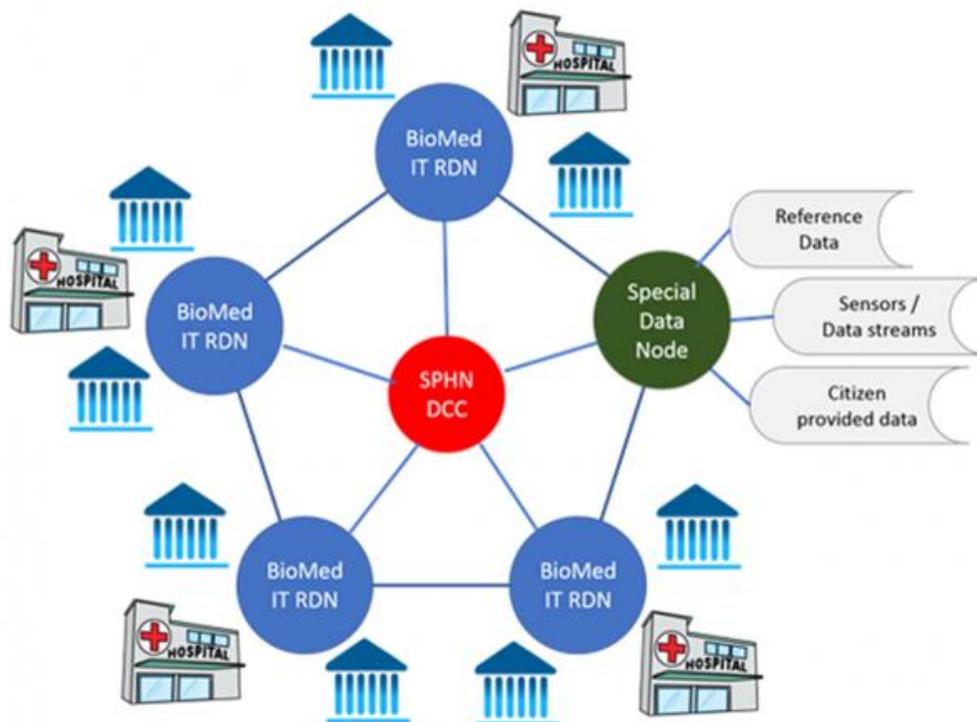
However, these difficulties have been acknowledged, and appropriate initiatives have been undertaken on local and regional levels. In 2013, **“Health 2030”**, a multicentre and multidisciplinary initiative was started by several institutions in the Lake Geneva region to promote research, training and services in the field of digital and personalised health in western Switzerland. The Universities and University Hospitals of Geneva, Lausanne and Bern, as well as EPFLausanne, have decided to team up to create the first genome centre in Switzerland.

This centre will further develop genome expertise in Switzerland and make gene sequencing (DNA decoding and analysis) more accessible, thus contributing to the development of personalised health care. In the eastern part of Switzerland, the University of Zurich and the ETHZurich founded in 2014 a competence centre for personalised medicine, which drives the development, complementary to the Lake Geneva centre, special expertise in proteomics and metabolomics. This centre has recently been extended to the Zurich-Basel Health Alliance.

# Executive Summary: Precision Medicine

These initiatives demonstrate that Swiss scientists and clinicians have realised the necessity to team up to be able to perform personalised health-related research on an internationally competitive level. Moreover, a **Swiss Biobanking Platform (SBP)** has been created to help Switzerland consolidate its position at the forefront of biomedical research by facilitating access and optimal usage of its existing and future biobanked specimens.

What is needed further are close links between biobank samples and clinical disease phenotype data. Furthermore, the local/regional initiatives have to be expanded to the whole of Switzerland and complemented with a nationwide effort for making health data (For example clinical, molecular, laboratory, and imaging data) findable, accessible, interoperable and usable for research (FAIR) on a national scale. For this purpose, the Swiss Personalized Health Network (SPHN) initiative was launched in 2017. It will help to push Switzerland to the international forefront of personalised health-related research and health care.



# Executive Summary: Conclusion

In examining Switzerland's Longevity-progressive characteristics, we find that the country possesses the following unique strengths:

- A lean political system that facilitates rapid implementation of integrated government programs
- A strong research environment for geroscience
- A strong research and business environment for digital health
- An abundance of political will to address the demographic challenge
- International financial prowess

And the following weaknesses:

- The absence of any specific Longevity business community. For example It is a site of digital health summits, not Longevity summits
- The absence of any industrial strategy for Longevity, like the UK's recognition of 'aging in society' as an industrial challenge
- The heterogeneity of health data infrastructures has slowed the development of a nationwide personalised health ecosystem as compared to countries with more homogenous national health systems

Given Switzerland's small geographical size, and its reliance on international cooperation, its inevitable function will be as a small but important node. The most productive way forward for Switzerland, given its strengths, might be as follows:

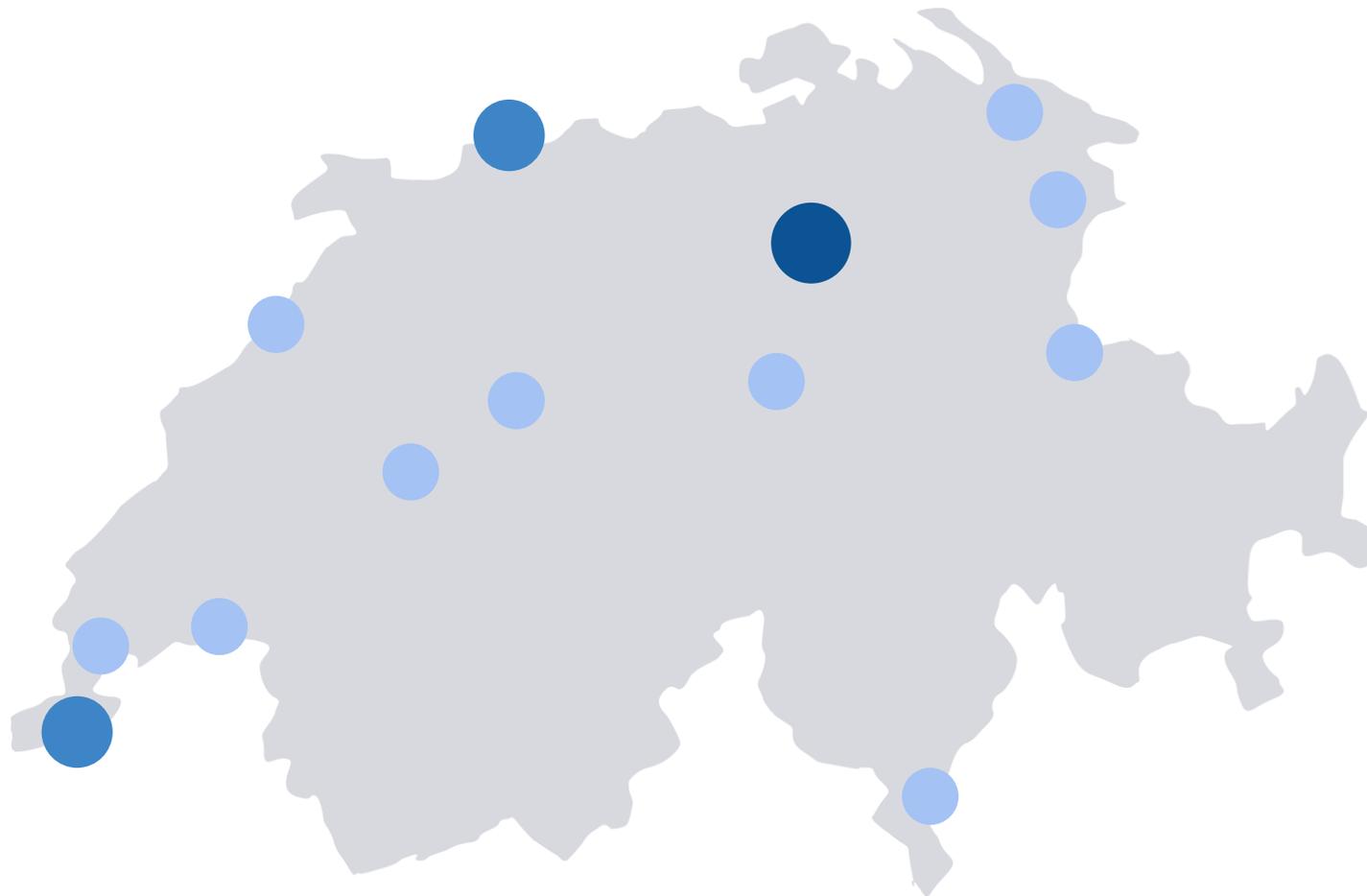
- Develop a Longevity progressive pension system and insurance company ecosystem that accounts for both population ageing (which threatens to destabilize the current business models of insurance companies and pension funds) and the potential for widespread healthspan extension
- Develop a national strategy for intensively developing its geroscience, precision medicine and FinTech to a state so advanced that it propels Switzerland into a central role in the internationally competitive Longevity business ecosystem, where it can rise to become a global leader in the specific field of Longevity finance.



# Chapter I

## Switzerland Longevity Industry Overview

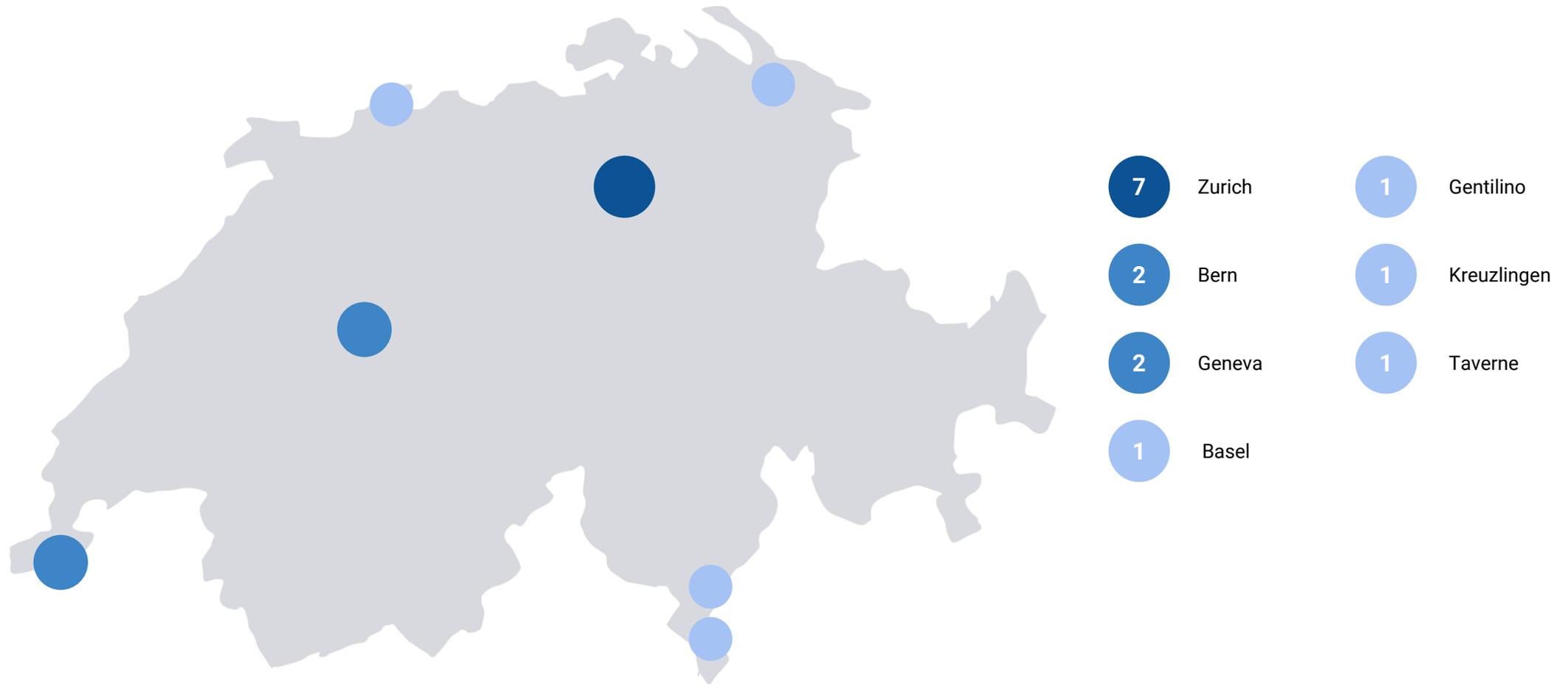
# Top-20 Longevity Precision Clinics in Switzerland by City



6	Zurich	2	Basel
2	Geneva	1	Vitznau
1	Sorengo	1	Fribourg
1	Bad Ragaz	1	Bern
1	Lausanne	1	Genolier
1	Zihlschlacht	1	Teufen
1	La Chaux-de-Fonds		

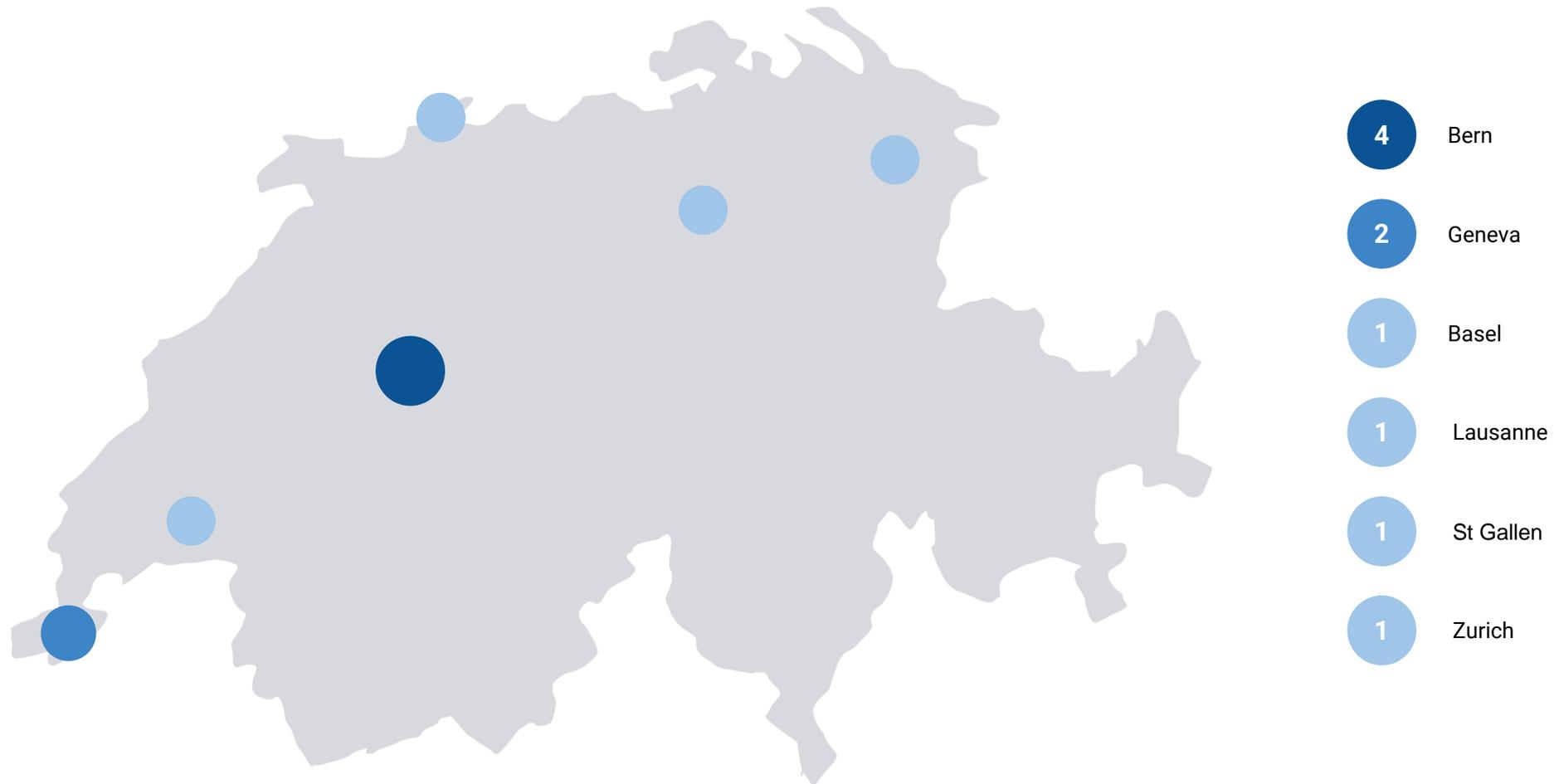
This map shows the top precision clinics across Switzerland. It should come as no surprise that such centres are clustered around Zurich, the nerve centre for Swiss BioTech. However, Switzerland faces an interoperability difficulty across cantons. The Swiss Personalized Health Network supports projects which involve all four of the five university hospitals (University Hospitals of Zurich, Bern, Basel and Lausanne as well as with ETH Zurich).

# Top-15 Longevity Non-profits in Switzerland by City



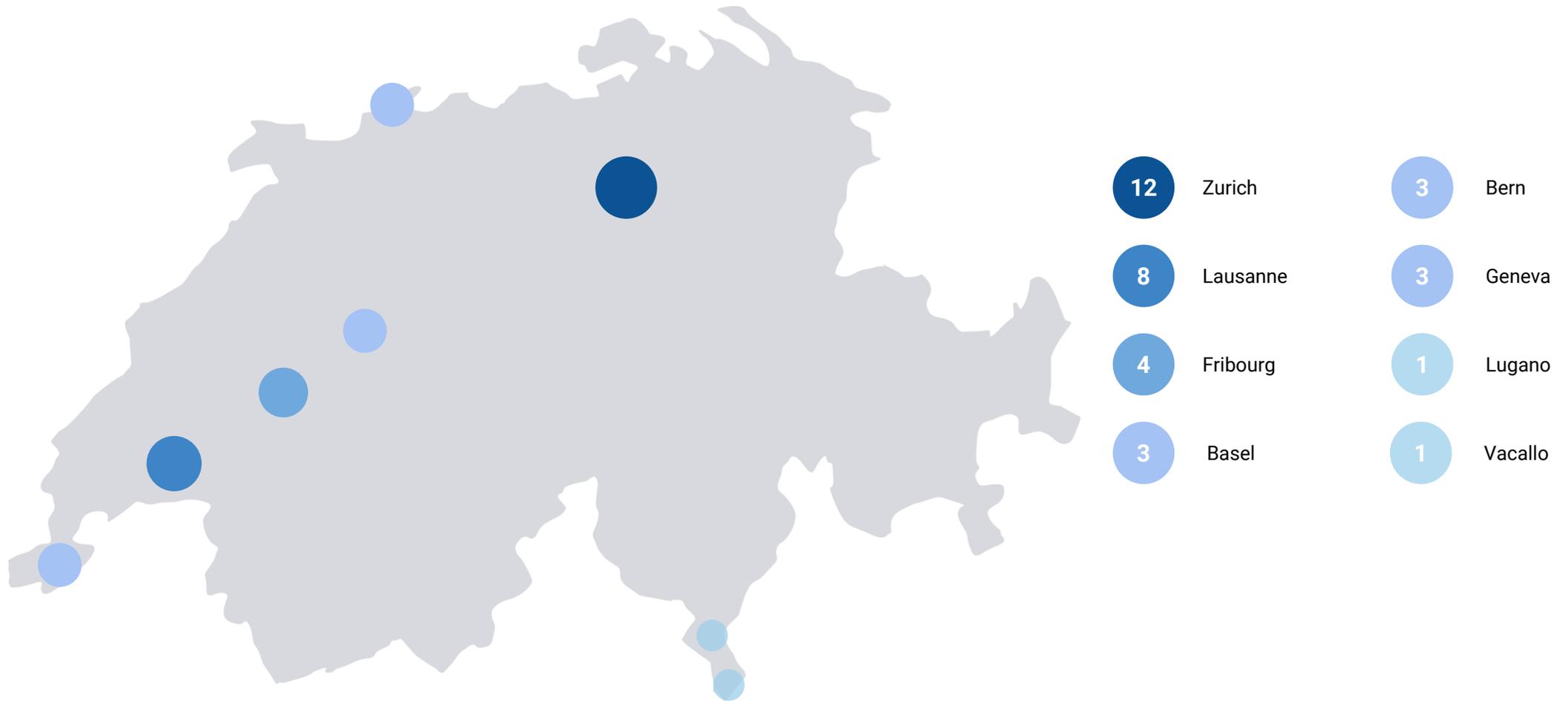
This diagram illustrates the locations of the top Longevity non-profits across Switzerland. Bern, being the capital, and Zurich, being at the cusp of the Biovalley biotech cluster, are the natural locations for non-profits.

# Top-10 Longevity Government Organizations in Switzerland by City



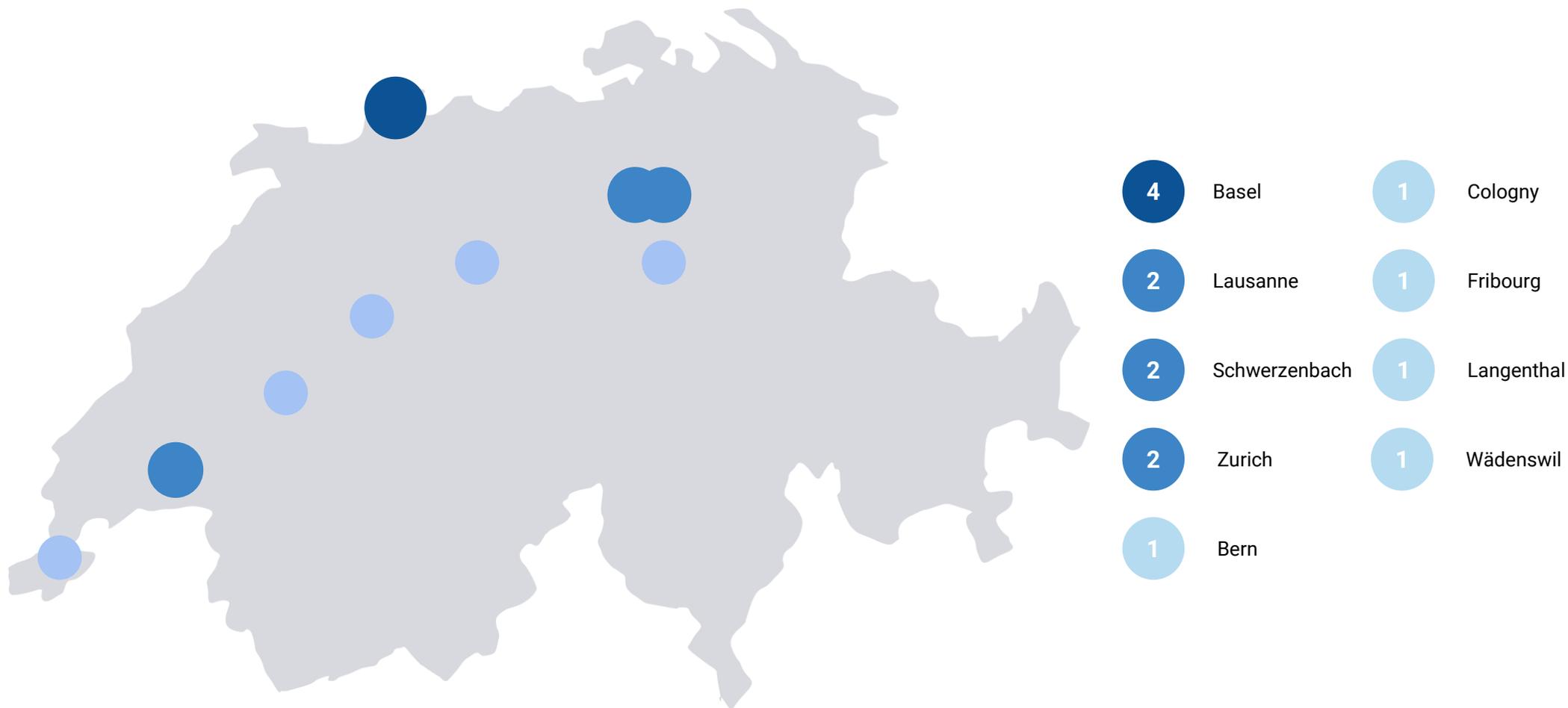
Bern is the de facto capital of Switzerland and is therefore the natural choice of location for governmental and quasi-governmental organizations. However, Switzerland's high degree of decentralization means that as the number of government organizations responsible for Swiss Longevity increases, the concentration of relevant organizations outside of Bern will likely remain evenly distributed.

# Top-35 Longevity Research Labs in Switzerland by City



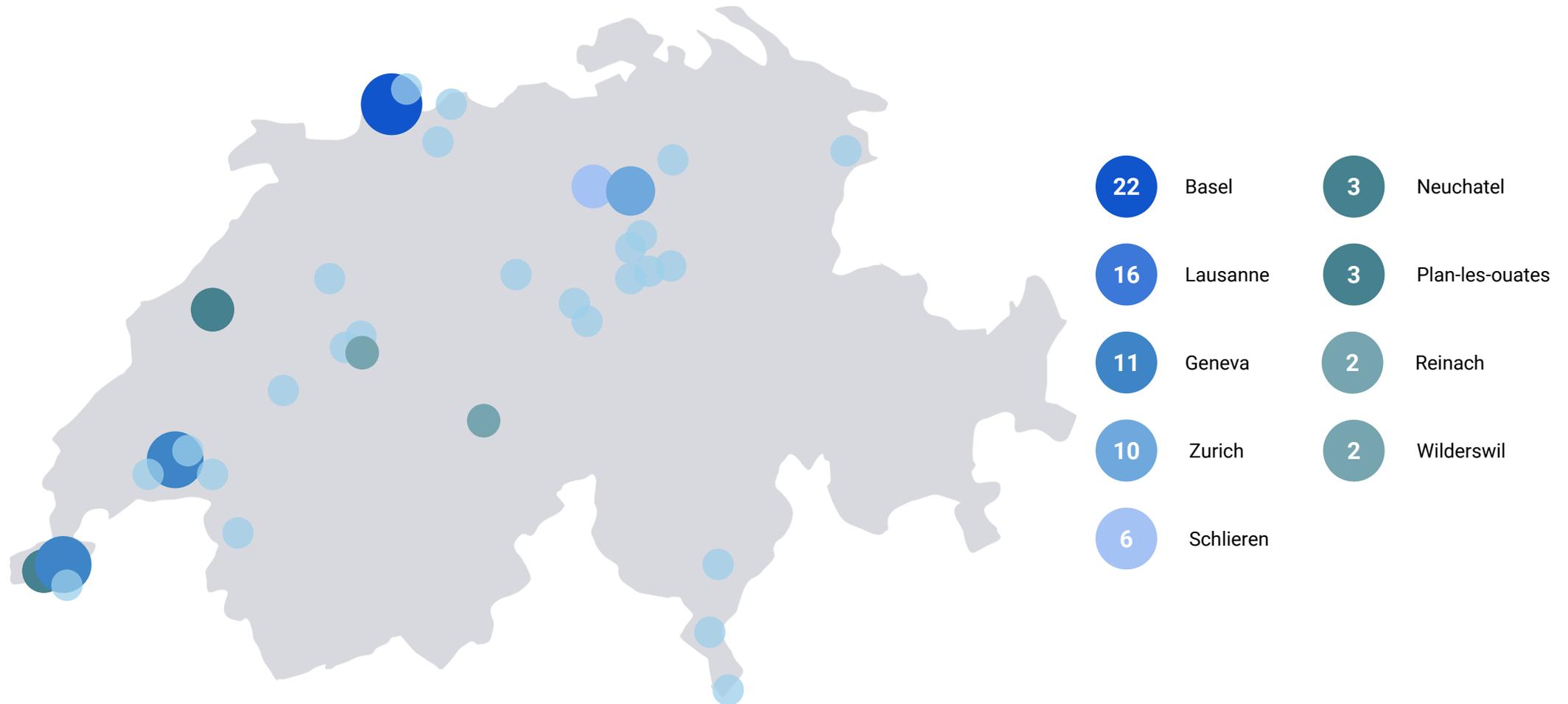
This diagram illustrates the locations of the top Longevity research labs across Switzerland. Switzerland falls well within the Biovalley biotech cluster. The cluster is unique in that it spans three countries Switzerland, Germany and France. At its south-eastern tip is the global life science hub of Basel, and its metropolitan neighbour, Zurich. BioValley brings together important ingredients for a successful biotech cluster, a concentration of companies, rich availability of skills and experience within Life Sciences and a research base that is world-class.

# Top-15 Longevity Influencers in Switzerland by City



This map shows the top Longevity influencers across Switzerland. The most common types of influencers in Switzerland are scientists and entrepreneurs, and as such tend to congregate around large metropolises, and the many country's widely dispersed biotech hubs.

# Top-100 Longevity Companies in Switzerland by City



This map shows the distribution of Longevity companies in Switzerland. Note that as a direct consequence of being an academic powerhouse the BioValley cluster produces a number of spin-out companies. Spin-outs, and private companies are supported by a good financial network including both public and private financing initiatives as well as more traditional venture capital and private equity.

# Top 100 Companies in Switzerland

- 1.ABCDx
- 2.Ability Rehab Solutions
- 3.Abionic
- 4.AC Immune
- 5.Adipogen International
- 6.ADR AC
- 7.aktiia
- 8.Amal Therapeutics
- 9.Amazentis
- 10.APR Applied Pharma Research
- 11.Aptissen
- 12.Asceneuron
- 13.Atracsys
- 14.Auris Medical
- 15.Axovant Sciences
- 16.BACOBA
- 17.BalOnco
- 18.Basilea Pharmaceutica
- 19.Biocartis
- 20.BioVersys
- 21.BioXpress Therapeutics
- 22.Cardiola
- 23.Cardiorientis
- 24.Cell Receptor
- 25.CELLEC Biotek
- 26.Cellestia Biotech
- 27.CeQur
- 28.Ciliatech
- 29.Clinerion
- 30.codiag
- 31.Corporate Health Solutions
- 32.Covagen
- 33.CovalX
- 34.Covalys Biosciences
- 35.Crisalix
- 36.CT Atlantic
- 37.Cureab
- 38.CyanoGuard
- 39.diagene laboratories
- 40.Dividat
- 41.Dorphan
- 42.ecogenics
- 43.Ennar Pharma
- 44.Evasensor
- 45.ExCellness Biotech
- 46.Exquiron Biotech
- 47.fasteris
- 48.Frimorfo
- 49.Gene Signal
- 50.Genedata
- 51.Genentech
- 52.Geneva Biotech Center
- 53.Genkyotex
- 54.GenomSoft
- 55.GenomSys
- 56.Gnothis
- 57.Gondola Medical Technologies
- 58.GTX Medical
- 59.healthbank innovation
- 60.Humabs
- 61.IDUN Technologies
- 62.IFPMA
- 63.InPheno
- 64.iOnctura
- 65.Juvaplus
- 66.Kuros Biosciences
- 67.Leucogenics
- 68.MacKenzie Innovations
- 69.MaxWell Biosystems
- 70.Meierhofer
- 71.Memo Therapeutics
- 72.Memocare
- 73.MIAC
- 74.NBE-Therapeutics
- 75.Nebion
- 76.Neurimmune Holding
- 77.Novartis
- 78.OncoEthix
- 79.Photoderma
- 80.PIQUR Therapeutics
- 81.Pregnoia
- 82.Prextion Therapeutics
- 83.Roche
- 84.Roche Diagnostics
- 85.Roche Glycart
- 86.RodanoTech
- 87.Scailyte
- 88.Sensometrix
- 89.SonoView
- 90.Stemmedica International
- 91.Straumann
- 92.Swiss Cardio Technologies
- 93.Swortec
- 94.TOLREMO therapeutics
- 95.TransCure bioServices
- 96.Vivendy Therapeutics
- 97.Xigen
- 98.Xsensio
- 99.Youdowell
- 100.Zeptosens

# Top 80 Investors in Switzerland

- 1.3wVentures
- 2.Aescap Venture
- 3.Angel Investment Network
- 4.Arthurian Life Sciences
- 5.BioMedPartners
- 6.BlueOcean Ventures
- 7.Boehringer Ingelheim Venture Fund
- 8.BVGroup
- 9.Capital Initiative
- 10.CADFEM
- 11.CDC Enterprises
- 12.Deutsche Venture Capital
- 13.dievini Hopp Biotech holding
- 14.EASME
- 15.Eclosion Ventures
- 16.Edmond de Rothschild Private Equity
- 17.Endeavour Vision
- 18.Erfindungs Verwertung
- 19.ETP Ventures
- 20.Eurostars
- 21.FONGIT
- 22.Forbion Capital Partners
- 23.Genevest Consulting Group
- 24.Gilde Healthcare
- 25.Global Life Science Ventures
- 26.GoBeyond
- 27.HBM Partners
- 28.HealthCare Royalty Partners
- 29.Helsinn Investment Fund
- 30.Hercules Capital
- 31.High-Tech Gründerfonds
- 32.Hitachi Chemical Diagnostics
- 33.HS LifeSciences
- 34.Idinvest Partners
- 35.Index Ventures
- 36.Innovation Capital
- 37.investiere
- 38.Johnson & Johnson Development Corporation
- 39.Johnson & Johnson Innovation
- 40.LifeCare Partners
- 41.Life Sciences Partners
- 42.M Ventures
- 43.MassChallenge
- 44.MedHoldings
- 45.Michael J. Fox Foundation
- 46.MP HealthCare Venture Management
- 47.Neomed Management
- 48.Nestle Health Science
- 49.Novartis
- 50.Novartis Venture Fund
- 51.Novo Holdings
- 52.Omega Funds
- 53.Palmarium
- 54.PMV Tina Fund
- 55.PPF Group
- 56.Preon Capital Partners
- 57.Quest Capital Management
- 58.Redalpine Venture Partners
- 59.Seroba Life Sciences
- 60.Sofinnova Partners
- 61.SR One
- 62.Sunstone Life Science Ventures
- 63.SV Health Investors
- 64.Swiss Helvetia Fund
- 65.Swiss Life Private Equity Partners
- 66.Swisscom Ventures
- 67.Tilocor Life Science
- 68.TransLink Capital
- 69.The Bill & Melinda Gates Foundation
- 70.TVM Capital
- 71.Ventech
- 72.Venture Incubator
- 73.Venture Kick
- 74.Versant Ventures
- 75.Vesalius Biocapital Partners
- 76.VI Partners AG
- 77.Wellington Partners
- 78.Woodford Investment Management
- 79.Ysios Capital
- 80.Zürcher Kantonalbank ZKB

# Top 35 Universities and Research Labs

## in Switzerland

1. Aging and Muscle Metabolism Lab, University of Lausanne
2. Altmeyer Lab, University of Zurich
3. Barral Group, ETH Zurich
4. Bern Center for Precision Medicine
5. Blanchoud Group, University of Fribourg
6. Chemical and Biological Systems Engineering Laboratory, ETH Zurich
7. Clinique la Colline in Geneva, Medical Oncology
8. Clinique la Colline in Geneva, Hip and Knee Centre
9. Competence Center for Personalized Medicine
10. De Virgilio Group, University of Fribourg
11. Department of Ecology and Evolution, University of Lausanne
12. Department of Molecular Mechanisms and Disease, University of Zurich
13. Ehrbar Lab, University of Zurich
14. Eggel LAB
15. Energy Metabolism Laboratory, ETH Zurich
16. Extracellular Matrix Regeneration Laboratory, ETH Zurich
17. Ewald Lab, ETH Zurich
18. Group Ocampo, University of Lausanne
19. Institute of Regenerative Medicine, University of Zurich
20. Institute of Social and Preventive Medicine, University of Bern
21. Klinik Hirslanden in Zurich
22. Klinik Im Park
23. Laboratory of Integrative and Systems Physiology, EPFL
24. Laboratory of Regeneration and Adult Neurogenesis, University of Geneva
25. Lingner Lab, EPFL
26. Prof. Anna Jazwinska Müller Research Group, University of Fribourg
27. Prof. Christoph Handschin Research Group, University of Basel
28. Prof. Markus Rüegg Research Group, University of Basel
29. Prof. Michael N. Hall Research Group, University of Basel
30. Prof. Thomas Flatt Research Group, University of Fribourg
31. Statistical Genetics Group, Lausanne University Hospital
32. Swiss Institute for Regenerative Medicine
33. Swiss Stem Cells Biotech
34. The Nestlé Institute of Health Sciences
35. Vital-IT Competence Centre

# Top 15 Conferences in Switzerland

1. 11th International Francophone Congress of Gerontology and Geriatrics
2. 69th World Health Assembly
3. Aging & Cognition 2019
4. Alzheimer's and Dementia Care
5. Annual Aging and Drug Discovery Forum
6. Biology of Aging - Gordon Research Seminar
7. Credit Suisse Global Supertrends Conference 2019
8. Integrative Biology of Aging: New Insights from Molecules to Systems
9. Gerontology Symposium
10. Next Generation Summit - Investing in Longevity Forum
11. Personalized Oncology 2019
12. Precision Medicine and Personalized Health
13. Swiss Genomics Forum
14. The World's Leading AI in Medicine Summit
15. UBS's 2018 Healthcare Summit

## Top 15 Non-Profit Organizations in Switzerland

1. BioValley Basel
2. Health 2030 Genome Centre
3. Gerontological Economic Research Organization
4. Life Sciences Switzerland (LS2)
5. Swiss Coordination Committee for Biotechnology
6. Swiss Institute for Regenerative Medicine
7. Swiss National Science Foundation
8. Swiss Society for Aging Research
9. Swiss Society of Gerontology
10. Swiss Stem Cell Foundation
11. The Geneva Foundation for Medical Education and Research
12. The Swiss Biotech Association
13. University of Zurich (UZH) Institute for Regenerative Medicine
14. Velux Stiftung
15. Vontobel Foundation

## Top 15 P3 Clinics in Switzerland

1. Bern University Hospital
2. Cereneo
3. Clinica Sant'Anna
4. Clinique Générale Ste-Anne
5. Clinique Montbrillant
6. Double Check
7. Geneva University Hospitals
8. Klinik Hirslanden in Munich
9. Klinik Im Park
10. Lausanne University Hospital
11. Lumen healthcare Clinic
12. Medbase Checkup Center
13. Medical Health Center Bad Ragaz
14. Nescens Clinique de Genolier
15. Paracelsus Clinic

## Top 10 Government Organizations in Switzerland

1. BaselArea.swiss
2. biotechnet
3. Federal Department of Economic Affairs, Education and Research
4. St Gallen Elderly Care Bank
5. Swiss Biobanking Platform
6. Swiss Clinical Trial Organization
7. Swiss Federal Commission for Innovation and Technology
8. Swiss Personalized Health Network
9. SystemsX.ch
10. World Health Organization

## Top 10 Journals in Switzerland

1. Cells
2. Frontiers in Aging Neuroscience
3. Frontiers in Genetics
4. Frontiers in Neurology
5. Journal of Personalized Medicine
6. IN VIVO
7. International Journal of Molecular Sciences
8. Gerontology
9. Public Health Genomics
10. Tissue Engineering and Regenerative Medicine

## Top 15 Scientists in Switzerland

1. Alejandro Ocampo
2. Alexander Eggel
3. Anna Jazwinska Müller
4. Brigitte Galliot
5. Christoph Handschin
6. Claudio De Virgilio
7. Collin Ewald
8. Joachim Lingner
9. Johan Auwerx
10. Matthias Altmeyer
11. Michael Hall
12. Michael Ristow
13. Simon Blanchoud
14. Thomas Flatt
15. Yves Barral

## Top 15 Influencers in Switzerland

1. André Kudelski
2. Claudio De Virgilio
3. Collin Ewald
4. Dominik Escher
5. Eavan Dorcey
6. Johan Auwerx
7. Johann Schneider-Ammann
8. Klaus Schwab
9. Mark A. Rubin
10. Michael Hall
11. Michael Ristow
12. Niko Beerenwinkel
13. Severin Schwan
14. Ursula Graf-Hausner
15. Vasant Narasimhan

## Top 15 Journalists in Switzerland

1. Alexander Thoele
2. Avik Roy
3. Béatrice Schaad
4. Celia Luterbacher
5. Daniel Saraga
6. Duc-Quang Nguyen
7. Florian Fisch
8. Jeannie Wurz
9. Jérôme Cosandey
10. Hannah Wise
11. Kevin D. Williamson
12. Natasha Leeson
13. Nelson D. Schwartz
14. Pierre-François Leyvraz
15. Sina Steiningger



## Companies - 100

### AgeTech

#### Mobility



SWORTEC

#### Personalized

Meierhofer

#### Wearables



IDUN Technologies

pregnolia®

aktia

J U V A INJECTION SYSTEMS

evasensor



## P3 Medicine

### Personalized Medicine



### Preventive Medicine



ct atlantic



CeQur

atracosys INTERACTIVE SOLUTIONS



IFPMA

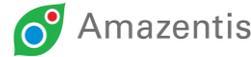


AdipoGen LIFE SCIENCES

memocare



NOVARTIS



CELLESTIA BIOTECH



Dividat



CILIATECH

### Precision Medicine



RodanoTech



frimorfo

maxwell BIOSYSTEMS



PIQUR TARGETED CANCER THERAPIES

BIOVERSYS

BalOnco

basilea PHARMACEUTICA

bioXPRESS THERAPEUTICS SA



AMAL Therapeutics

DORPHAN

AC IMMUNE

MEMMO



ionctura

aptissen

scailyte

SENSOMETRIX



GLYCART biotechnology



## Regenerative Medicine

### Tissue engineering



### Precision



### Geroscience



covalys



### Cell therapy

zeptosens Bayer Technology Services



### Other

Vivendy Therapeutics Ltd.

# 80 Swiss Longevity Investors

## AgeTech



## Regenerative Medicine



# P3 Medicine



## BioMed Partners



## HBM Partners



# 15 Longevity Scientists in Switzerland



Alejandro Ocampo



Alexander Eggel



Anna Jazwinska  
Müller



Brigitte Galliot



Christoph  
Handschin



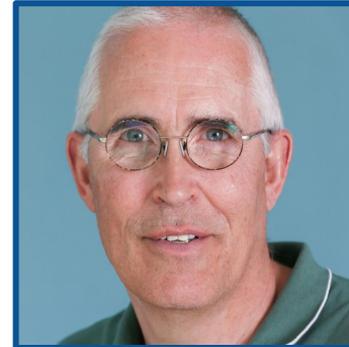
Claudio De Virgilio



Collin Ewald



Joachim Lingner



Johan Auwerx



Matthias Altmeyer



Michael Hall



Michael Ristow



Simon Blanchoud



Thomas Flatt



Yves Barral

# 15 Longevity Influencers in Switzerland



André Kudelski



Claudio De Virgilio



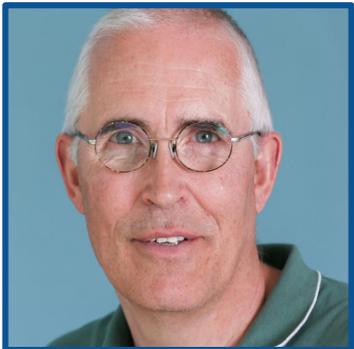
Collin Ewald



Dominik Escher



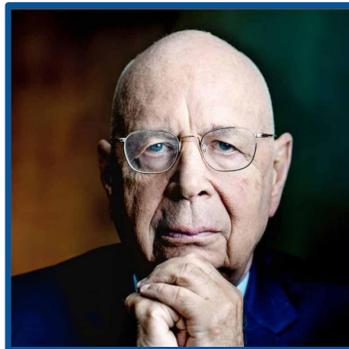
Eavan Dorcey



Johan Auwerx



Johann Schneider-  
Ammann



Klaus Schwab



Mark A. Rubin



Michael Hall



Michael Ristow



Niko Beerenwinkel



Severin Schwan



Ursula Graf-Hausner



Vasant Narasimhan

# 15 Journalists Covering Longevity in Switzerland



Alexander Thoele



Avik Roy



Béatrice Schaad



Celia Luterbacher



Daniel Saraga



Duc-Quang Nguyen



Florian Fisch



Jeannie Wurz



Jérôme Cosandey



Hannah Wise



Kevin D. Williamson



Natasha Leeson



Nelson D. Schwartz



Pierre-François  
Leyvraz



Sina Steininger

# 35 Swiss Research Labs Focusing on Aging and Longevity



Aging and Muscle Metabolism Lab, University of Lausanne



Altmeyer Lab, University of Zurich



Barral Group, ETH Zurich



Bern Center for Precision Medicine



Blanchoud Group, University of Fribourg



Chemical and Biological Systems Engineering Laboratory, ETH Zurich



Clinique la Colline in Geneva, Medical Oncology



Clinique la Colline in Geneva, Hip and Knee Centre



Competence Center for Personalized Medicine



De Virgilio Group, University of Fribourg



Department of Ecology and Evolution, University of Lausanne



Department of Molecular Mechanisms and Disease, University of Zurich



Ehrbar Lab, University of Zurich



Eggel LAB



Energy Metabolism Laboratory, ETH Zurich



Extracellular Matrix Regeneration Laboratory, ETH Zurich



Ewald Lab, ETH Zurich



Group Ocampo, University of Lausanne



Institute of Regenerative Medicine, University of Zurich



Institute of Social and Preventive Medicine, University of Bern



Klinik Hirslanden in Zurich



Klinik Im Park



Laboratory of Integrative and Systems Physiology, EPFL



Laboratory of Regeneration and Adult Neurogenesis, University of Geneva



Lingner Lab, EPFL



Prof. Anna Jazwinska Müller Research Group, University of Fribourg



Prof. Christoph Handschin Research Group, University of Basel



Prof. Markus Rüegg Research Group, University of Basel



Prof. Michael N. Hall Research Group, University of Basel



Prof. Thomas Flatt Research Group, University of Fribourg



Statistical Genetics Group, Lausanne University Hospital



Swiss Institute for Regenerative Medicine



Swiss Stem Cells Biotech



The Nestlé Institute of Health Sciences



Vital-IT Competence Centre

# 15 Conferences Focusing on Aging and Longevity



11th International Francophone Congress of Gerontology and Geriatrics



69th World Health Assembly



Aging & Cognition 2019



Alzheimer's and Dementia Care



Annual Aging and Drug Discovery Forum



Biology of Aging - Gordon Research Seminar



Credit Suisse Global Supertrends Conference 2019



Integrative Biology of Aging: New Insights from Molecules to Systems



Gerontology Symposium



Next Generation Summit - Investing in Longevity Forum



Personalized Oncology 2019



Precision Medicine and Personalized Health



Swiss Genomics Forum



The World's Leading AI in Medicine Summit



UBS's 2018 Healthcare Summit

# 15 Swiss Non-Profit Organizations Focusing on Aging and Longevity



BioValley Basel



Health 2030 Genome Centre



Gerontological Economic Research Organization



Life Sciences Switzerland (LS2)



Swiss Coordination Committee for Biotechnology



Swiss Institute for Regenerative Medicine



Swiss National Science Foundation



Swiss Society for Aging Research



Swiss Society of Gerontology



Swiss Stem Cell Foundation



The Geneva Foundation for Medical Education and Research



The Swiss Biotech Association

Institute for Regenerative Medicine • IREM



University of Zurich (UZH) Institute for Regenerative Medicine

VELUX STIFTUNG

Velux Stiftung

VONTOBEL Vontobel

Vontobel Foundation

# 15 Swiss Precision Medicine Clinics



Bern University Hospital



Cereneo



Clinica Sant'Anna



Clinique Générale Ste-Anne



Clinique Montbrillant



Double Check



Geneva University Hospitals



Klinik Hirslanden in Munich



Klinik Im Park



Lausanne University Hospital



Lumen healthcare Clinic



Medbase Checkup Center



Medical Health Center Bad Ragaz



Nescens Clinique de Genolier



Paracelsus Clinic

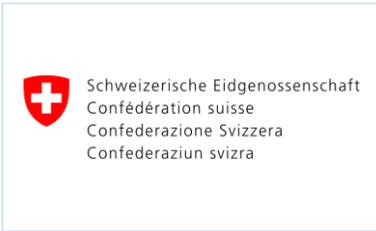
# 10 Swiss Government Organizations Focusing on Aging and Longevity



BaselArea.swiss



biotechnet



Federal Department  
of Economic Affairs,  
Education and Research



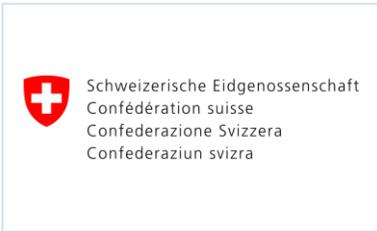
St Gallen Elderly Care  
Bank



Swiss Biobanking  
Platform



Swiss Clinical Trial  
Organization



Swiss Federal  
Commission for  
Innovation and  
Technology



Swiss Personalized  
Health Network

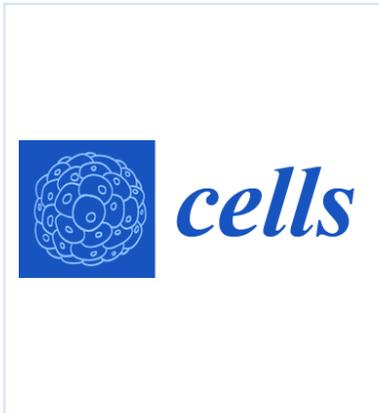


SystemsX.ch



World Health  
Organization

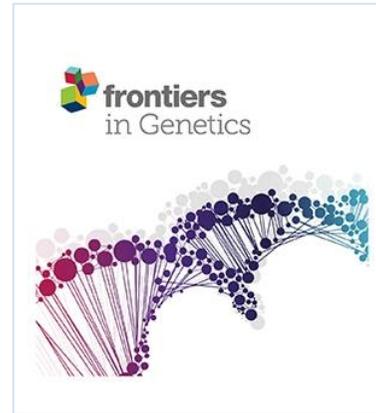
# 10 Swiss Journals Focusing on Aging and Longevity



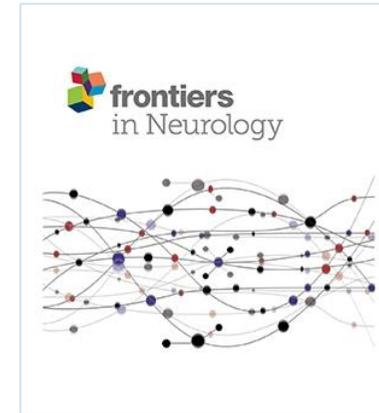
Cells



Frontiers in Aging  
Neuroscience



Frontiers in Genetics



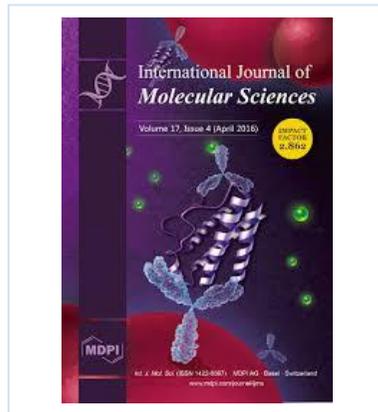
Frontiers in Neurology



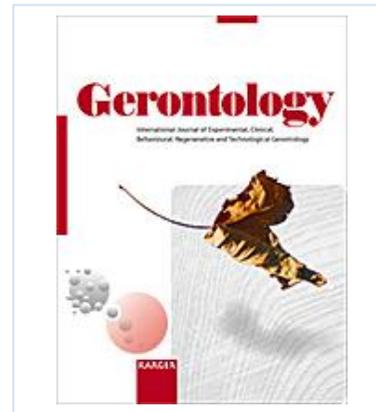
Journal of Personalized  
Medicine



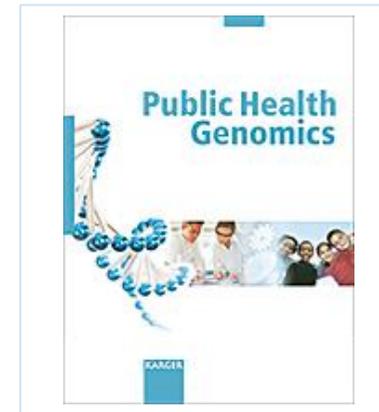
IN VIVO



International Journal of  
Molecular Sciences



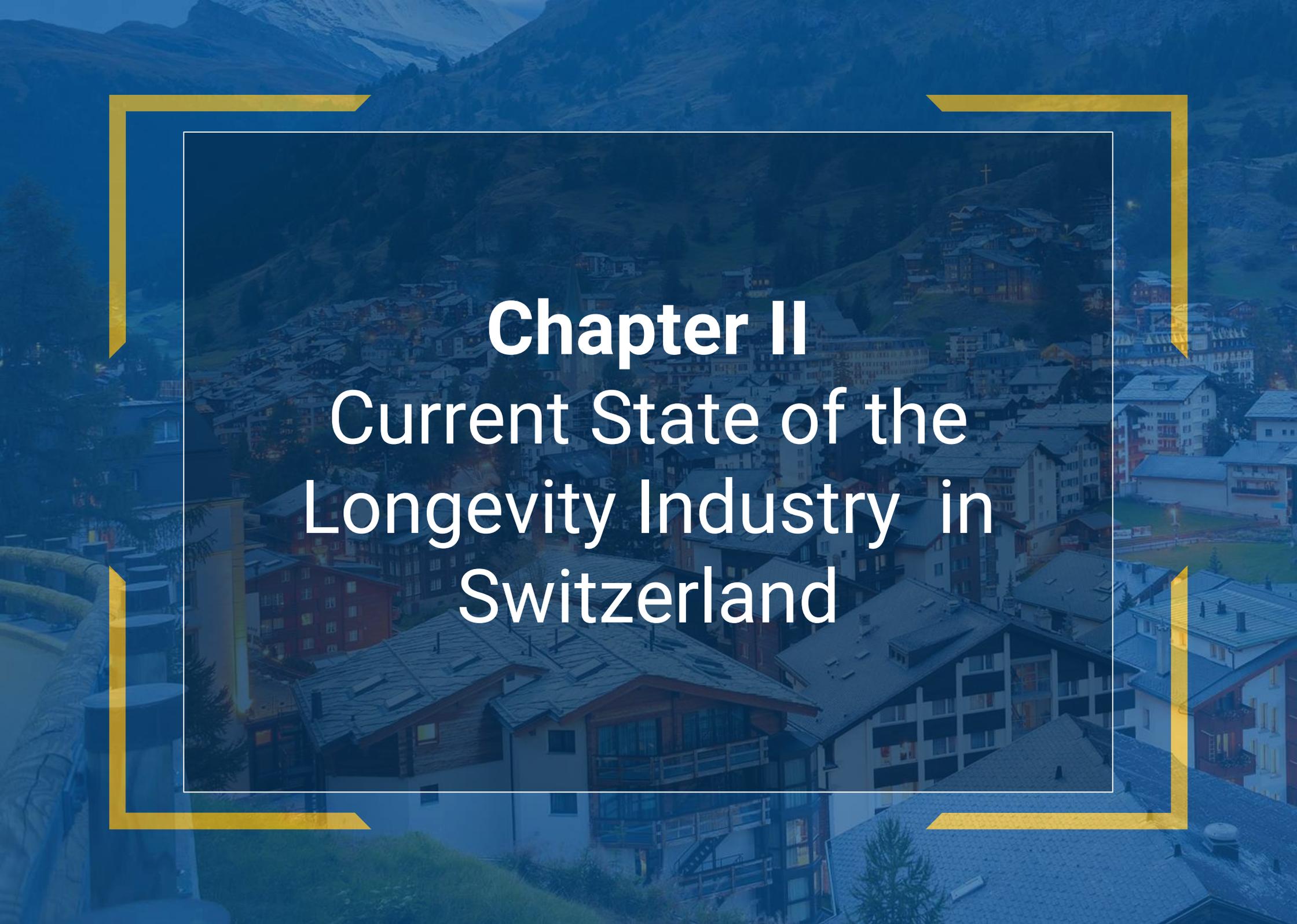
Gerontology



Public Health Genomics



Tissue Engineering and  
Regenerative Medicine

An aerial photograph of a Swiss mountain town at dusk, with a blue color overlay and a yellow frame. The town is built on a hillside, with many buildings illuminated by warm lights. In the background, there are snow-capped mountains under a dark sky. The text is centered in the middle of the image.

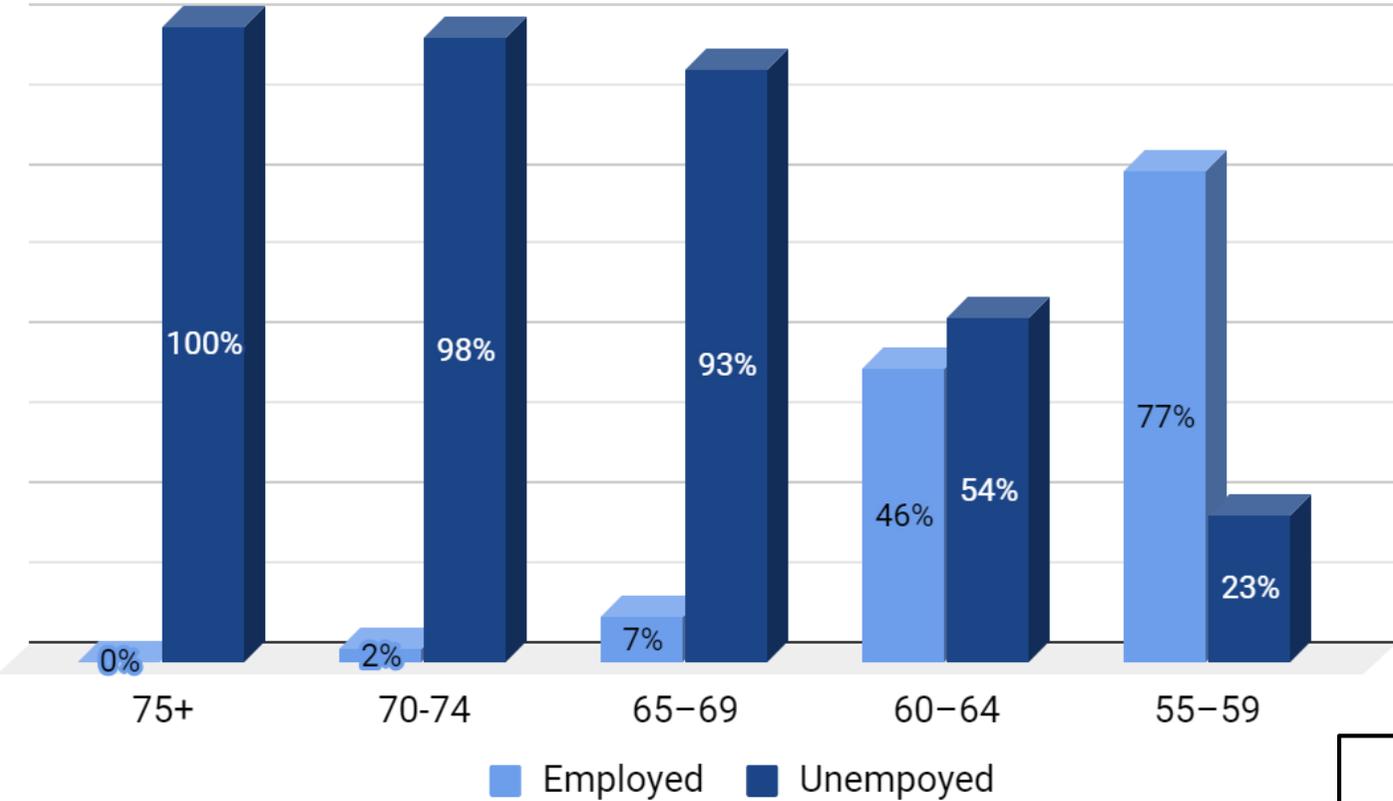
# **Chapter II**

## **Current State of the Longevity Industry in Switzerland**

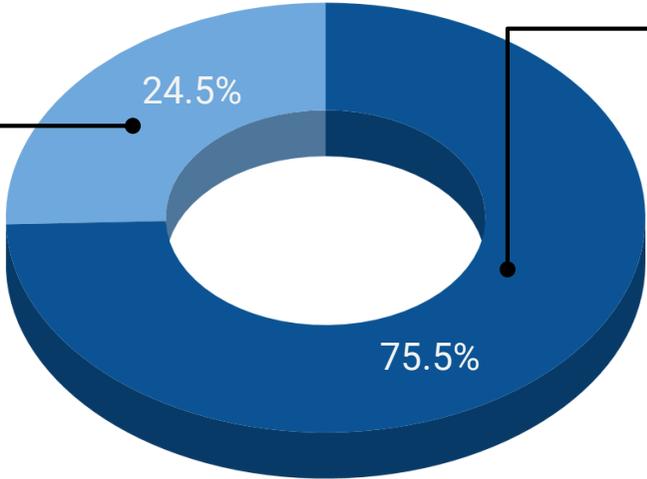
# Switzerland Age/Employment Range



### Fraction of the Unemployed by Age



Percent of people under 60

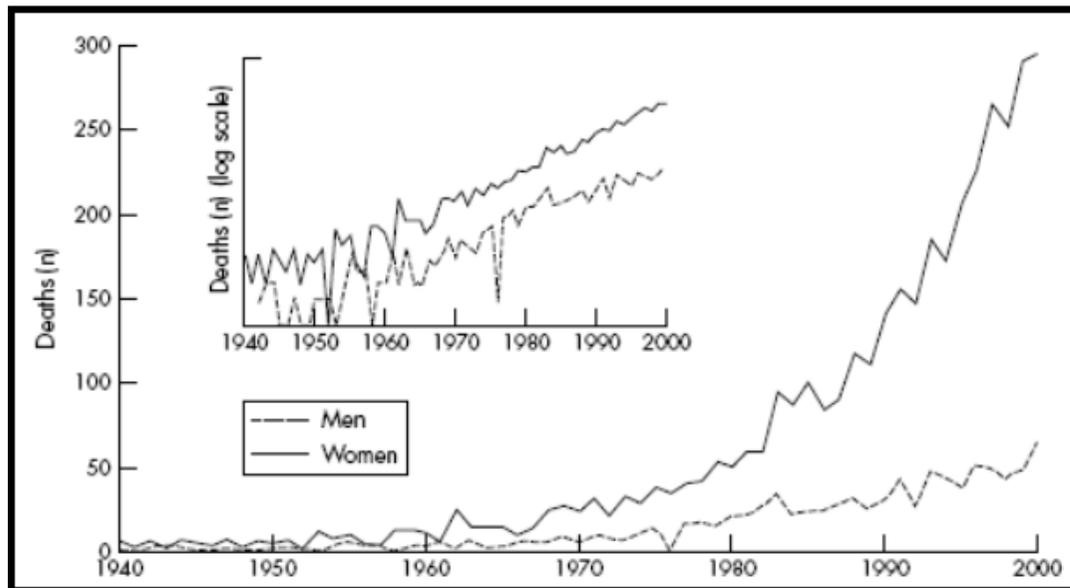


Percent of people over 60

# Past and Current Trends in Longevity and Health

The majority of usable studies on Swiss Longevity are based on population census and vital statistics, i.e., on an information system available only since the mid-19th century in the developed countries. A substantial amount of information is provided by demographic history and on pre-modern patterns of mortality, including in Switzerland.

In Europe, there is a slow and steady increase in life expectancy at birth since the Middle-Age, i.e., well before the sanitary and hygienic reforms of the late 19th century, possibly in relation with factors such as diet, infectious environment, etc. This raises the possibility that future changes in mortality might be determined by unexpected changes of currently unknown factors.



*Number of deaths at age 100 and over, by gender, Switzerland, 1940-2000 (Source: Robine J-M, Paccaud F. 2005)*

Life expectancy at birth has increased steadily in Switzerland since 1876, from about 40 and 42 years for men and women, respectively, to the current values of 79 and 84 years 2.

In other words, life expectancy at birth almost doubled in both genders, with a yearly increase amounting to about 4 or 5 months from 1876 until 1950, slightly faster among women than among men. It then dropped off to a slower rhythm, about 3 months per year, during the period 1950-2000.

# Switzerland Tops Longevity League in Europe

Switzerland has more centenarians than any other European nation, thanks to high standards of living, health care and nutrition over the past 50 years. Researchers at Lausanne University said the country had the highest life expectancy in Europe.

Proportionally, Switzerland is thought to be second only to Japan in terms of the number of people who have reached 100. According to the study conducted by the Institute for Social and Preventive Medicine, about 40 out of every 10,000 people born in 1900 in Switzerland made it to their 100th birthday. Life expectancy has increased by 98 per cent for men and 96 per cent for women in the past century and a half. A slight dip was due to an influenza epidemic in 1918.

Swiss women live longer than men, clocking up an average of 83 years, whereas males can expect to make it to their 77th birthday. Factors that shortened male life spans included smoking and alcohol. High standards of living were the most important factor in ensuring longevity.

Another factor was that neutral Switzerland, unlike many other European countries, did not suffer major loss of life during the two world wars. Other research has established that life expectancy around the world has more than doubled over the past two centuries. This could mean average life expectancy in developed countries will reach 100 in 50 years' time.

Switzerland has the highest life expectancy in Europe at 83.7 years, according to Eurostat. On a regional level, only Madrid in Spain, where people can expect to live until 85.2 years old, tops the Swiss canton of Ticino (85 years).

In its latest breakdown of life expectancy, the European Union's statistics portal found that on a regional level, Spain came out tops: it had three regions in the top five. Switzerland also did well, as did Italy.

# Switzerland Tops Longevity League in Europe

	REGION	COUNTRY	VALUE
1	Community of Madrid	Spain	85.2
2	<b>Ticino</b>	<b>Switzerland</b>	<b>85.0</b>
3	Castile-León	Spain	84.3
4	La Rioja	Spain	84.3
5	Trentino	Italy	84.3

## *Life expectancy in Europe: top 5 regions*

Within Switzerland, the area with the highest life expectancy after the southern Italian-speaking canton of Ticino was the Lake Geneva region, at 84.2. This actually puts Lake Geneva just below Trentino in the rankings, along with the Île de France around Paris. Next in line for Switzerland was Central Switzerland, with a life expectancy of 84, so still among the top 15 regions in Europe.

# Switzerland Tops Longevity League in Europe

After that came Zurich at 83.9, followed by the northwest (Basel area, Aargau) at 83.6, and eastern Switzerland (from Glarus to Thurgau, includes St Gallen) at 83.4, according to Eurostat. The last spot, although still with a very high life expectancy, was held by the “Espace Mittelland” (Bern, Freiburg, Solothurn, Neuchâtel and the Jura) at 83.1. Across Europe, most of the regions with relatively low levels of life expectancy were located in the easternmost regions of the EU. The lowest was in the Bulgarian region of Severozapaden (73.3 years).

“The figures show that there is a difference of 11.9 years between the regions with the highest and lowest life expectancy,” said Eurostat on Friday. In terms of life expectancy in countries, using Eurostat figures, Switzerland is still on top at 83.7, followed by Spain (83.5), Italy (83.4) and France, Luxembourg and Cyprus (all 82.7). The EU average is 81 years old.

According to the World Health Organization, Swiss life expectancy is 81 for men and 85 for women.



# Switzerland Tops Longevity League in Europe

Swiss men live on average the longest lives in the entire world, according to an annual report by the World Health Organization (WHO).

The World Health Statistics report, shows that a boy born in Switzerland in 2015 can expect to live on average 81.3 years, longer than men in any other of the 194 countries studied. Swiss men live a whole 12 years longer than the global average, which stands at 69.1.

Swiss women don't do too badly either, with a projected life expectancy of 85.3 years, putting them sixth in the world behind women in Spain, France, Singapore, South Korea and front-runners Japan, where women can expect to live longer than anyone else on the planet. When combined, the life expectancy average for both men and women in Switzerland is 83.4 years, placing the country second only behind Japan.

With its good health service, high standard of living, pro-family society and promotion of an active lifestyle, Switzerland frequently tops rankings related to health and aging.

Overall, global life expectancy increased by five years between 2000 and 2015 said WHO, the fastest increase since the 1960s.

*"The world has made great strides in reducing the needless suffering and premature deaths that arise from preventable and treatable diseases"* said Dr Margaret Chan, Director-General of WHO.

*"But the gains have been uneven. Supporting countries to move towards universal health coverage based on strong primary care is the best thing we can do to make sure no-one is left behind."*

# Easing the Burdens of Old Age

As the number of people suffering from dementia rises, innovative solutions are being sought to make life easier for them and their carers. Switzerland currently has the highest life expectancy in Europe, and one of the highest in the world. But longevity comes at a price. Of course, not everyone who reaches a ripe old age will necessarily end up with dementia, but growing old often means that the brain starts to deteriorate.

It may shrink, causing sufferers to become confused and forgetful, to lose their sense of space and time, and no longer be able to recognise their loved ones. It is tough – on sufferers, and also on their family and friends.

Research conducted for the Allianz Suisse insurance company suggests that by 2050 the number of people in Switzerland suffering from dementia is likely to have risen from the current 111,000 to about 266,000.

Worldwide, the number is like to be more than 115 million by the same date – three times as many as now.

About 60 percent of dementia sufferers are currently cared for at home. As the numbers rise, there is an urgent need for new ideas.

That's why the Swiss Alzheimer's Association has been calling for years for a national dementia strategy. It wants the state to find strategies and funds that will enable sufferers, their families and professional carers to "live with the illness as well as possible".

*"Stimulating the remaining abilities and the independence of dementia sufferers can significantly delay their need for help," the association says.*



*Family members often find themselves driven to their wits' end. But care homes also have to cope with large numbers of sufferers, and it is not easy for them either.*

# Easing the Burdens of Old Age

A number of aids are already available to help dementia patients achieve the greatest possible autonomy and quality of life. One is a small portable device with integrated GPS technology, which enables a sufferer to move around freely within a defined area. If they try to leave it, this triggers a text message alarm. Carers then know where the person is and how fast they are moving.

This enables patients to keep some of their old habits a little longer, and to follow their compulsion to move around. They can also carry on with some kind of social life. Another important aid is sensors, which can be fixed to such things as doors and the edges of beds. As soon as the patient gets out of bed or goes out of the door, an alarm is triggered. Knowing they will be awoken if necessary, carers can then get at least a few hours' untroubled sleep without feeling they have to be listening out all the time for what the sufferer might be doing.

*"When the right technical aids are used for the specific stage of the dementia process, the independence and autonomy of sufferers can be preserved as long as possible"* gerontologist Helmut Mazander told a conference on the security of dementia patients in Basel.

*"Dementia is normal. It's part of life. We must not try to sweep it under the carpet,"* he said. *"All too often people with dementia are shut away."*

But that is not always the case.

The Sonnweid care home in Wetzikon near Zurich is regarded as a model: dementia sufferers can move around freely within its grounds. The doors are unlocked. Only the garden is fenced. Another idea is Switzerland's first dementia village, based on Hogewey in the Netherlands. The village will have a medical practice, café, kiosk and cinema. The villagers will be able to move around freely within a protected area, giving them a feeling of independence.

# Dementia and Alzheimer's

There are more than 50 illnesses grouped under the name of dementia. Alzheimer's is the commonest form. Dementia patients suffer from loss of memory as well as other dysfunctions of the brain. Together, these lead to a loss of independence. Age presents the greatest risk of suffering from dementia.

About 8 % of over-65s are estimated to suffer from Alzheimer's or another form of dementia.

In 2050 there are likely to be more than 115 million dementia sufferers worldwide. In Europe the figures are expected to rise from 10 million today to nearly 19 million. Today in the EU there are two dementia sufferers for every 100 people in the job market aged between 15 and 64. In 2050 there are likely to be five. Switzerland today has more than 110,000 dementia sufferers. By 2050 it is likely to be 266,000 gerechnet. About 20,000 new cases of dementia are diagnosed in Switzerland every year.

Dementia in Switzerland is reckoned to cost about SFr7 billion (\$7.6 billion) per year. Dementia is usually an illness of older people, and the risk increases with age. However in rare cases, people in their 30s, 40s, and 50s may be affected.

The average Swiss boasts one of the world's highest life expectancies. Wealth, well-being and eating cheese are three of the secrets.

**Source: Swiss Alzheimer's Association**

# Social Aging

A 2014 report by the World Health Organization found Switzerland has among the highest life expectancies in the world — ranking second worldwide for men and third for women. Before we can begin to examine the technological factors, we must first factor in the social:

## Strong sense of community

Human beings are social creatures and need to spend time engaging with others, no matter how young or old they are. Various studies have shown the scary health toll loneliness and isolation can take — some say it's as bad as obesity. And there's no doubt that a strong network of family and friends is important for our mental health.

It's estimated that 96% percent of people in Switzerland say they have at least one person they could rely on in a time of need, according to the Organization for Economic Cooperation and Development. It seems it may be due in part to community involvement across the nation. The Swiss are well-educated, participate in elections and also rank their satisfaction with life as fairly high.



## Walking

Like much of Europe, many cities in Switzerland are very pedestrian-friendly and highly walkable. Though many major cities like Geneva have public transportation, many people prefer to walk. In congested cities, it can be easier than driving. For those who prefer wheels, many cities are also very bike-friendly too with bike rentals and cycling routes. And with scenic views of clear lakes and snow-peaked mountains, it's no surprise that people are so active.

With this much exercise daily on foot, whether it's strolling to the grocery store or running to the post office, the Swiss don't have to worry about gym membership in the same manner that a US American for example might. There are obvious health benefits of an active lifestyle, including improved cardiovascular function and a lowering of the risk of some diseases. Some studies suggest that walking can even cut your mortality risk.

# Social Aging

## Work-life balance

Work can be a major source of stress for many people, with hectic commutes, long workdays, difficult bosses and pressing deadlines. Stress can lead to a number of health problems, like increasing your risk of heart attack, diabetes and depression – not to mention that it literally can shorten your life.

But only around 7 percent of Swiss people in an OECD survey said they work very long hours. They also make sure to take proper lunch breaks. Most shops are closed on Sundays, literally forcing people to take a respite, while new mothers get a minimum 14-week maternity leave.

## Diet

Switzerland is home to some of the best chocolate in the world. Therefore, it's no surprise that – according to some reports – Switzerland has the highest chocolate consumption per capita of any country in the world. Now we're not suggesting you run out and eat a whole box of Cailler chocolates, but we have to point out a few health benefits of the treat. Dark chocolate is believed to have protective properties, with some studies saying it can ward off heart attacks and strokes. And other research has shown that it can actually have anti-aging benefits. In one study, participants who drank hot chocolate containing the flavanol equivalent of 3 oz. of dark chocolate every day for 12 weeks had less skin reddening after sun exposure and actually seemed to have better skin texture. We can get on board with that.

# Health Valley Cluster

## GREATER GENEVA BERN AREA HEALTH VALLEY: THE PLACE TO BE



- 450 biotech companies
- 300 medtech companies
- >500 biomedical labs
- 8 Incubators
- 16,000 highly skilled life sciences employees
- 50% of all Swiss life sciences start-ups
- Strong network of highly specialized life sciences service providers
- Presence of the Ludwig Institute for Cancer Research
- Unique infrastructures for translational and clinical developments
- Massive public investments and fruitful public-private partnerships

# Health Valley Cluster

As biotechnology gains prominence among investors, two hubs have emerged as hotbeds of innovation for the resurgent industry.

While the two-square-mile patch of South San Francisco bustles with more than 70 biotech firms, including Genentech, Amgen and Exelixis, an equally influential geography has grown along the Lemanic Arc of Switzerland and into the heart of Basel, where pharma giants like Novartis, Actelion and Roche (which acquired Genentech in 2009) have their headquarters.

“Silicon Valley has a very strong life science sector that is enriched by the undeniable strength of the Valley in IT,” said Patrick Aebischer, president of the Swiss Federal Institute of Technology in Lausanne (EPFL). “In Switzerland, the Health Valley is trying to take advantage of our unique position in micro/nanotechnology coming from a long tradition of watchmaking.”

California indeed has a very strong culture of IT stemming from Intel’s first programmable computer chip in the late 1960s. Biotechs are therefore reaping the benefits and merging science with the power of IT (i.e. bioinformatics, digital therapeutics, cloud biology and computational medicine).

Twist Bioscience and its storage of data in synthetic DNA is a good example. Koniku has also followed this trend, specializing in neuro-computing by building co-processors made of biological neurons that work alongside traditional silicon processors.

Beyond its talented horologists, Switzerland is also known for its expertise in technical engineering, which has had a considerable impact on the scientific application of micro/nanotechnology. Be it implants or nanomolecules, the country is known for its precision.

Xsensio illustrates this with its Lab-on-Skin nano-wearable devices that exploit biochemical information on the skin’s surface. In terms of microtechnology, QGel designs customized in vitro cellular microenvironments for cancer drug screening.

In terms of academic influence and support, both valleys have their fair share. Stanford and UCSF have spun out many success stories in the field of biotechnology, a phenomenon that the Swiss Federal Institutes of Technology in Lausanne (EPFL) and Zurich (ETHZ) were quick to follow.

# Health Valley Cluster

But even though Switzerland's biotechs are supported by a strong academic structure, the country lacks Silicon Valley's aggressive entrepreneurial mindset. It's not just about the research anymore.

In this highly competitive entrepreneurial climate, scientists need a comprehensive business approach to push their research onto the market. San Francisco-based IndieBio, an accelerator for biotechs, is doing just that: supporting scientists in their research as well as mentoring them on how to pitch to investors.

Nonetheless, an overzealous marketing strategy can also be detrimental, as was the case for Theranos, where the founder's charisma took precedence over actual scientific data. Fickle hypes can therefore be misleading and blow into over-valuations. This is where the risk-averseness of the Swiss pays off at times, especially in an industry as non-transparent as biotechnology.

In either case, funding is needed – something Bay Area biotechs aren't deprived of. Their funding has increased from \$1.89 billion in 2014 to \$2.76 billion in 2015, according to the MoneyTree Reports published by PriceWaterhouseCoopers (PwC) LLP and the National Venture Capital Association (NVCA). "Investments in the Silicon Valley biotech industry are on pace to reach the second highest level in MoneyTree history," states Greg Vlahos, a Life Science Partner at PwC. "This shows continued confidence from the venture community."

Unfortunately, this does not translate to Switzerland. Even though the country thrives on its private banking system, biotechs (and startups in general) are having a hard time tapping into Series A and B funding as the excess capital generated isn't effectively converted into risk capital.

"Although Switzerland places 30% of its national income into savings, two thirds of this amount are redirected into collective saving structures rather than direct investments," says Benoit Dubuis, the Director of Campus Biotech in Geneva. "However, new initiatives are gradually reversing this trend, as can be seen with projects like "Le Fond suisse pour l'avenir" (The Swiss Fund for the future), which aims to invest part of the capital collected by pension funds into venture capital."

# Health Valley Cluster

While Swiss entrepreneurs patiently wait for the implementation of these projects, a step in that direction has already been taken. Invested capital in Swiss startups has increased from CHF 450 million (\$465.6 million) in 2014 to CHF 650 million (\$672.6 million) in 2015, according to the 2016 Swiss Venture Capital Report. On the life sciences front, biotechs raised more than 63 percent in financing over the previous year, totaling an amount of CHF 310.7 million (\$319.2 million) in 2015.

## Bio funds and exits

Top VC firms like Andreessen Horowitz and Index Ventures have jumped on the bandwagon by launching sector-specific funds dedicated to life sciences. In the case of Andreessen Horowitz, the Sand Hill Road powerhouse launched a \$200 million a16z Bio Fund last year, which invests in mostly early-stage startups at the intersection of computer science and life sciences.

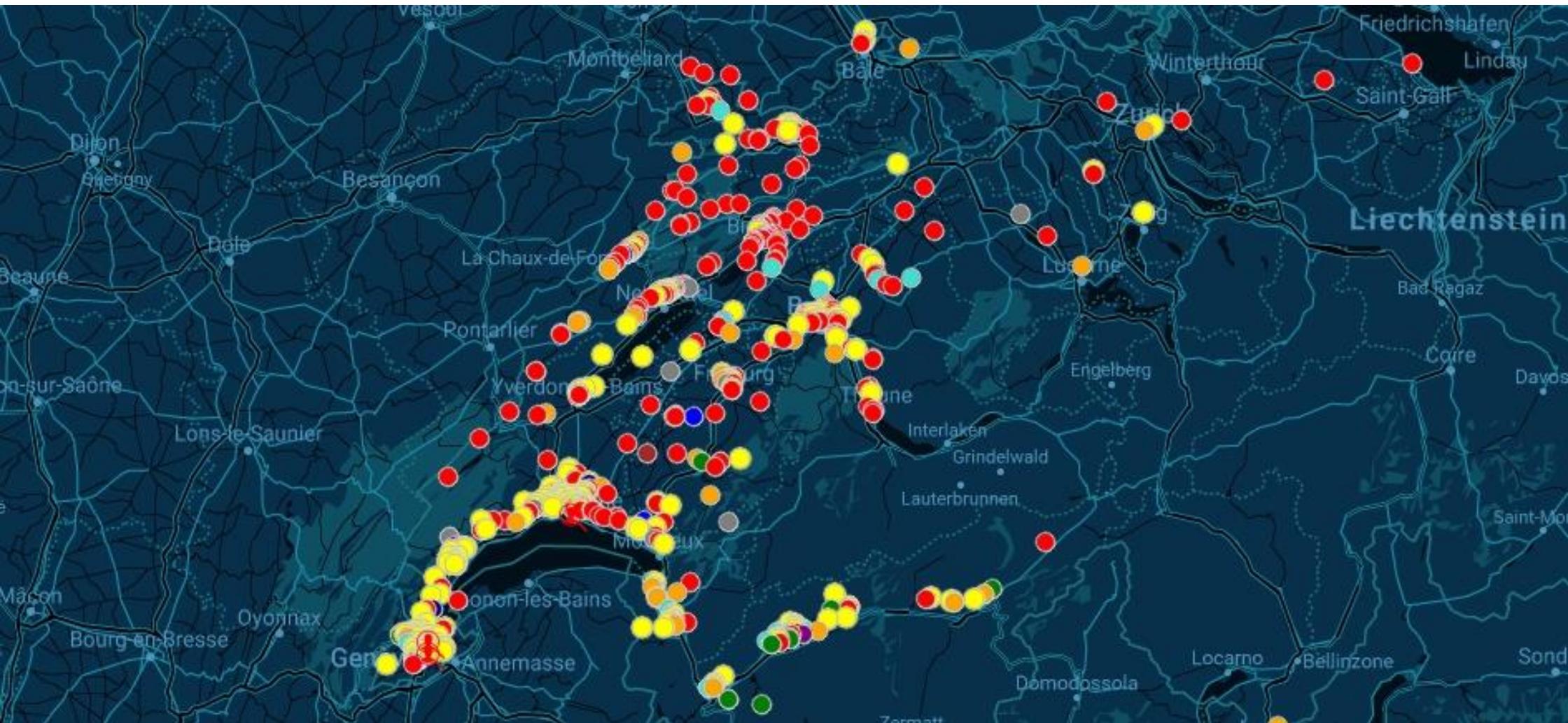
Geneva-headquartered Index Ventures set up Index Life VI in 2012, a life sciences-focused fund, which resulted in the creation of an independent venture firm earlier this year baptized Medixci Ventures. It invests primarily in Europe, with a particular focus on therapeutics.

“Although trade sales continue to be a viable exit strategy, the biotech segment of the public markets is much more robust and visible than it was 10 years ago,” explains Bruce W. Jenett, Senior Counsel in life sciences at DLA Piper LLP. “Biotech IPOs are therefore a very promising bet for liquidity.” And he is right: of the 18 venture-backed IPOs during the first 6 months of 2016, 14 were biotech companies.

In light of this, Silicon Valley is the right place to be as IPOs are rare (almost non-existent) in Switzerland. Be it the size of the market, the vibrancy of the stock market or the number of VCs, California-based biotechs have the best chance of exiting through a successful and fruitful IPO.

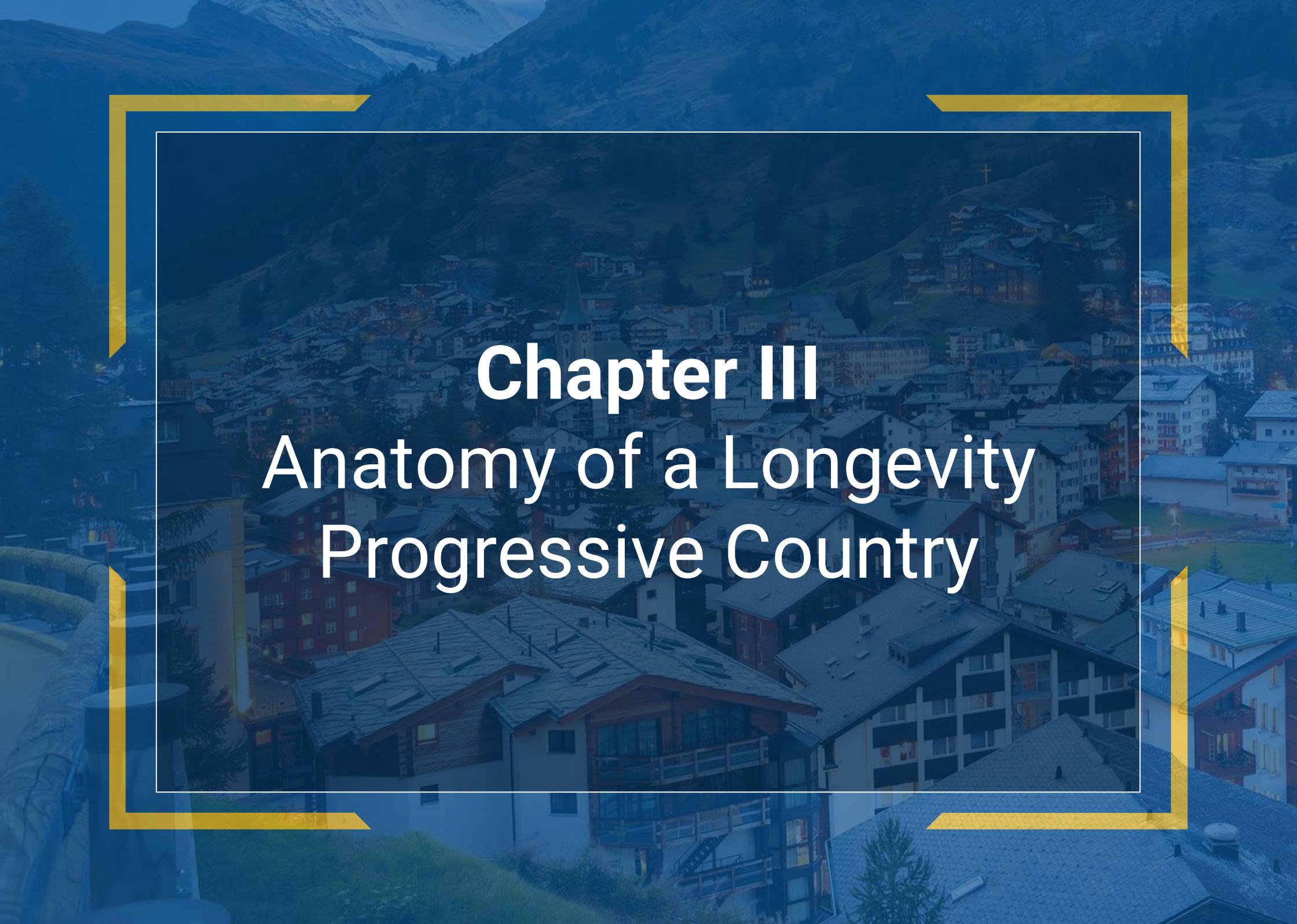
**Source: TechCrunch**

# Health Valley Cluster



**Technology and innovation parks, research centers, labs, equipment** : Western Switzerland has the advanced infrastructure necessary for companies in the life sciences sector to develop their activities. Campus Biotech in Geneva is a center of excellence for research in biotechnology and life sciences, as is Biopôle in Lausanne, specializing in oncology, immunology and personalized medicine. In Valais, BioArk supports SMEs and start-ups in transforming their projects into industrial and commercial reality and in developing their business.

**Source:** [ggba-switzerland.ch](http://ggba-switzerland.ch)

An aerial photograph of a mountain town at dusk. The town is built on a hillside, with numerous buildings featuring dark roofs and some illuminated windows. A prominent church steeple is visible in the center. In the background, a large mountain peak is visible, topped with a cross. The overall scene is bathed in a soft, blue twilight light. The text is overlaid on this image, enclosed in a white rectangular frame with yellow corner accents.

# Chapter III

## Anatomy of a Longevity Progressive Country

# Longevity Progressive Countries

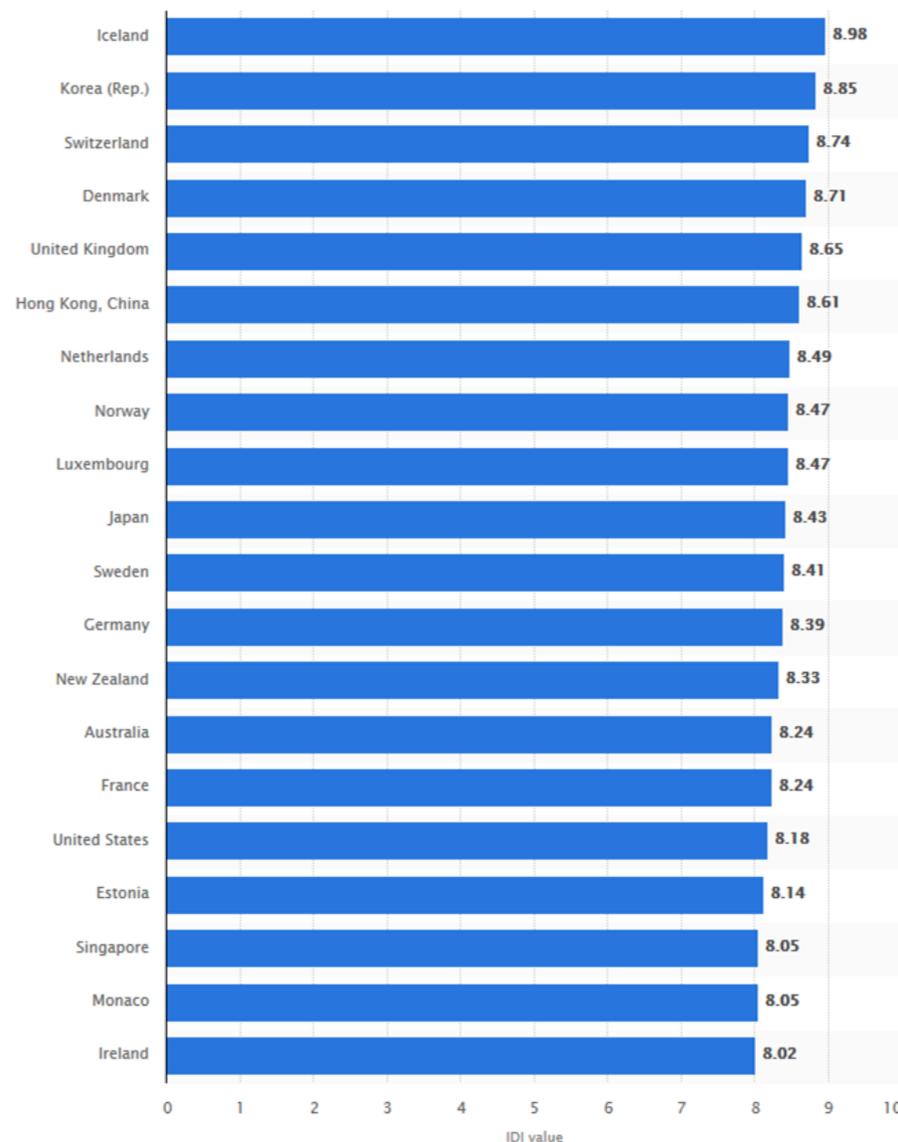
We are at the dawn of the Fourth Industrial Revolution, which will bring together digital, biological and physical technologies in new and powerful combinations.

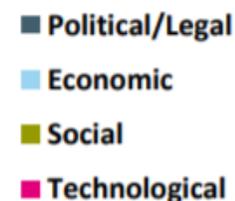
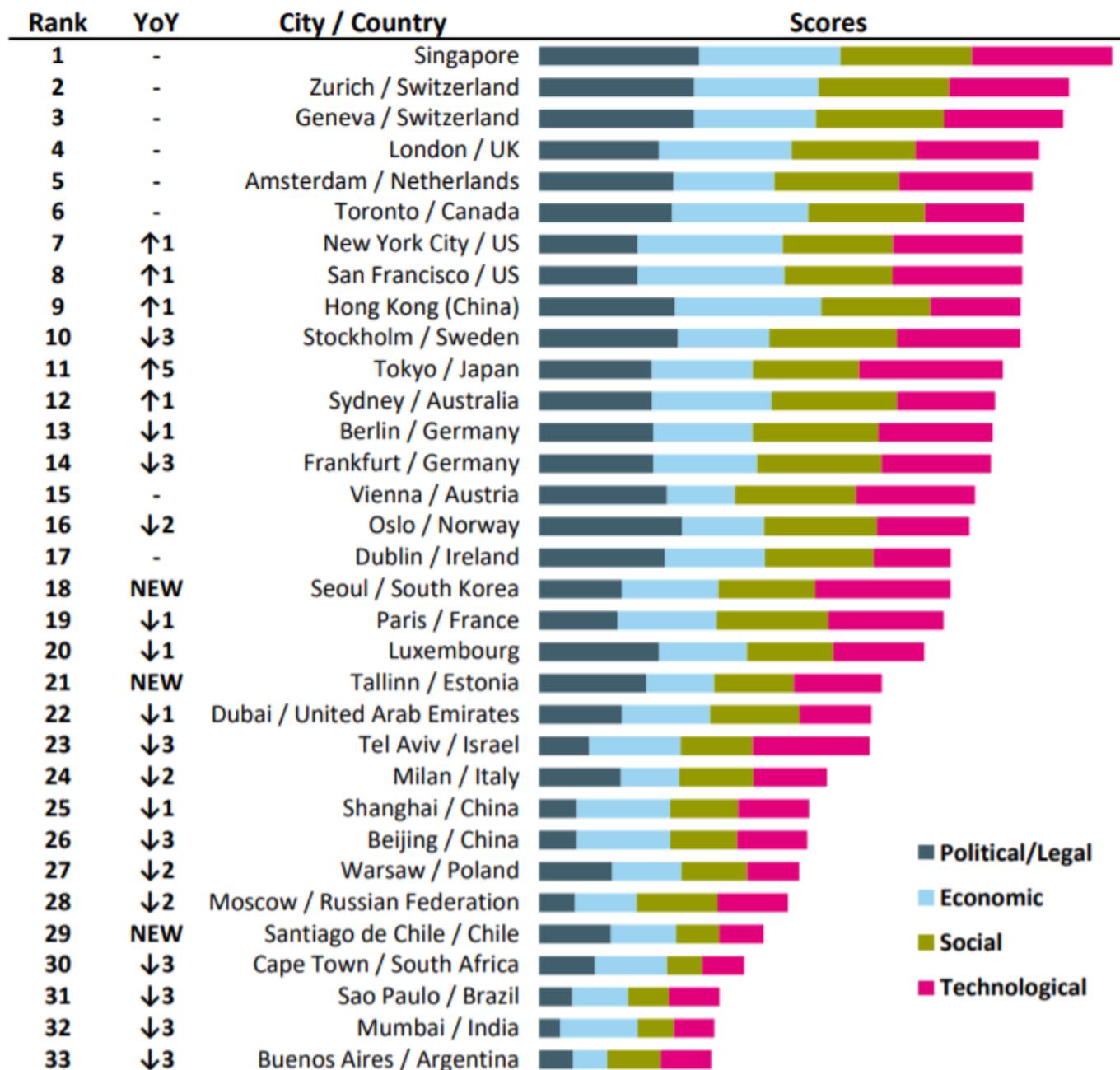
We predicted this revolution emerging from what we called 'longevity-progressive' countries, countries with the greatest incentives for advancing and integrating these four technologies. These are not simply countries with high investment in biotechnology such as the US or China, but countries most capable of integrating AI into their economic, financial, and healthcare systems.

The World Economic Forum's Networked Readiness Index is a key indicator of how countries are doing in the digital world. It measures how well an economy is using information and communications technologies to boost competitiveness and well-being.

In a few years we will see ratings based on the integration of AI into economic, financial, and healthcare systems. These in turn will form the basis for a rating system that will help identify countries that are leaders in longevity.

## Information and Communication Technology (ICT) Ranking 2017





# Swiss FinTech

Switzerland has been leading transformative developments emerging from the digitalization of its banking and financial sector. Even the Swiss Board of Advisors name now digitization as the most important topic.

An estimated 10% of all European fintech businesses are now based in Switzerland, mainly in the city of Zurich.

According to the IFZ Fintech Study 2018, 2017 was the year that the Swiss fintech industry matured, with the sector becoming widely acknowledged as an important innovation driver and startups penetrating the financial system on different levels.

There were 220 fintech companies in Switzerland by the end of 2017, with 32 new companies being incorporated throughout the year. Two segments in particular have been witnessing significant growth: crypto and blockchain, and investment management.

## **A booming crypto industry**

With over a hundred companies, the crypto and blockchain industry is Switzerland's most developed fintech segment with ventures tackling multiple topics from cryptocurrencies and crypto-assets, to asset management and decentralized applications.

The willingness of political decision-makers to maintain and enhance Switzerland's attractiveness for new technologies and companies, and the government's desire to promote a sustainable crypto and blockchain economy, have largely contributed to the expansion of the Swiss blockchain sector.

The Federal Council issued a report in December 2018, providing a legal framework for blockchain, stating that Switzerland's existing rules are well suited to dealing with such new technologies but there is still a need for some amendments.

According to the IFZ Fintech Study 2018, more than half of the new fintech ventures incorporated in Switzerland in 2017 operated in the blockchain and crypto space. The majority of these companies were founded in Zug, also known as Crypto Valley for the high concentration of blockchain startups located in the municipality.

# Swiss FinTech

Switzerland appears to be growing four blockchain sub-ecosystems, which are Zug+Zürich, Liechtenstein border, Geneva+Lausanne, and Ticino + Italian border. Zug+Zürich possesses the majority of these actors and is first choice for blockchain, but Liechtenstein is an emerging concurrent region with low taxes. Finally, Geneva+Lausanne seems to possess technical talents and financial resources for a healthy environment, and Ticino could become a major Italian-speaking blockchain hub.

Swiss startups received about \$1bn in venture capital in 2016 and 2017 (publicly disclosed). Of this total round number, \$450m were invested in 2016 in Vaud, and \$300m in 2017. Those two figures suggest that investors are highly interested in the Swiss “Health Valley” and its associated technology. Zürich witnessed a growth from \$110m in 2016 to \$270m in 2017, mostly due to FinTech. This reinforces the idea that Lausanne and Zug-Zürich regions attract different types of activities.

Blockchain applications not related to finance are especially likely emerge from the Lausanne region! Notably, blockchain applications linked to medicine or life sciences might have more chance to emerge from Lausanne than Zürich.

Finally, Geneva brings an indisputable financial brick to the Vaud canton. Geneva-Lausanne are about 60km or 45min by train from each other, which also makes a small Swiss sub-ecosystem. While no remarkable tax incentives exist at the bottom left part of Switzerland, Geneva is said to be becoming a great FinTech hub (just after Singapore and even Zürich). Lausanne could be discarded as an effective blockchain hub alone, but its coupling with Geneva increases its attractiveness for investors.



# Swiss Cantonal System: Healthcare and Precision Medicine

**The cantonal system was described as a disadvantage in earlier chapters because it makes coordination of precision medicine more difficult.**

**But its subsidiarity and lack of bureaucracy makes it more agile, and makes things like health and welfare easier to mobilise.**

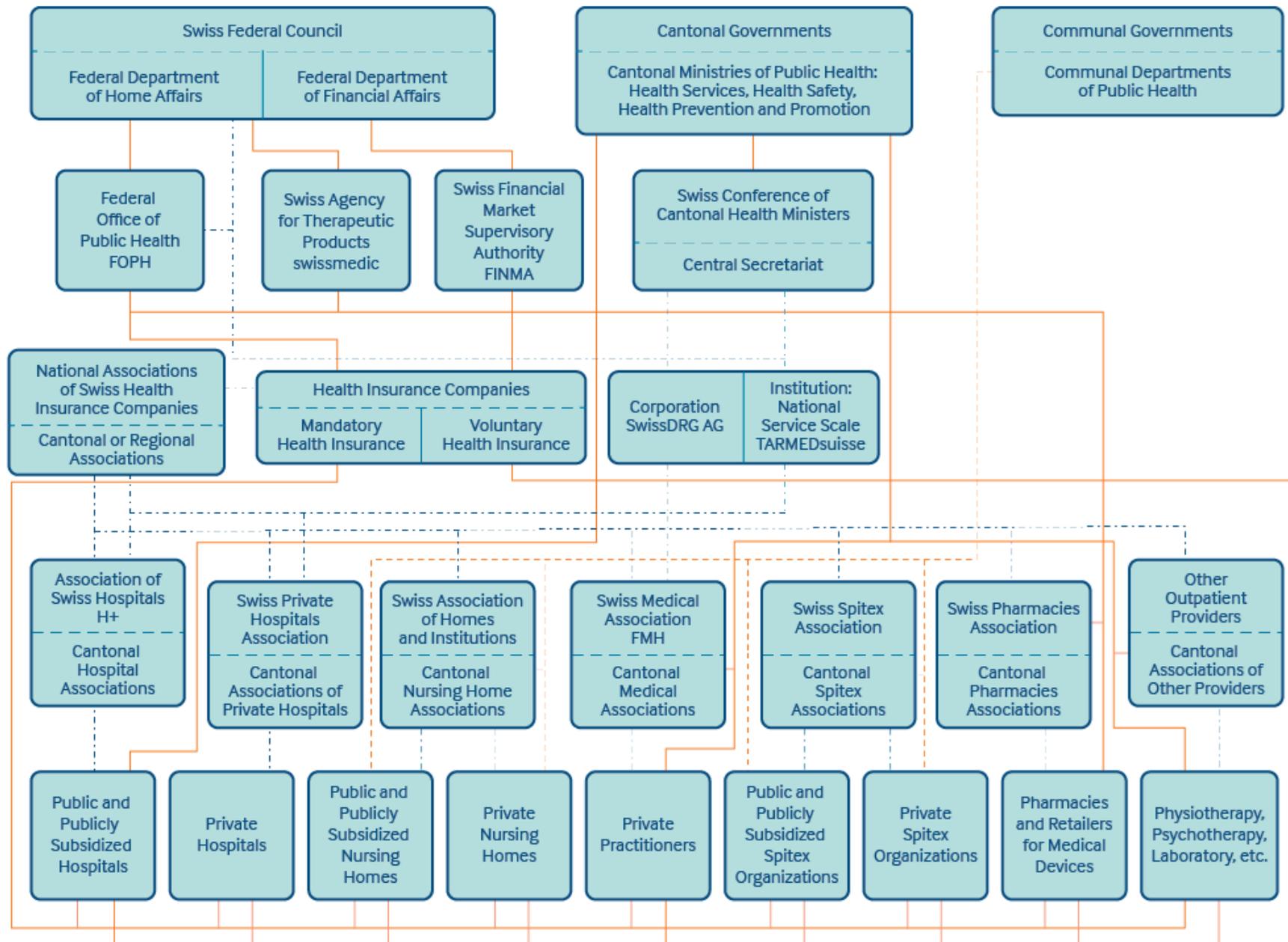
Switzerland spends the highest percentage of GDP on healthcare (around 11.4 percent) compared to all EU countries. Basic health insurance is compulsory in Switzerland, although you are free to choose your own Swiss health insurance company. In the EU's latest statistics, Switzerland was the only country compared to the EU to total more than EUR 4,500 per inhabitant on healthcare expenditure.

The OECD reports that Switzerland's healthcare expenditure is the second highest among all OECD countries (along with the Netherlands), with the US in first place, totalling almost double the OECD average spent per inhabitant.

Out-of-pocket spending, however, accounted for just over a quarter of all health spending, which is relatively high compared to the OECD average of 19.5 percent and neighbouring countries such as Austria (17 percent), Germany (13 percent) and France (7 percent).

Healthcare is largely organised by Switzerland's individual communes. The health ministers from all cantons form the Swiss Conference of the Cantonal Ministers of Public Health (GDK), which aims to promote cooperation and implement common policies between cantons.

# Organization of the Health System in Switzerland



Source: P. Camenzind, Swiss Health Observatory, 2015.

# Legal and technological barriers are significant for several European countries. Political barriers are slowly improving

## Current health data barriers, by country\*

Strength: ● Higher ● Medium ● Lower

Country	Political	Economic	Societal	Technological	Legal	Total
 Belgium	●	●	●	●	●	●
 France	●	●	●	●	●	●
 Germany	●	●	●	●	●	●
 Italy	●	●	●	●	●	●
 Netherlands	●	●	●	●	●	●
 Poland	●	●	●	●	●	●
 Spain	●	●	●	●	●	●
 Sweden	●	●	●	●	●	●
 Switzerland	●	●	●	●	●	●
 UK	●	●	●	●	●	●

\*Limited data for certain countries means that analysis of some barriers is inconclusive

Source: Cancer Atlas; WHO. 'Global eHealth survey' (2015); European Commission. 'Overview of national laws on EHR' (2013); OECD. 'Strengthening Health Info Infrastructure' (2015); Eurobarometer surveys on 'Digital health literacy' and 'Data protection'; Taylor Wessing. 'Global data protection guide', access Mar 2018; OECD 'Health Data Governance'; External interviews; A.T. Kearney analysis; IQVIA analysis

# Legal and technological barriers are significant for several European countries. Political barriers are slowly improving

## Health data profile overview (1/2)

✓ x = yes / no      ● ● ● = low / medium / high

<b>Political</b>											
eHealth national strategy	National eHealth policy or strategy	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓
	National plan or policy to implement EHRs	✓	✓	✗	-	✗	✓	✓	✗	✓	✓
	National plan or policy inc. 2° uses of data	✓	✓	-	-	-	✓	✗	-	✗	✓
EHR systems	Implementation of national EHR	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓
	Primary care facilities with EHR	70%	N/A	80%	100%	100%	15%	90%	100%	20%	100%
	Specialist facilities with EHR	80%	N/A	80%	-	100%	10%	25%	100%	-	20%
	Hospitals with EHR	75%	N/A	90%	-	100%	5%	70%	100%	90%	100%
<b>Economic</b>											
Provision of funding	Number of eHealth funding sources*	3/4	N/A	N/A	4/4	4/4	2/4	4/4	2/4	3/4	2/4
	Sum of eHealth funding amounts	100%	N/A	N/A	100%	100%	100%	100%	100%	75%	100%
	Driver of eHealth funding	Public	N/A	N/A	Public	Public	Public	Public	Public	PrivPub	Public
	Public-private partnerships for eHealth	25%	N/A	N/A	25%	25%	0%	25%	25%	25%	25%
<b>Societal</b>											
Patient trust & autonomy	Use of Internet to search for health info.	56%	63%	57%	59%	73%	60%	55%	70%	-	60%
	Knowledge of how to use health-related info. found online	88%	87%	87%	87%	91%	93%	90%	94%	-	95%
	Trust in health & medical bodies to protect data	85%	79%	77%	64%	81%	61%	74%	88%	-	81%
Training in eHealth	Health sciences students with pre-service training in eHealth	25%	-	-	25%	63%	63%	25%	75%	25%	38%
	HCPs with in-service training in eHealth	25%	-	-	63%	63%	38%	38%	75%	75%	63%
<b>Technical</b>											
Disease complex.	Quality of population-based cancer registries	●	●	●	●	●	●	●	●	●	●
	Operational national cancer plans	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Definition & standards	Defined minimum dataset	✓	✗	✗	-	✗	✓	✓	✓	✓	✓
	Structuring of data elements	●	●	●	-	●	●	●	●	●	●
	Rules on common terminology for EHR	✗	✗	✗	✓	✗	✓	✓	✓	✗	✓

EHR=electronic medical record; HCP=healthcare professional; PPP=public-private partnership; \*Public, private / commercial, donor / non-public or PPP  
 Source: Cancer Atlas; WHO. 'Global eHealth survey' (2015); European Commission. 'Overview of national laws on EHR' (2013); OECD. 'Strengthening Health Info Infrastructure' (2015); Eurobarometer surveys on 'Digital health literacy' and 'Data protection'; Taylor Wessing. 'Global data protection guide', access Mar 2018; OECD 'Health Data Governance'; External interviews; A.T. Kearney analysis; IQVIA analysis

# Legal and technological barriers are significant for several European countries. Political barriers are slowly improving

## Health data profile overview (2/2)

✓ = yes / no      ● ● ● = low / medium / high

Technical (cont.)											
Interoperability & linkage	Electronic sharing of information about patients	✓	✓	✓	-	✓	✗	✓	✓	✓	✓
	Use of unique identifying number for record linkage*	6/10	5/10	3/10	-	-	4/10	-	7/10	3/10	10/10
	Use of national data to record linkage projects*	7/10	4/10	0/10	-	-	0/10	-	7/10	5/10	9/10
Quality assurance	Specific rules & standards on EHR interoperability	✓	✗	✗	✓	✗	✓	✓	✓	-	✗
	Quality audits of EHR records	✓	✗	✗	-	✗	✗	✓	✗	✓	✓
	Certification that requires vendors to (1) adopt standards & (2) use structure data	✓✓	✓✓	✓	-	✗	✗	✗	✓	✗	✓
	Incentives or penalties to support quality	●	●	●	-	●	●	●	●	●	●
Legal											
Hosting & processing	Specific rules on hosting & processing of EHRs	✗	✓	✗	✗	✗	✓	✓	✓	-	✓
	Specific authorisation to host & process EHRs	✗	✓	✓	✗	✗	✗	✗	✗	-	✓
	Legal requirement for encrypted data in EHRs	✗	✗	✗	✓	✗	✓	✗	✗	-	✗
	Specific rules for archiving duration of EHRs	✗	✓	✗	✗	✗	✗	✗	✗	-	✗
	Specific law on 2° use of data	✗	✓	✗	✓	✓	✓	✓	✓	-	✓
	Use of 3 <sup>rd</sup> parties to (1) create, (2) de-identify or (3) approve data requests for access	2/3	2/3	3/3	-	3/3	3/3	3/3	3/3	-	1/3
Patient consent	Legal rules on patient consent	✓	✓	✓	✓	✗	✗	✓	✓	-	✓
	Rules on a patient's consent to create EHRs	✗	✓	✓	✗	✗	✗	✗	✓	-	✓
	Rules on a patient's consent to share the EHR	✗	✓	✗	✗	✓	✗	✗	✓	-	✓
Access & update of EHRs	Rules on identification & access of HCPs	✓	✓	✓	✓	✗	✓	✓	✓	-	✓
	Explicit prohibitions	✓	✓	✗	✓	✓	✗	✗	✗	-	✗
	Patient right to full access	✓	✗	✓	✓	✓	✓	✓	✗	-	✗
	Patient right to modify or erase data	✗	✓	✓	✓	✓	✗	✗	✗	-	✗
Data protection	Requirement for DPO (pre-GDPR)	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
	Breach notification requirement	✗	✗	✓	✓	✓	✓	✓	✓	✗	✓
	Cyber security law	✗	✓	✓	✗	✗	✗	✗	✗	✗	✗

EHR=electronic medical record; DPO=data protection officer; HCP=healthcare professional ; \*Out of 10 types of data that can be linked

Source: Cancer Atlas; WHO. 'Global eHealth survey' (2015); European Commission. 'Overview of national laws on EHR' (2013); OECD. 'Strengthening Health Info Infrastructure' (2015); Eurobarometer surveys on 'Digital health literacy' and 'Data protection'; Taylor Wessing. 'Global data protection guide', access Mar 2018; OECD 'Health Data Governance'; External interviews; A.T. Kearney analysis; IQVIA analysis

[www.efpia.eu](http://www.efpia.eu)

# Data sharing is across health care centres due to regional disparities, but encrypted identifiers are enabling linkage

## Health data profile: Switzerland (1/2)



✓ x=yes / no      ● ● ● = low / medium / high

Political		
eHealth national strategy	National eHealth policy or strategy	✓
	National plan or policy to implement EHRs	✓
	National plan or policy inc. 2° uses of data	x
EHR systems	Implementation of national EHR	✓
	Primary care facilities with EHR	20%
	Specialist facilities with EHR	-
	Hospitals with EHR	90%
Economic		
Provision of funding	Number of eHealth funding sources*	3/4
	Sum of eHealth funding amounts	75%
	Driver of eHealth funding	Private /Public
	Public-private partnerships for eHealth	25%
Societal		
Patient trust & autonomy	Use of Internet to search for health info.	-
	Knowledge of how to use health-related info. found online	-
	Trust in health & medical bodies to protect data	-
Training in eHealth	Health sciences students with pre-service training in eHealth	25%
	HCPs with in-service training in eHealth	75%
Technical		
Disease complex.	Quality of population-based cancer registries	●
	Operational national cancer plans	✓
Definition & standards	Defined minimum dataset	✓
	Structuring of data elements	●
	Rules on common terminology for EHR	x

- **eHealth Suisse** is responsible for **coordinating the work of four working groups** on standards & architecture, pilots & implementation, & education in EHRs – this was established in 2008
- **Encrypted identifiers**, created by Swiss cantons via algorithms, are provided to the Federal Statistical Office (FSO) to enable **linkages**
- The FSO is seeking the opinion of the Swiss national Office of Data Protection to determine the **legal authority to process data** using the **Social Security Number**
- In 2015 the Swiss Federal Parliament passed a law that makes **adoption of interoperable EHRs** in hospitals & nursing homes mandatory, & they must be **compatible with national standards**; it came into effect in **April 2017**
- Differing regional needs in Switzerland mean that **data sharing capabilities** in hospitals are **dispersed**
- 3 sources (public, private, PPP) provide eHealth funding
- **Public funding** provides less than 25% of eHealth funding; **private & public funding** are the main drivers
- Until 10-15 years ago, funding for data sources was **mostly local & ad hoc** which lead to **inefficiencies**
- More systematic **national & regional funding** was spurred on by government recognition of the importance of **using RWD to evaluate quality of care**
- Students have **less eHealth training**, & **HCPs more**, than other EU countries
- **HCPs are provided with eHealth education programmes** that specifically offer training in digital & data analytics

# Data sharing is across health care centres due to regional disparities, but encrypted identifiers are enabling linkage

## Health data profile: Switzerland (2/2)



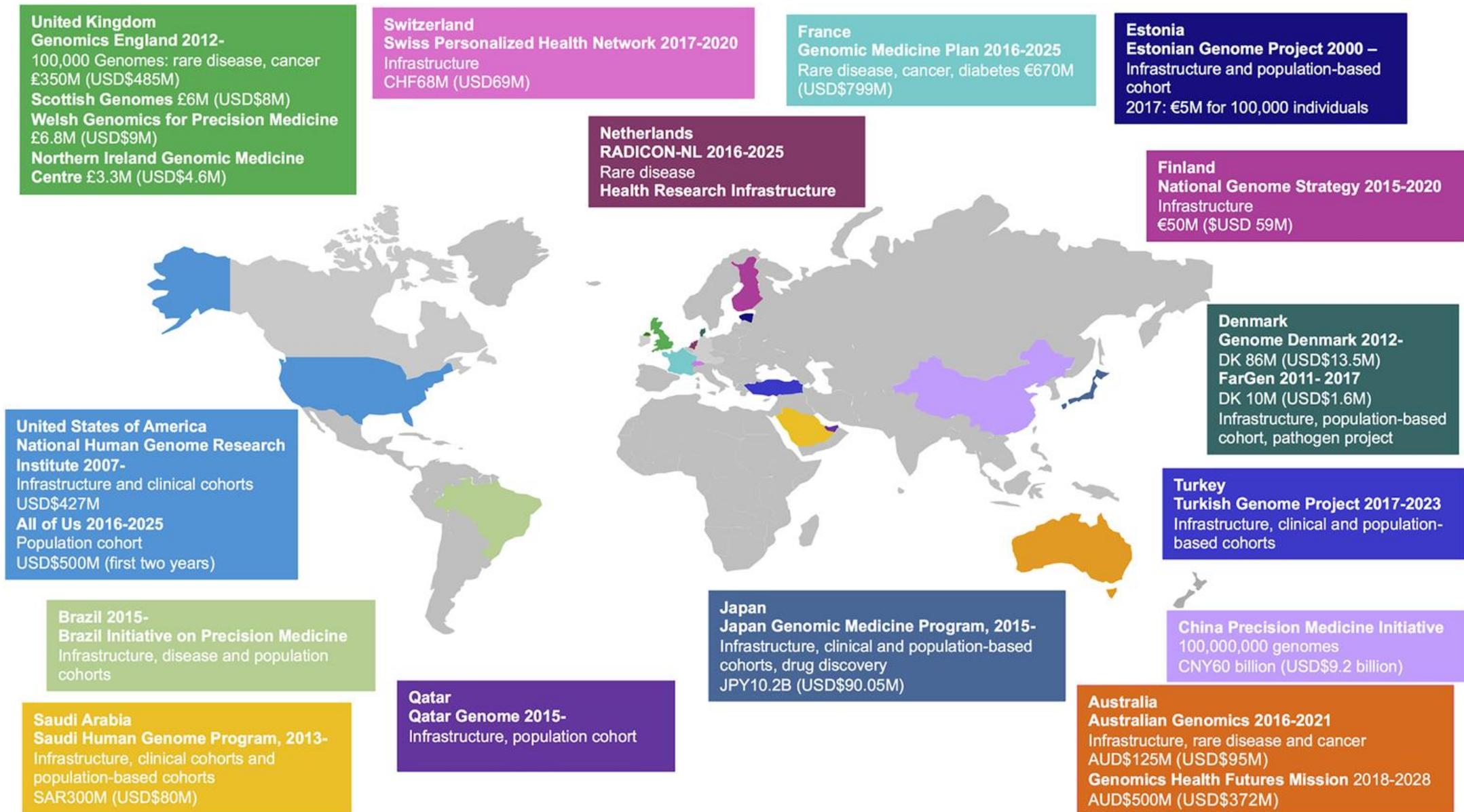
✓x=yes / no      ●●● = low / medium / high

Technical (cont.)		
Interoperability & linkage	Electronic sharing of information about patients	✓
	Use of unique identifying number for record linkage*	3/10
	Use of national data to record linkage projects*	5/10
	Specific rules & standards on EHR interoperability	-
Quality assurance	Quality audits of HER records	✓
	Certification that requires vendors to (1) adopt standards & (2) use structure data	x
	Incentives or penalties to support quality	●
Legal		
Hosting & processing	Specific rules on hosting & processing of EHRs	-
	Specific authorisation to host & process EHRs	-
	Legal requirement for encrypted data in EHRs	-
	Specific rules for archiving duration of EHRs	-
	Specific law on 2° use of data	-
	Use of 3 <sup>rd</sup> parties to (1) create, (2) de-identify or (3) approve data requests for access	-
Patient consent	Legal rules on patient consent	-
	Rules on a patient's consent to create EHRs	-
	Rules on a patient's consent to share the EHR	-
Access & update of EHRs	Rules on identification & access of HCPs	-
	Explicit prohibitions	-
	Patient right to full access	-
	Patient right to modify or erase data	-
Data protection	Requirement for DPO (pre-GDPR)	x
	Breach notification requirement	x
	Cyber security law	x

- Switzerland specified a **minimum dataset in 2009**, such that **90% of all patients** have an EHR containing it
- National EHR adoption laws that came into force in April 2017 required both **patients & healthcare** providers to have a **unique electronic ID**, to enable EHR sharing & linkage across databases
- **Data linkage** is conducted with **5-6 national databases** using data which has the unique electronic patient ID
- Data across **1-2 key national datasets** is linked for **statistical analysis & research purposes**

- When data files are provided to an external researcher, a contract with the FSO binds them to **protect the data following given guidelines**; if these guidelines are infringed, **data must be destroyed**
- **No audit of external researchers** takes place, but publications & case studies are **tracked for adherence** to the agreed-upon purpose of the study
- A new national law set **certification requirements** for communities of health care providers to follow, in order to **share records with others**; the law aims to ensure **regional systems will be interoperable**

# Swiss Cantonal System: Healthcare and Precision Medicine



# Conclusions

**The cantonal system is a double-edged sword, because:**

- On the one hand, the diversity of health data infrastructures slows development of a nationwide personalised health ecosystem.
- The health and social care system is lean and efficient, and often run at a commune level. The most successful system of healthcare in the western world.

**Therefore, Switzerland should:**

- Take advantage of its small size to implement a national plan for coordinating a precision health ecosystem across the cantons.
- Develop a Longevity progressive health, pension and social care system and insurance company ecosystem.
- Advance its FinTech to a state so advanced that it propels Switzerland into a central role in the internationally competitive position in the emerging Longevity business ecosystem, emerging as a financial leader

**The next chapter examines the measures taken at a government level thus far.**

An aerial photograph of a Swiss village at dusk, with mountains in the background. The village is built on a hillside, and the buildings are illuminated by warm lights. The sky is a deep blue, and the mountains are silhouetted against the twilight. The text is overlaid on the center of the image, framed by a white border and a yellow decorative frame.

# Chapter IV

## Swiss Government Involvement in Longevity

# Why Switzerland?: Political System

## Swiss government involvement in Longevity

- 2010 **National Platform for Palliative Care Strategy**  
The Confederation and cantons have promoted palliative care in Switzerland in a national strategy.
- 2012 **Elderly Care Bank established**  
St Gallen the first Swiss city to introduce a novel banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people.
- 2013 **Masterplan for the Promotion of Biomedical Research**  
The plan impacts the entire chain, from research and development, clinical research, market entry for biomedical products, and pricing and reimbursement by social security, all the way to the availability of these products in day-to-day healthcare.
- 2014 **Retirement 2020**  
Swiss government advocates that “living longer means working longer”.
- 2016 **Roadmap 2016–2021**  
For developing the next generation of clinical researchers
- 2017 **2017 Swiss Personalized Health Network (SPHN) established.**
- 2018 **Masterplan for the Promotion of Biomedical Research renewed**  
**The VIA project launched**  
The overall goal of the VIA project is to promote the health of older people and to strengthen their self-determination and independence in order to maintain or improve their quality of life and overall well-being, allowing them to continue living at home for as long as possible.
- 2019 **SPHN was chosen by Global Alliance for Genomics to becomes one of the 7 main international organisations that work to create frameworks and standards to enable voluntary and secure sharing of genomic and precision medicine data.**



# Swiss Government Intervention in Context



## General metrics

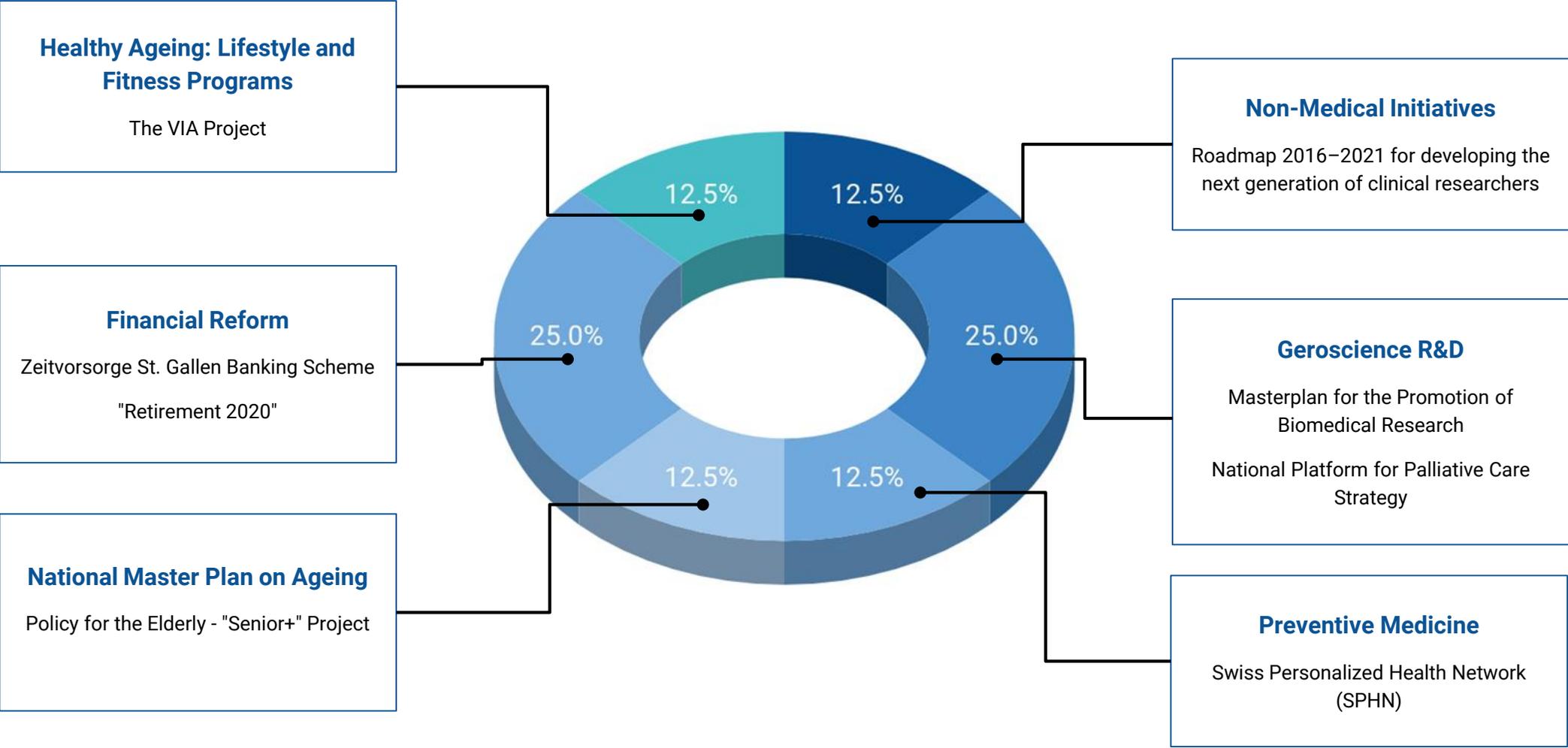
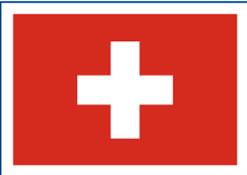
Life Expectancy	Both sexes life expectancy (2019)	81.8 years
	Male life expectancy (2018)	81.2 years
	Female life expectancy (2018)	85.2 years
GDP	GDP per capita, current prices (2018)	82.41 thousand (\$)
	GDP per capita, PPP (2018)	65.71 thousand (\$)
	GDP, current prices (2018)	707.54 billion (\$)
Population Ageing	Rate of population ageing	1.9 (2007-2017)
	Aged over 65 (2018)	18.34%
	Age dependency ratio (2017)	28%
Healthcare Efficiency	Health expenditure (2017)	12.3% of GDP
	Health expenditure per capita (2017)	8.009 thousand (\$)
	Healthcare efficiency score (2018)	58.4
Retirement	Total # retired	1 560 790
	Retired people proportion	18%
	Normal retirement age (Man/Woman)	65 years/ 64 years
	Early retirement age (Man/Woman)	63 years/ 61 years

## Longevity Initiatives



- Age of relevant initiatives: **15 years**
- **3** of WHO age-friendly cities and communities
- **4** initiatives focused on non-medical improvement of quality of life
- **1** initiative focused on preventive medicine and healthcare approaches
- **2** initiatives involve research or R&D of medicines that directly impact on ageing

# Swiss Government Initiatives Comprehensiveness



### Underrepresented Initiatives

AgeTech	Elderly Healthcare Vouchers	Longevity Industrial Strategy	Continuing Education
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# Swiss government Policy and Precision Medicine

## Precision medicine globally

In view of its potential and the high expectations and promises for global health, it is not surprising that worldwide numerous national initiatives have been launched over the past decades to foster the development of personalised health. For example, as early as 1999 the Estonian government decided to create a population-based biobank that has the right “to collect, store and use biological samples and phenotype information for genetic research and is further expected to use the results to improve public health” . Since this innovative and future-oriented decision, Estonia has reached further milestones towards personalised medicine, including the development of a **nationwide technical infrastructure** allowing secure electronic exchange of medical information, as well as accessibility of medical data from hospitals, primary care physicians and pharmacies in a strictly regulated manner.

Meanwhile other countries with universal health care and comprehensive medical registers have developed similar precision medicine programmes on a national scale, including Denmark, France, the Netherlands, Sweden and the United Kingdom. The UK government mandated the Department of Health to initiate the 100 000 Genomes Project, the goal of which is to sequence 100 000 genomes from National Health Service (NHS) patients by the end of 2017, and thereby “to create an ethical and transparent programme based on consent, to bring benefit to patients and set up a genomic medicine service for the NHS, to enable new scientific discovery and medical insights”. On the European level the International Consortium for Personalized Medicine (ICPerMed) was established following the PerMed project funded by the European Union's 7th Framework Programme (FP7). The consortium is composed of over 30 European and international partners representing ministries, the European Commission, and funding agencies. ICPerMed aims at positioning Europe as global leader in personalised medicine research by providing a platform where members can exchange and coordinate research and funding activities at the European level and later at the global level . Outside Europe, a Precision Medicine Initiative (PMI – renamed “All-of-Us”) was launched in the USA in 2015 . As part of its objectives, the initiative aims to create a voluntary national research cohort of 1 million participants, to provide better treatments for cancer via the identification of genomic drivers, to modernise the regulatory landscape, and to partner with relevant private and public actors. This initiative has highlighted the importance of public participation in research and has reinforced the idea of partnership with research participants as a driver of the initiative. And even more impressive, China announced the launch of the “China Precision Medicine Initiative” in March 2017 with an estimated budget of US\$9.2 billion over 15 years, indicating that China is about to take the global lead in precision/personalised medicine.

# Swiss government Policy and Precision Medicine

## Precision medicine in Switzerland

Switzerland does not yet have a strong international presence in precision/personalised medicine and/or health. Undoubtedly, Switzerland has an excellent, albeit expensive, healthcare system. Also, the Swiss institutions of higher education (For example universities, **ETH Zurich**, **EPF Lausanne** have excellent reputations in science and education). Although the public Swiss healthcare system is universal, healthcare is provided by a combination of public, subsidised private and totally private systems, and is organised largely on the level of individual cantons. This federalist principle, which also applies to the Swiss education system, until now to a large extent prevented a nationwide coordination and/or harmonisation of biobanks, electronic clinical information systems and clinical data management infrastructures. This heterogeneity of health data infrastructures has retarded the development of a nationwide personalised health ecosystem as compared to countries with more homogenous national health systems (see above).

However, the deficiencies have been realised and appropriate initiatives have been undertaken on local and regional levels. In 2013, “Health 2030”, a multicentre and multidisciplinary initiative was started by several institutions in the Lake Geneva region to promote research, training and services in the field of digital and personalised health in western Switzerland.

The Universities and University Hospitals of Geneva, Lausanne and Bern, as well as EPF Lausanne, have decided to team up to create the first genome centre in Switzerland. This centre will further develop genome expertise in Switzerland and make gene sequencing (DNA decoding and analysis) more accessible, thus contributing to the development of personalised health care. In the eastern part of Switzerland, the University of Zurich and the ETH Zurich founded in 2014 a **competence centre for personalised medicine**, which drives the development, complementary to the Lake Geneva centre, special expertise in proteomics and metabolomics. This centre has recently been extended to the Zurich-Basel Health Alliance.

# Swiss government Policy and Precision Medicine

These initiatives demonstrate that Swiss scientists and clinicians have realised the necessity to team up to be able to perform personalised health-related research on an internationally competitive level. Moreover, a **Swiss Biobanking Platform (SBP)** has been created “to help Switzerland consolidate its position at the forefront of biomedical research by facilitating access and optimal usage of its existing and future biobanked specimens”.

What is now needed are close links between biobank samples and clinical disease phenotype data. Furthermore, the local/regional initiatives have to be expanded to the whole of Switzerland and complemented with a nationwide effort for making health data (For example clinical, molecular, laboratory, and imaging data) findable, accessible, interoperable and usable for research (FAIR) on a national scale. For this purpose, the **Swiss Personalized Health Network (SPHN)** initiative was launched in 2017. It will help to push Switzerland to the international forefront of personalised health-related research and health care.

## **The Swiss Personalized Health Network (SPHN) initiative Mission**

The mission of the SPHN initiative is to promote the development of personalised medicine and personalised health on a national scale in Switzerland.

SPHN will lay the foundations that are needed to facilitate research projects in this area, such as the development of a nationally coordinated interoperable data infrastructure to enable nationwide accessibility and exchange of health-related data. Rather than creating a centralised database, SPHN will build a dynamic network of existing data sources and fund the efforts that are needed in order to make data nationwide interoperable and sharable for research. The ultimate goal is to promote personalised health and wellbeing, by being able to prevent, diagnose and treat unfavourable individual health conditions more precisely. This will allow the risk of developing such conditions to be reduced and permit more effective treatments of disease states with fewer adverse events. Ultimately, the SPHN initiative shall lead to the development of a personalised health ecosystem on a national level, which is required to advance effective individual prevention and treatment of disease states.

# Masterplan for Promotion of Biomedical Research

It is the job of the federal administration to maintain and develop as good a framework as possible for biomedical research and technology, and at the same time to enable people in Switzerland to physically benefit from the achievements of biomedicine and give them affordable access to the latest biomedical products. The FOPH plays a key role in this. It is responsible for the legal framework (for example in relation to human research, therapeutic products, cancer registers and e-patient dossiers), and is charged with ensuring that the healthcare system remains high-quality, effective and affordable. Besides the FOPH, efforts to promote biomedicine and biomedical research also involve units of other departments, including the following:

The State Secretariat for Education, Research and Innovation (SERI), part of the Federal Department of Economic Affairs, Education and Research (EAER) is the federal administration's centre of competence for the domestic and international aspects of education, research and innovation policy. The State Secretariat for Economic Affairs (SECO), also part of the EAER, is responsible for business and economic development across industries, encouraging foreign companies to locate to Switzerland. Swissmedic, the Swiss agency for the authorisation and supervision of therapeutic products, guarantees that only high-quality, safe and effective therapies are marketed in this country. The Swiss Federal Institute of Intellectual Property is the federal centre of competence for all matters related to patents, trademarks, indications of source, the protection of designs, and copyright.

In response to requests from parliament, in 2013 the Federal Council presented a package of measures designed to boost Switzerland as a centre of biomedical research and technology. The master plan contains more than 20 actions covering the promotion of research and innovation, market entry, health insurance reimbursements, rare (orphan) diseases and intellectual property. The Department of Biomedicine at the FOPH is responsible for coordinating the master plan. The Federal Council decided in December 2018 to continue the master plan.

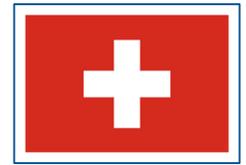


Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

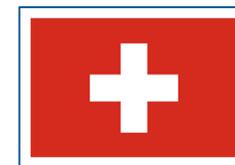
# Swiss Personalized Health Network (SPHN)



# Swiss Personalized Health Network (SPHN)

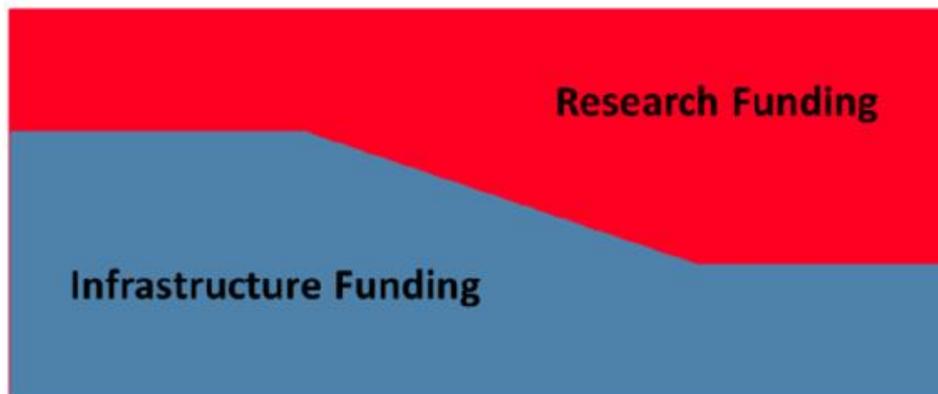


The main goal of the SPHN initiative is to bring Switzerland at the forefront of personalized health research by establishing nationwide interoperability of biomedical information. Data sharing must be the guiding principle.

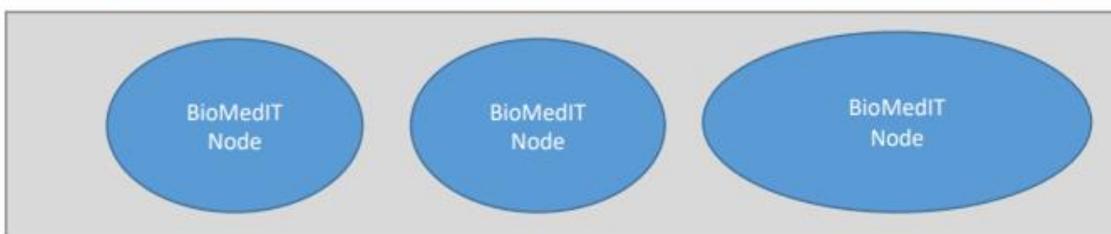


## Infrastructure Implementation Projects.

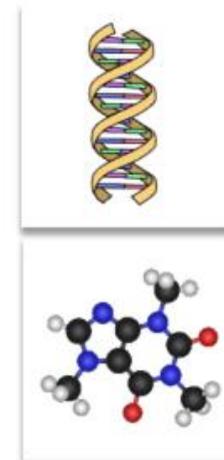
Data Management  
Infrastructure at Hospitals



Secure Research  
Environment (BioMedIT)



Universities



Strategic Focus Area  
**Personalized Health  
and Related Technologies**



Swiss Institute  
Bioinformatics

# Elderly Care Bank

The city of St Gallen in Switzerland has introduced a novel banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people.

In return they can use any time saved up for their own care provision later in life. The St Gallen government hopes the pilot project will lower social service costs and encourage local solidarity as it copes with a steadily ageing population.

Under the proposed scheme, a retired person in good health who has time on their hands can provide care and support for elderly locals in need. Every hour worked is recorded as a “deposit” on a special personal account, which can later be used to pay for care workers’ time when the volunteer in turn needs assistance.

The idea for the project emerged as a result of the new situation facing many local authorities.

“We haven’t noticed a reduction of solidarity in Switzerland. But it’s more about greater individual mobility and new family structures; family ties and networks are not as resistant as in the past. It’s therefore important to look for help from outside the family circle,” explained Ludwig Gartner, deputy director of the insurance office.

The bank is part of the Swiss tradition of time banking. Such programs are primarily regional, with around 40 different time exchanges in operation countrywide. This limits your opportunities for earning and spending time.

Time banking initiatives in Switzerland include Zürich Tauscht (Zurich), Zeittauschbörse Basel, Luzerner Tauschnetz (Lucerne), Zittbörse Chur und Umgebung (Chur), ZeitTausch Solothurn, Zeitbörse Benevol (St. Gallen), Scambio di Favori (Ticino), Zytbörse Thun, Tauschnetz Länggasse Bern, Tauschnetz Freiburg (Fribourg), Give&Get (Winterthur), and TALENT (Basel, Biel, St. Gallen, Zug, Aarau).

An aerial photograph of a mountain town at dusk, with a blue color overlay and a yellow frame. The town is built on a hillside, with many buildings and a church spire visible. The text "Chapter V Media and Conferences" is centered in the image.

# Chapter V

## Media and Conferences

# Vontobel Prize for Aging Research



Once a year, the Center for Gerontology of the University of Zurich awards the Vontobel Award for Research on Age(ing) endowed by the **Vontobel Foundation**. The award can be given to one or more persons for completed, publishable or published work of excellent quality in the format of a journal article. The principal goal of the award is to support gerontological research in Switzerland originating from any field of science referring to age(ing). One purpose is to encourage knowledge transfer between research and practice – specifically, to acquire information from basic research for practical issues and, vice versa, to gain practical experience in order to serve research. They also support the scientific evaluation of gerontological practice.

Another important scope is to make this knowledge public and to improve the understanding of aging throughout society in order to demonstrate possibilities for solidarity among different generations, age groups and professionals within the field of gerontology.

The Vontobel recognizes researchers who demonstrate outstanding achievements in the field of gerontology and aging research. Dr Marcello Ienca from the Health Policy Lab of ETH Zurich is the winner of the recognition prize 2018 for his research on intelligent assistive technologies for the care of older people and people with dementia. The Vontobel Prize is an annual award presented by the Center for Gerontology and supported by the Vontobel Foundation.

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# Personalized Health Technologies and Translational Research Conference 2018

Personalized Health Technologies and Translational Research was a conference on personalized health tools & technologies, addressing the community providing services to biomedical and translational researchers and the translational research for health care in and around Switzerland. The conference brought together experts from multiple disciplines to explore present and future directions in the field of personalized health technologies and translational research. The goal was to tackle challenges in chemical hit identification, lead development, molecular circuit analyses, clinical bioinformatics, and multivariate statistics, as well as their application in innovative clinical personalized health approaches in oncology, immunology, infectious diseases, neurology, and cardiology.

The event took place June 18 to 21, 2018 at ETH Zurich, Switzerland.



# Credit Suisse Global MegaTrends Conference 2018

# CREDIT SUISSE



## Credit Suisse Global Megatrends Conference

April 18, 2018, Fairmont Singapore

The Global Megatrends Conference hosted by Credit Suisse brings together experts and thought leaders in the world of business and politics to meet and share their insights in the latest megatrends that are likely to shape the future of investments, among which was listed the demographic challenge.

The sixth Credit Suisse Global Megatrends Conference took place on April 18, 2018 and hosted close to 600 guests at this Private Banking APAC flagship event.

At the conference, attendees heard from 14 internationally recognized opinion leaders, sector specialists and industry experts on fundamental supertrends that are expected to impact global markets.

### Invitation

**Date:** [Tuesday, 30 October, 2018](#)

**Venue:** Soho Hotel, 4 Richmond Mews,  
London W1D 3DH

[17:30](#) **Guest registration**

**Welcome**

[18:00](#) Christian Berchem, CEO Credit Suisse (UK) Ltd

**Keynote**

[18:10](#) Pierre Bose, Head of European Strategy, Credit Suisse

**How technology is revolutionizing health care**

Dr Alex Zhavoronkov, CEO,

[18:30](#) [Insilico Medicine](#)

Jason C. Foster, Managing Director, [Health Equity Consulting](#)

Pascal Mercier, Product Specialist Thematic Equity Funds, [Credit Suisse](#)

[19:00](#) **Q&A**

[19:30](#) **Drinks reception**

# Credit Suisse Global MegaTrends Conference 2018

Credit Suisse's supertrends are investment themes that link long-term trends between today's major developments and investors' profiles. Long-term trends such as technology are expected to dominate in the coming years. The conference focused on Supertrends themes consisting of:

- The Age Of Sci-Fi & Rise Of Artificial Intelligence
- Technology At The Service Of Humans - What Does It Mean for Investors
- When Millennials Rule
- **The Silver Economy – Investing For Population Aging.**

In his keynote speech, Alex Zhavoronkov, cofounder of Insilico Medicine, which brings genomics, big data analysis, and deep learning to bear on drug discovery, responded to the 'health and aging' aspect of the demographic challenge by describing the impact of technology on healthcare.

Two sizeable demographic groups -- the elderly and millennials -- were a major focus for 2018 as the consumption needs for each group are specific, substantive and momentous. Panelists for the third session "The Silver Economy - Investing For Population Aging" discussed the seismic shift in the age composition of populations will make senior citizens one of the fastest growing consumer age group.



*From left: Professor Tommy Koh, Janice Chia, Dr Samuel Bernal, Vafa Ahmadi, Martin Soong (moderator)*

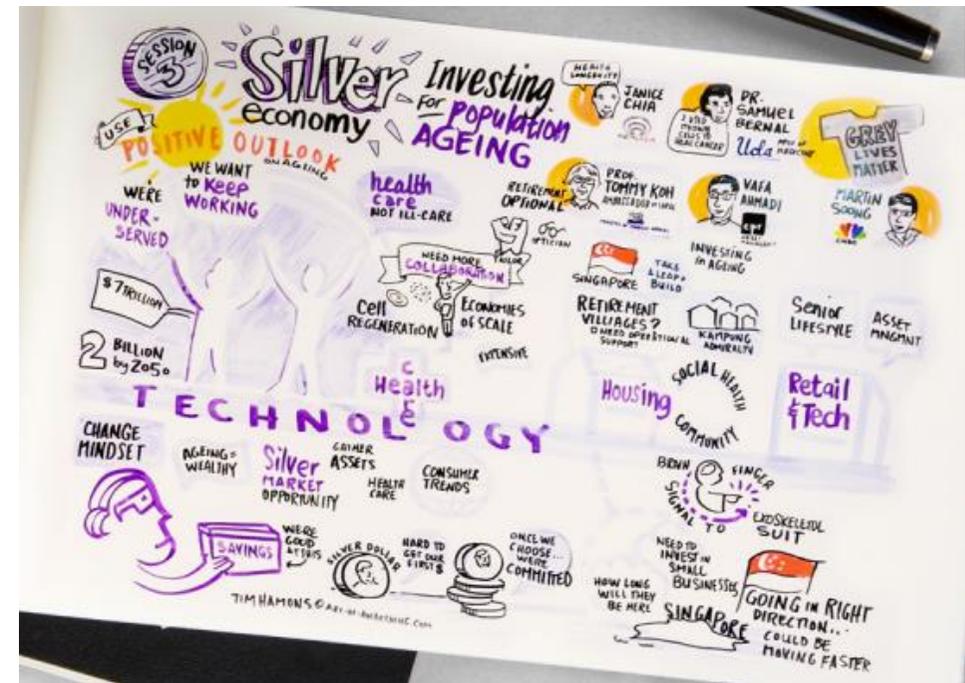
# Credit Suisse Global MegaTrends Conference 2018

“With more than two billion senior citizens aged 60 and above expected by the year 2050, the growing silver economy will pose both challenges and opportunities to businesses and governments. The elderly generation is valued at around seven trillion dollars a year, but is still largely underserved by businesses,” said Professor Tommy Koh, Singapore’s Ambassador-at-Large, at a panel session on the Silver Economy.

“The silver economy has huge potential but it is overlooked because it is a demographic that is associated with poverty and not wealth; but it’s a huge demographic. Look at the potential for doctors, housing providers and investors.

At the moment, this group is underserved,” he said. Janice Chia, Founder and Managing Director of Ageing Asia, noted that older people don’t spend just on healthcare but all products. Yet, businesses have yet to adapt their offerings for them.

“A lot of businesses are looking at the young and not the old, but baby boomers are the biggest savers. It takes a lot more patience to access the silver dollar. The first dollar is the hardest to get, but once you get it their loyalty is incredible,” she said. On the investment front, Vafa Ahmadi, Managing Director and Head of Global Thematic Equities, CPR Asset Management said that investors are also increasingly aware of the potential of the older generation. His firm manages a fund that invests in the silver economy. “More investors want to be exposed to ageing as an investment theme,” he said, adding that about half his investors are retail investors, with the rest made up of pension funds and insurance companies.



**Promotional art for Credit Suisse Global MegaTrends Conference 2018**

# WHO 69th World Health Assembly 2016



The World Health Assembly is attended by delegates from WHO Member States as well as representatives from many agencies, organizations, foundations and other groups that contribute to improving public health. Member States approve resolutions in committee before formally adopting them in the plenary session at the end of the Health Assembly.

In Geneva in May 2016, some 3500 delegates from WHO's 194 Member States – including a large proportion of the world's health ministers – attended the Health Assembly, which ended on 28 May.

They embarked on a general plenary discussion about “Transforming our world: the 2030 Agenda for Sustainable Development” and began a discussion on WHO reform. Over the following days, delegates discussed a wide range of agenda item, such as decisions relating to WHO's response to health emergencies and the International Health Regulations. They also included noncommunicable diseases and factors that can put people at risk of these diseases – or reduce their level of risk. Important decisions were made relating to childhood obesity and maternal, child and young child nutrition, as well as air pollution, tobacco control, violence and road safety.

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# WHO 69th World Health Assembly 2016

A key item on the agenda was the Global Strategy and Action Plan on Ageing and Health (2016-2020), a framework for coordinated global action by the World Health Organization, Member States, and Partners across the Sustainable Development Goals.

Over the next five years, goals include implementing existing evidence to maximize functional ability, filling the evidence gaps and establishing partnerships to ensure a “Decade of Healthy Ageing” from 2020 – 2030.

This is to be achieved through a focus on five strategic objectives:

1. **Align health systems to the needs of older populations**
2. **Ensuring a sustainable and appropriately trained, deployed, and managed health workforce**
3. **Align health systems to the needs of older populations**
4. **Develop age-friendly environments**
5. **Improve measurement monitoring and research**



## Global strategy and action plan on ageing and health (2016-2020)

A framework for coordinated global action by the World Health Organization,  
Member States, and Partners across the Sustainable Development Goals

# WHO 69th World Health Assembly 2016

## ↳ Commit to action

Fostering *Healthy Ageing* requires leadership and commitment. To ensure that the political and operational platforms exist for effective multisectoral action, collaboration is needed between government and non-government actors, including service providers, designers, and academics.

### Key actions include:

1. Establishing national frameworks towards *Healthy Ageing*
2. Strengthening national capacities to formulate evidence-based policy
3. Combatting ageism



## ↳ Align health systems to the needs of older populations



As people age, their health needs tend to become more chronic and complex. A transformation is needed in the way that health systems are designed to ensure affordable access to integrated services that are centred on the needs and rights of older people. In most care contexts, this will require fundamental changes in the clinical focus of care for older people, as well as in the way care is organized, funded, and delivered across health and social sectors.

### Key actions include:

1. Orienting health systems around intrinsic capacity and functional ability
2. Developing and ensuring affordable access to quality older person-centred and integrated clinical care
3. Ensuring a sustainable and appropriately trained, deployed, and managed health workforce

## ↳ Improve measurement, monitoring, and research

The current metrics and methods used in the field of ageing are limited, preventing a complete understanding of the health issues experienced by older people and the usefulness of interventions to address them. Focused research and improved measurement are essential to better understand and act on *Healthy Ageing*.

### Key actions include:

1. Agreeing on ways to measure, analyse, describe, and monitor *Healthy Ageing*
2. Strengthening research capacities and incentives for innovation
3. Building and synthesizing evidence on *Healthy Ageing*



## ↳ Develop age-friendly environments

Creating age-friendly environments requires collaboration and coordination across multiple sectors and with diverse stakeholders, including older people. Because age-friendly environments promote health, remove barriers, and provide support for people experiencing losses in capacity, they can ensure older people age safely in a place that is right for them, are free from poverty, can continue to develop personally, and can contribute to their communities while retaining autonomy and health.

### Key actions include:

1. Fostering older people's autonomy
2. Enabling older people's engagement
3. Promoting multisectoral action



## ↳ Strengthen long-term care

Worldwide, the number of older people requiring care and support is increasing. Every country needs to have an integrated system of long-term care. Each system should help older people maintain the best possible level of functional ability to allow older people to live with dignity and enjoy their basic human rights and fundamental freedoms.

### Key actions include:

1. Establishing and continually improving a sustainable and equitable long-term-care system
2. Building the long-term care workforce and supporting informal caregivers
3. Ensuring the quality of person-centred and integrated long-term care

## Development of the strategy

The Strategy underwent extensive regional and global consultation involving Member States, non-governmental organizations, representatives from United Nations agencies, technical and scientific experts, WHO departments, and the general public. The Strategy was adopted by WHO's 194 Member States at the World Health Assembly on May 26, 2016.



AGEING and HEALTH

© World Health Organization Department of Ageing and Life Course  
For more information and the full Strategy, visit <http://www.who.int/ageing/global-strategy>

# Basel Life Congress

BASEL LIFE is Europe's leading congress in the Life Sciences, showcasing cutting-edge science and technology.

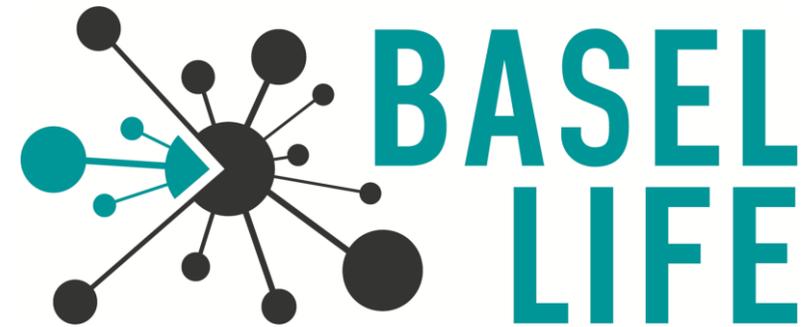
It brings together preeminent researchers in the field, and offers talented young scientists the possibility to present themselves.

Basel is the heart of Europe's Life Sciences landscape.

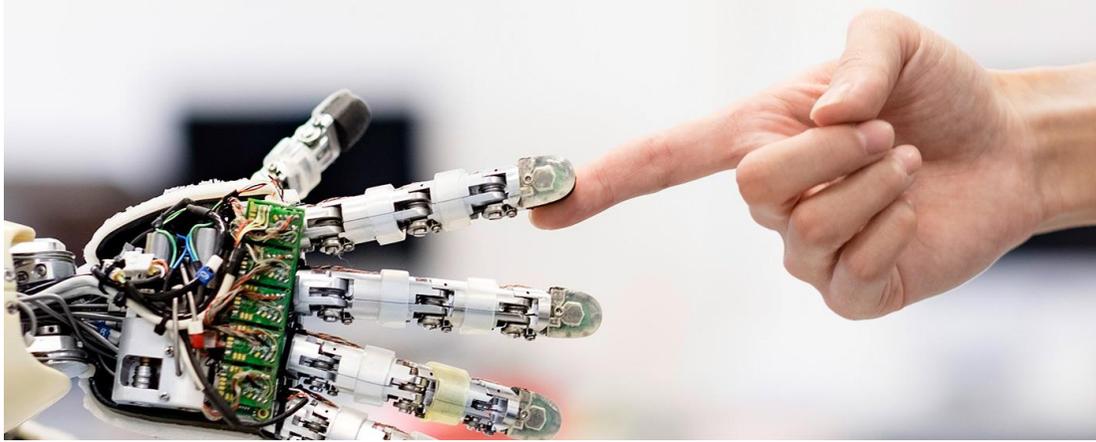
The **Annual Aging and Drug Discovery Forum** at the Conference is now in its 6th year. The forum will feature the talks of some of the industry's most prominent scientists and entrepreneurs.

Several presenters at the Conference's Aging and Drug Discovery forum have examined how diseases such as diabetes, neurodegeneration, and cancer emerge as part of the aging phenotype, and how this knowledge also allows us to develop interventions targeting aging and age-associated diseases.

At 2019's the forum will be attended by leaders in the aging, longevity, and drug discovery field will describe the latest progress in the molecular, cellular and organismal basis of aging and the search for interventions. Furthermore, the forum will include opinion leaders in AI to discuss the latest advances of this technology in the biopharmaceutical sector and how this can be applied to interventions. This event intends to bridge academic and commercial research and foster collaborations that will result in practical solutions to aging.



# UBS's 2018 Healthcare Summit

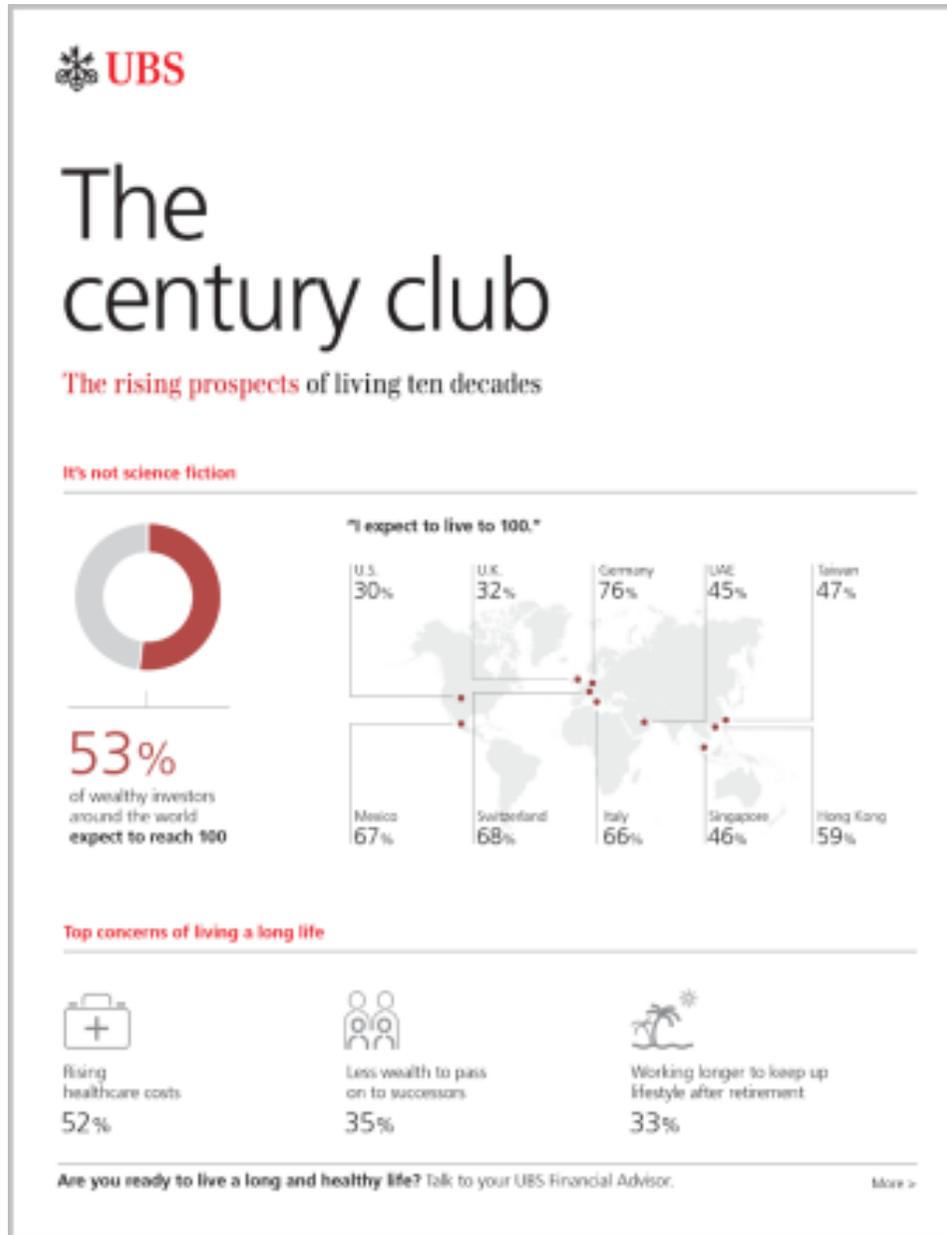


The United Swiss Bank holds an annual healthcare summit in Singapore. The event focused on trends in the sector, such as healthtech, an area many analysts expect to figure prominently with Asian investors in the next five to ten years.

At the 2018 summit the key themes of Transformative Trends and Enabling Innovations in the healthcare industry will take center stage. By providing an exceptional platform to deepen networks in the industry, the summit brings together forward-thinking leaders, captains of industry and renowned speakers who are at the forefront of the transformative trends in Healthcare, Life Science and technologies. Thematic topics included:

- **Living to 150**
- **Big data and artificial intelligence**
- **Disruptive healthcare business model**
- **Investment opportunities in healthcare**

# UBS's 2018 Healthcare Summit



In April 2018, UBS Investor Watch, the world's largest surveyor of wealthy investors, documented the general state of individual investor optimism regarding longevity globally. It found that:

- Nine out of 10 believe their health to be more important than their wealth;
- Many investors are anxious about the financial implications of old age, with healthcare costs being a top concern;
- Investors also worry about having less wealth to pass on to successors.

UBS Investor Watch concludes:

***"Don't let skepticism about living to 100 keep you from planning for it. Life expectancies are rising, and it's a real possibility. In fact globally, nine in 10 investors are already adjusting how they are planning for their life and their legacy."***

# Julius Bär - Next Generation Summit - Investing in Longevity Forum

Swiss multinational bank Julius Baer's Next Generation annual conference series provides an audience of interested investors with first-hand insights from Julius Baer's leading experts and renowned guest speakers on the topic of 'First Movers' – people who look beyond short-term challenges and instead try and test innovative ideas.

## Program of the Forum "Investing in Longevity"

Julius Bär

Julius Bär

### KEY SPEAKER:

Mark Winterburn, Senior Investment Adviser, Julius Baer International Limited

**Guest speaker:** "5 myths of longevity interventions"  
by James Peyer, PhD, Apollo Ventures, Hamburg, Germany

#### Investors' panel:

- ▶ Vlad Kozlov, Ami capital, Partner
- ▶ Dmitry Kaminskiy, Deep Knowledge Ventures
- ▶ James Peyer, PhD, Apollo Ventures, Hamburg, Germany
- ▶ Andrey Kozlov, Partner, 4BIO Capital
- ▶ Timur Artemiev - Retrotope, USA, investor, member of board of directors

**Moderator:** Alexander Lushnikov (entrepreneur)

**"The Business of Longevity:** Landscape, Investment and Financial Projections"  
by Dmitry Kaminskiy, Deep Knowledge Ventures

#### Entrepreneurs' panel:

- ▶ Ivan Ozerov, Insilico Medicine
- ▶ Sergey Jakimov, Longenesis
- ▶ Nina Skorytchenko, Avenna Ltd
- ▶ Nikolai Vysokov, Brain Patch
- ▶ Anasasia Georgievskaya, Youth Laboratories

**Moderator:** Andranik Okroyan, Wave Glasses, GB.io

Q & A | Self presentations (30 sec for each guest) | Networking, cocktails & canapés

# Julius Bär - Next Generation Summit - Investing in Longevity Forum

Dmitry Kaminskiy, Founding Partner of Deep Knowledge Ventures delivered the keynote speech on *"The Business of Longevity: Landscape, Investment and Financial Projections"* on 6th December 2018 in London, while also participating in their Investors' Panel, speaking on the challenges, roadblocks and opportunities facing the sector.

Julius Bär

INVESTING IN LONGEVITY

Mark Winterburn, Investment Advisory  
London, 6th December 2018



# Personalized Oncology



Personalized Oncology 2019 showcased the state-of-the-art of translational oncology research to an audience of 300 international scientists, including clinicians, basic researchers and computational biologists. The objective of this international scientific conference is to highlight the current developments and future perspectives of patient-centric, personalized prevention, diagnosis, treatment, and outcome of cancer patients. Accordingly, the invited speakers were world-renowned researchers and clinicians.

The conference is organized in the context of the Personalized Health Alliance Basel-Zurich, including the University and University Hospital Basel, ETH Zurich, and the University and University Hospital Zurich.



Strategic Focus Area

**Personalized Health  
and Related Technologies**

biotechnet  
switzerland



SWISS NATIONAL SCIENCE FOUNDATION

An aerial photograph of a mountain town at dusk, with a blue color overlay and a yellow frame. The town is built on a hillside, with many buildings illuminated by warm lights. In the background, there are snow-capped mountains under a dark sky. The text is centered in the middle of the image.

# Chapter VI

## Global Longevity Industry Overview

# Reports Published in Q1 2019 by Aging Analytics Agency



Longevity Industry in UK Q4 2018



FemTech Longevity Landscape Overview



Longevity Industry in Israel 2019



Longevity Industry in Singapore 2019

# Longevity Reports in UK, Israel, Singapore



## Longevity Industry in Israel

- 160 Longevity companies;
- 180 Longevity investors;
- 10 Longevity non-profit organizations;
- 10 Longevity research centers;
- 60 Longevity influencers in Israel;
- 7 University longevity labs and research units;
- 10 Longevity conferences.



## Longevity Industry in Singapore

- 100 Longevity companies;
- 80 Longevity investors;
- 15 Longevity Non-Governmental organizations;
- 30 Longevity influencers in Singapore;
- 15 Longevity R&D centers;
- 15 Longevity conferences.



## Longevity Industry in UK

- 260 Longevity companies;
- 250 Longevity investors;
- 50 Longevity articles published by UK geroscientists;
- 50 Longevity books published by UK geroscientists;
- 25 Longevity scientific journals published by UK geroscientists;
- 50 Longevity non-profit organizations;
- 55 Longevity influencers in the UK;
- 25 Longevity university labs and research labs.

# Longevity in UK

## Introducing Longevity Industry in UK

This special regional case study follows-up on the content and general outline of the Longevity Industry made by our consortium in the previous Longevity Industry Landscape Overviews, including [Volume I “The Science of Longevity”](#), released in February of 2018, and [Volume II “The Business of Longevity”](#), published in April of 2018; i.e. by presenting a broad yet comprehensive Global Longevity Industry Landscape Overviews.

These ongoing analytical reports are part of a collaborative project by The Global Longevity Consortium, consisting of the Biogerontology Research Foundation, Deep Knowledge Life Sciences, Aging Analytics Agency and the Longevity.International platform.

While our aim is first and foremost to provide a comprehensive assessment of the Longevity Industry globally, we are also interested in producing regional case-studies that analyze the Longevity Industry in specific geographic locations, and consider where the United Kingdom fits into this picture.

Given our significant presence in the UK, and the substantial dynamic of development in geroscience and advanced biomedicine in the region, we decided that beginning with a regional case study in the United Kingdom in particular would be most appropriate, given our specific experience and expertise with regards to the industry players and trends located in England.

The “UK Longevity Industry Report” provides a specific landscape overview of the companies, investors, articles, books, nonprofits and influencers based in the UK.

The present report gives a brief history of geroscience in the UK, with a particular emphasis on developments in the past two decades which distinguish the region as a longevity-progressive country, culminating in a detailed description of the state of the industry in 2018, and identifies the present custodians of the industry's future. We then take a broader view of the key persons and developments in regenerative medicine, geroscience, precision medicine, and gene therapies.

# Longevity in UK

## Why the UK?

It is hoped that a closer look at this particular country may provide a clearer case study of how these possibilities will play out, by demonstrating how this particular nation's technological, political and economic strengths and weaknesses affect its prospects for maintaining a healthy and productive population. The UK will serve as the standard against which to compare other longevity-progressive regions, most of which have disadvantages compared to the UK, but some of which might have specific advantages in particular areas compared to the UK. The specific characteristics that make a country 'longevity-progressive' are systematized, categorized and described in detail in Chapter VI of the Longevity Industry Landscape Overview Volume II: The Business of Longevity.

## How Does the United Kingdom Measure Up as a Longevity Progressive Country?

In this publication we examine how the United Kingdom in particular is equipped to weather its own incoming 'Silver Tsunami'. As a developed nation, the UK will be one of the first to have exponentially increasing levels of older people, as well as diminishing birth rates - leading to a lower support ratio.

The report is structured in order to introduce readers to the major trends and players in the industry via several infographic MindMaps, so that the reader can quickly ascertain the report's major analytical findings and conclusions. It provides a framework to better structure readers' understanding of the entire Longevity field. It then dives into greater detail in each successive chapter, focusing on specific areas of the Longevity industry in the UK.

The report charts the major trends in the UK longevity industry in recent years, and concludes that the UK is an excellent position to achieve a global leadership position in the Longevity industry, so long as it focuses on the optimal assembly of its existing resources. It also highlights one of the strongest conclusions to come out of this report: namely that the British government should focus on and prioritize the coordinated development of its AI, Financial and Longevity industries, not separately but in synergetic convergence.

**Longevity  
Industry in UK  
Landscape Q4 2018**

**Companies - 260  
Investors - 250  
Non-Profits - 50  
R&D Centers - 25**

**Personalised  
Medicine**

**AgeTech**

**Investors**

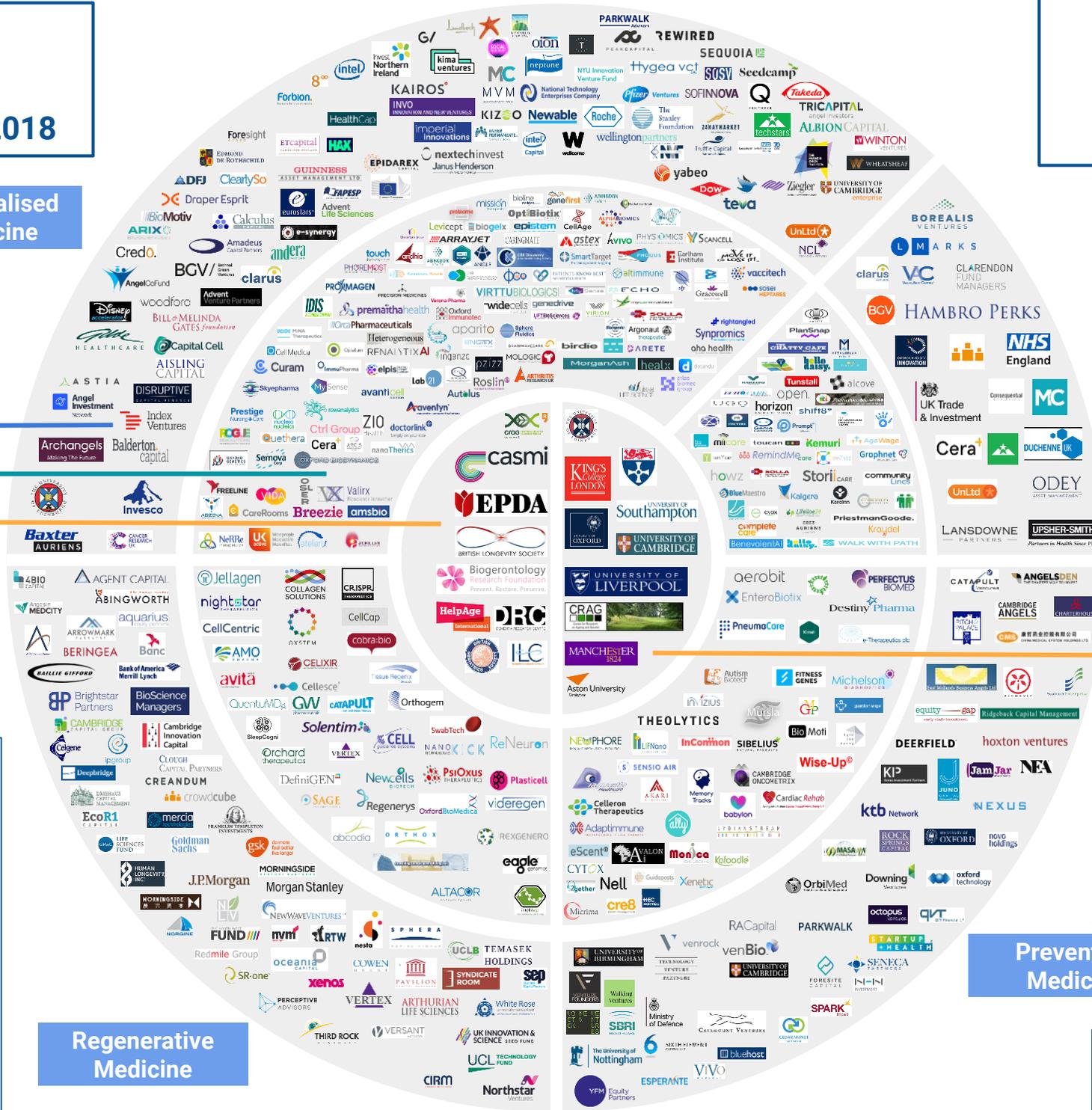
**Companies**

**Non-Profits**

**R&D Centers**

**Preventive  
Medicine**

**Regenerative  
Medicine**



# 13 Longevity influencers in UK



David Sinclair



Baroness Sally Greengross OBE



Eric Kihlstrom



Helen Whately



John Bell



Matt Hancock



Andrew Scott



Charles Alessi



Aubrey de Grey



Tina Woods



Jim Mellon



Dmitry Kaminskiy



David Amess

# Longevity in Israel

## Why Israel?

Israel has seen a substantial rise in the maturity of its academic geroscience landscape (with at least one ageing research center or cluster either present or planned for every Israeli university), as well as a rapid increase in the size of its longevity industry. It is hoped that a closer look at this particular country may provide a clearer case study of how these possibilities will play out, by demonstrating how this particular nation's technological, political and economic strengths and weaknesses affect its prospects for maintaining a healthy and productive population.

The report is structured in order to introduce readers to the major trends and players in the industry via several infographic MindMaps, so that the reader can quickly ascertain the report's major analytical findings and conclusions. It provides a framework to better structure readers' understanding of the entire Longevity field. It then dives into greater detail in each successive chapter, focusing on specific areas of the Longevity industry in Israel.

- The executive summary charts the major trends in the Israeli longevity industry in recent years, and concludes that Israel has necessary ingredients to achieve a strong international position within the global Longevity industry landscape, so long as it focuses on the optimal assembly of its existing resources. It also highlights one of the strongest conclusions to come out of this report: namely that the Israeli government should continue its already-evident prioritization of its geroscience landscape and longevity industry assets.
- **Chapter I** gives a detailed overview of the current Israeli longevity industry, major occurrences over recent years, and charts the landscape in depth in order to identify major trends and patterns.
- **Chapter II** gives a detailed overview of the history of geroscience and the Longevity industry in Israel.
- **Chapter III** gives comprehensive coverage of the state of the Longevity industry in Israel, as well as the major trends and developments by categories..

# Longevity in Israel

- **Chapter IV** Introduces the Israeli Longevity Alliance (ISRLA)/VETEK - the Movement for Longevity and Quality of Life, a strategic alliance operating in Israel for the advancement of the longevity industry.
- **Chapter V** takes a brief look at Israel's top universities focusing on Longevity-relevant lines of research.
- **Chapter VI** lists some of the media and conferences which have given Israeli Longevity science the greatest exposure.
- **Chapter VII** gives specific attention to the policy landscapes and the “politics of Longevity” forming in Israel, which is one of the most substantial ways in which the nation's government is taking a more progressive and proactive approach to the growth of both its geroscience sphere and its Longevity industry landscape than many other governments.
- **Chapter VIII** presents the most relevant infographic mindmaps and summaries from our previous reports, in order to put the recent and current developments in the Israeli Longevity sphere in the larger context of the global Longevity industry.
- **Chapter IX** presents data and charts on various economic aspects of the longevity industry in Israel.

The report concludes with an appendix on the economic aging-related trends in Israel, and a detailed appendix of profiles on the major entities and influencers making up the Israeli Longevity industry, profiling:

- 160 Longevity companies
- 180 Longevity investors
- 10 of the top Longevity non-profit organizations
- 10 of the most important longevity research centers
- 60 Longevity influencers in Israel
- 7 University longevity research labs and clusters
- 10 Longevity conferences

# Longevity Industry in Israel Landscape 2019

Companies - 160  
Investors - 180  
Non-Profits - 10  
R&D Centers - 10

## Personalized Medicine

### Investors

### Companies

### Non-Profits

**AGING ANALYTICS AGENCY**

**ISRAELI LONGEVITY ALLIANCE**  
ותם - התנועה לשיקום ואיכות חיים (נ"ל)  
Vetek (Seniority) - the Movement for Longevity and Quality of Life

**DEEP KNOWLEDGE ANALYTICS**



## Progressive Wellness

## R&D Centers

## Preventive Medicine

## AgeTech

## Regenerative Medicine

**LONGEVITY INTERNATIONAL**



# 60 Israeli Longevity Influencers



Aaron Ciechanover



Alex Friedman



Anat Ben-Zvi



Assaf Sella



Benjamin Sredni



Boaz Misholi



Dan Peer



Doron Garfinkel



Doron Melamed



Dov Chernichovsky



Dov Shmotkin



Ehud Cohen



Eitan Okun



Eldad Tzahor



Eli Mizrahi



Eyal Banin



Gabriel Barbash



Gil Atzmon



Hadas Lewy



Haim Cohen



Hanan Tal



Howard Litwin



Idan Papier



Idan Segev



Ilia Stambler



Israel Doron



Itamar Harel



Itamar Raz



Joe van Zwaren



Jonathan Mandelbaum-Shor



Michal Neeman



Michal Schwartz



Mooly Eden



Natalie Yivgi Ohana



Nir Barzilai



Nirit Lev



Rafi Eitan



Ran Balicer



Raphael Gorodetsky



Ruth Arnon



Sami Sagol



Sara Carmel



Shai Brill



Shai Efrati



Shai Shen-Orr



Sivan Henis-Korenblit



Sol Efroni



Tal Dvir



Tzvi Dwolatzky



Uri Alon



Valery Krizhanovsky



Yael Benvenisti



Yakir Kaufman



Yaky Yanay



Yechezkel Barenholz



Yitzhak Brick



Yosef Gruenbaum



Yossi Heymann



Zorian Radomyslsky



Zvi Lanir

# Longevity in Singapore

## Singaporean Healthy Life Expectancy Lags Behind Life Expectancy

In a 2017 article for StraitsTimes, Dr. Brian Kennedy, former CEO of the Buck Institute for Research on Aging and the new Director of the Centre for Healthy Ageing at the National University Health System (NUHS) noted that while Singaporean life expectancy continues to rise, the nation's healthy life expectancy is lagging behind, citing a 2012 global study which reported that Singaporeans' lifespans grew by 5.4 for females and and six years for males from 1990 to 2010, while their health spans only grew by 3.4 and 4.1 years during that same timespan. Kennedy noted that the combination of Singapore's ageing population and the Government's progressive approach to be a global leader in healthcare efficiency sets the country up for taking the lead in human ageing studie globally.

The new Centre for Healthy Ageing's short-term plans to put this commitment into action include research into delaying ageing through behavioural and lifestyle interventions like exercise and fasting, as well as through the use of drugs, performing studies to determine whether healthspan-extending interventions have similar outcomes across different population demographics and ethnicities, and a collaboration with the Institute for Ageing Research at the Albert Einstein College of Medicine in the US to determine whether the common diabetes drug metformin can extend human healthspan.

The need for an increased Government commitment to prioritizing healthspan extension research is all the more pressing given that nearly 25 percent of Singapore's population will be over the age of 65 by the year 2030. A recent report by Marsh and McLennan Asia-Pacific Risk Centre entitled "Elderly health costs to rise tenfold by 2030: Report" estimated that annual elderly healthcare costs will rise 10x per capita by 2030, reaching nearly S\$52,000 (US\$38,000) per capita.

Singapore has already proven its progressive stance on the problem of demographic ageing through other initiatives, like implementing changes in social policy to increase quality of life for its elderly demographic, such as increased healthcare access, promotion of intergenerational bonding, as well as post-secondary education, but such social initiatives are not enough. The Singaporean Government needs to cement its commitment to fund research into the clinical validation and translation of healthspan-extending interventions. And, indeed, as noted in a recent Straits Times article, "By emphasising preclinical and clinical studies to slow ageing, Singapore can take the lead in combating the medical crisis of this century.

# Longevity in Singapore

## Retirement Security in Singapore

This year Singapore was ranked 28th globally and 3rd in Asia (behind Japan and South Korea) for the strength of their retirement security according to the Natixis Investment Managers' Global Retirement Index. The index ranks countries according to 18 different performance indicators that cover key aspects of retirement security including the material means to live comfortably; access to quality financial services to help preserve savings value and maximise income; access to quality health services; and a clean and safe environment.

Singapore ranked very high compared to the other 42 countries surveyed in the retirement financing sub-index (ranking second after New Zealand). While they held the top spot in the previous year's report, they slipped to second place due to lower scores in the areas of government indebtedness, bank non-performing loans, old-age dependency and governance.

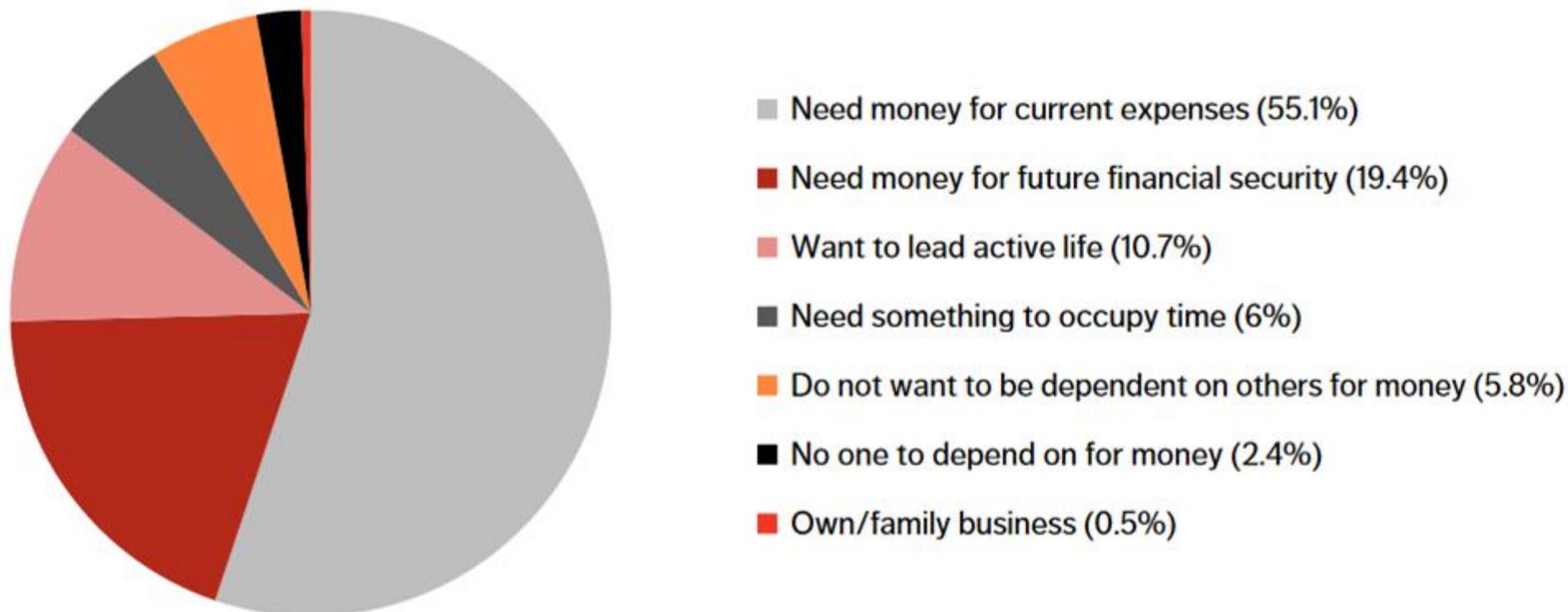
The report also highlighted areas in which there is room for improvement for the nation, such as the fact that a large portion of healthcare expenditure is not covered by insurance, despite the fact that the nation has the seventh-highest life expectancy of all the countries ranked in the report.

Furthermore, recent survey titled "Ready for 100? Preparing for longevity in Singapore" conducted by the international research firm Economist Intelligence Unit (EIU) and insurer Prudential reported that the majority of the 1,214 Singaporean residents surveyed expected to still be working by the age of 62 (the standard retirement age in Singapore).

The report argues that this is for the most part a result of the nation's increasing life expectancy (83.1 years, which is the third longest in the world behind Japan and Switzerland). 75% of respondents indicated that they are not financially prepared to live to 100 years of age.

The Singapore Government's National Population and Talent Division indicates that the number of citizens living to 100 years of age is increasing, up to 1,100 in 2015 compared to just 50 in 1950.

## Figure 4. Reasons for Working or Returning to Work, Age 55 and Older, 2011



Source: Institute of Policy Studies 2011

# Longevity in Singapore

## What is the Singaporean Ministry of Health Doing to Combat Population Aging?

In a recent the *Straits Times*-AIA roundtable entitled "Managing Singapore's Health with an Aging Population: What more needs to be done?", Singapore's Senior Minister of State for Health, Dr. Amy Khor, noted that in 2015, the ministerial committee for aging had already launched the action plan for successful aging, consisting of a multi-pronged approach that includes:

- Preventive and active aging programs that start at the early age of 40;
- The launch of The Silver Academy, a continuing-education program that offers 900 courses, currently with 21,000 students enrolled;
- Barrier-free access for those with restricted mobility;
- Traffic junctions that provide the elderly with more time to cross the street;
- Silver Generation Ambassadors who visit citizens when they turn 65 to determine their needs, and offer referrals to relevant services where necessary;
- Increased funding by the Health Ministry to healthcare infrastructure like hospitals, nursing homes and day care facilities;
- A program that screens five key age-related conditions for \$5 or less.

Commenting on the progress of these initiatives over the past several years, Dr. Khor stated "I think few places in the world, if any, do this. It is being done [here] systematically, and not on an ad hoc basis," adding that the 2015 action plan is a "living document" and that "we have to build up on it and as we implement programs, we learn and we refine and implement other new programs that may be useful."

# Longevity in Singapore

## Singapore is Rapidly Embracing AgeTech

Singapore has enthusiastically embraced the rising AgeTech sector to improve the quality of life and levels of social engagement of its elderly population. AgeTech, which encompasses any digital technologies that aid the elderly, are being rapidly adopted by medical institutions and nursing homes across the nation.

One illustrative device is the Bond Stick, which is a three-in-one walking stick, alarm sensor and MP3 player. The stick reduces dementia through sensory stimulation, and its auto-fall sensor alerts caregivers to potentially devastating falls.

At the 9th annual Aging Asia Innovation Forum, a recent conference showcasing AgeTech devices, Singapore's Senior Minister of State for Health Dr. Amy Khor noted that "rethinking aged care and supporting our aged population is not a task that can be accomplished overnight. To succeed in these efforts, the public, private and people sectors will have to work in partnership to re-imagine new possibilities and solutions."

The market for products and services targeted for Singaporeans aged 50 and over is projected to triple from SGD 33 billion (USD 24 billion) in 2015 to SGD 91 billion (USD 66 billion) in 2025.

Interestingly, pioneering companies at the forefront of Singapore's AgeTech market are almost entirely technology startups, with very limited private sector interest from larger corporations other than Singapore's multinational healthcare technology companies. Wong Poh Kam, Director of the National University of Singapore's Entrepreneurship Center, commented that "the awareness of big corporations towards aging population might be lower than you expected [in Singapore], compared with other advanced economies like Japan."

# Longevity Industry in Singapore Landscape 2019

## Personalized Medicine

Companies - 100  
Investors - 80  
Non-governmental organisations - 10  
Research Centres - 15

## AgeTech

## Progressive clinics

## Research Labs

## Preventive Medicine

## Progressive wellness

## Regenerative Medicine

### Companies

### Investors

### Non-Profits



AGING ANALYTICS AGENCY



DEEP KNOWLEDGE ANALYTICS



LONGEVITY INTERNATIONAL

# 30 Longevity influencers in Singapore



Finian Tan



Danny Soon



Gary Khoo



Bussarawan (Puk)  
Teerawichitchainan



Chong Hock Sia



Janice Chia



Jeffrey Lu



Carl Firth



Kanwaljit Soin



Christiani Jeyakumar  
Henry



Colin Stewart



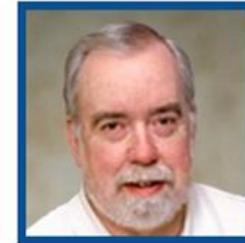
Birgit Lane



Brian Kennedy



Hwee-Pink Tan



Kenneth Noonan



Lim Chwee Teck



Lok Shee-Mei



Melis Tay



Neo Kah Yean



Ng Huck Hui



Paolo  
Rampichini



Paul Si



Penny Wan



Judith Swain



Vishal Doshi



Wallace I.  
Torres



Wanjin Hong



Wilf Blackburn



Yu Cai

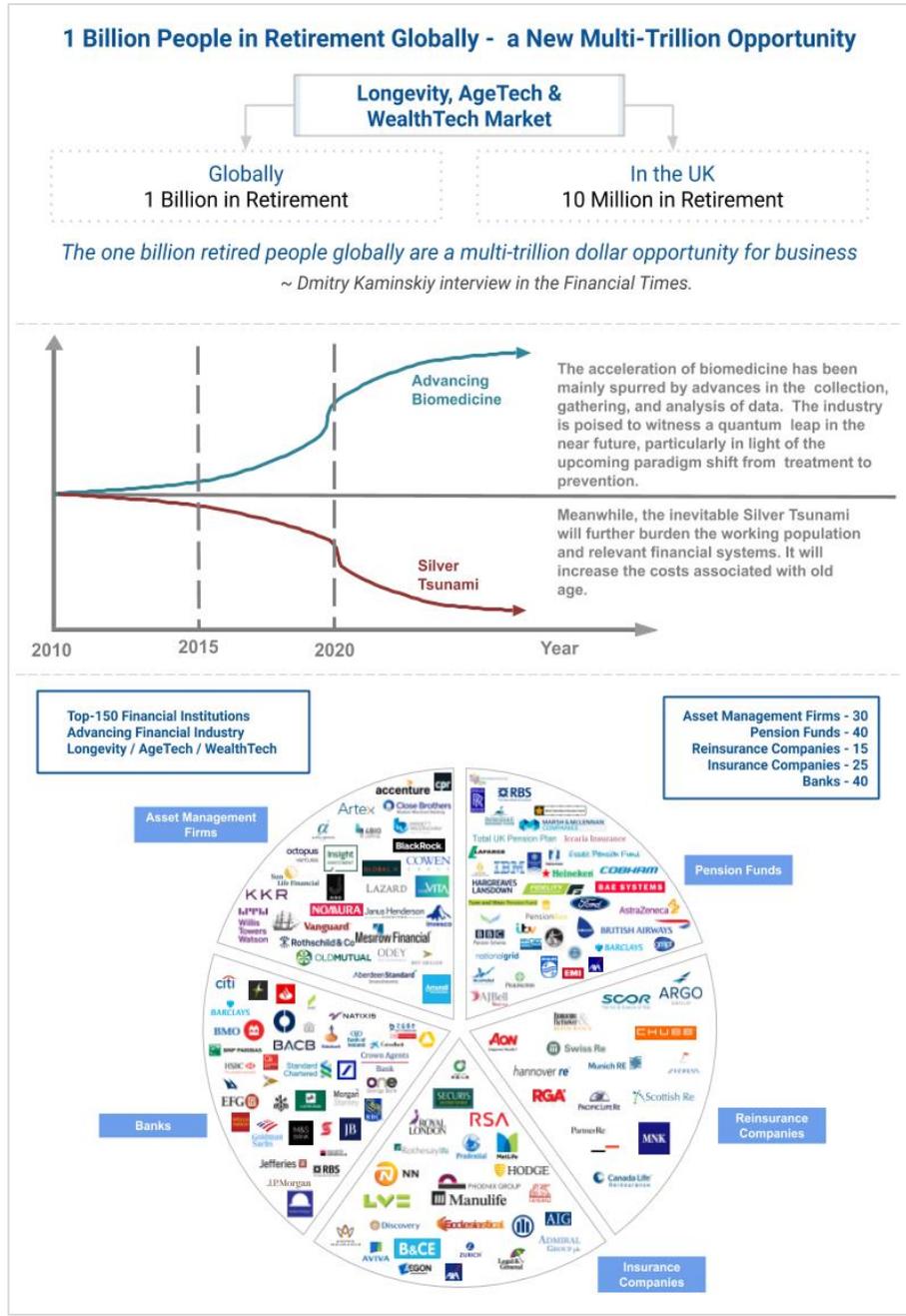


Lim Xinhong

# Proprietary Report: Advancing Financial Industry - Longevity / AgeTech / WealthTech

Ageing Analytics Agency is currently producing a new proprietary report on the Longevity Financial Industry, titled **Advancing Financial Industry - Longevity / AgeTech / WealthTech**, which will offer key strategic insights on how large financial corporations can tap into the multitrillion market of people in retirement, and retune their existing business models avoid stagnation under the economic pressures of a rapidly ageing population, transforming Ageing from a challenge to an opportunity.

The parties who gain early access to this report will acquire deep expertise on how their strategic agendas can be optimized and stabilized in order to manage and hedge Longevity risks, to surpass the challenges and to utilize the opportunities related to progressive biomedicine, ageing population and advancing financial technologies.



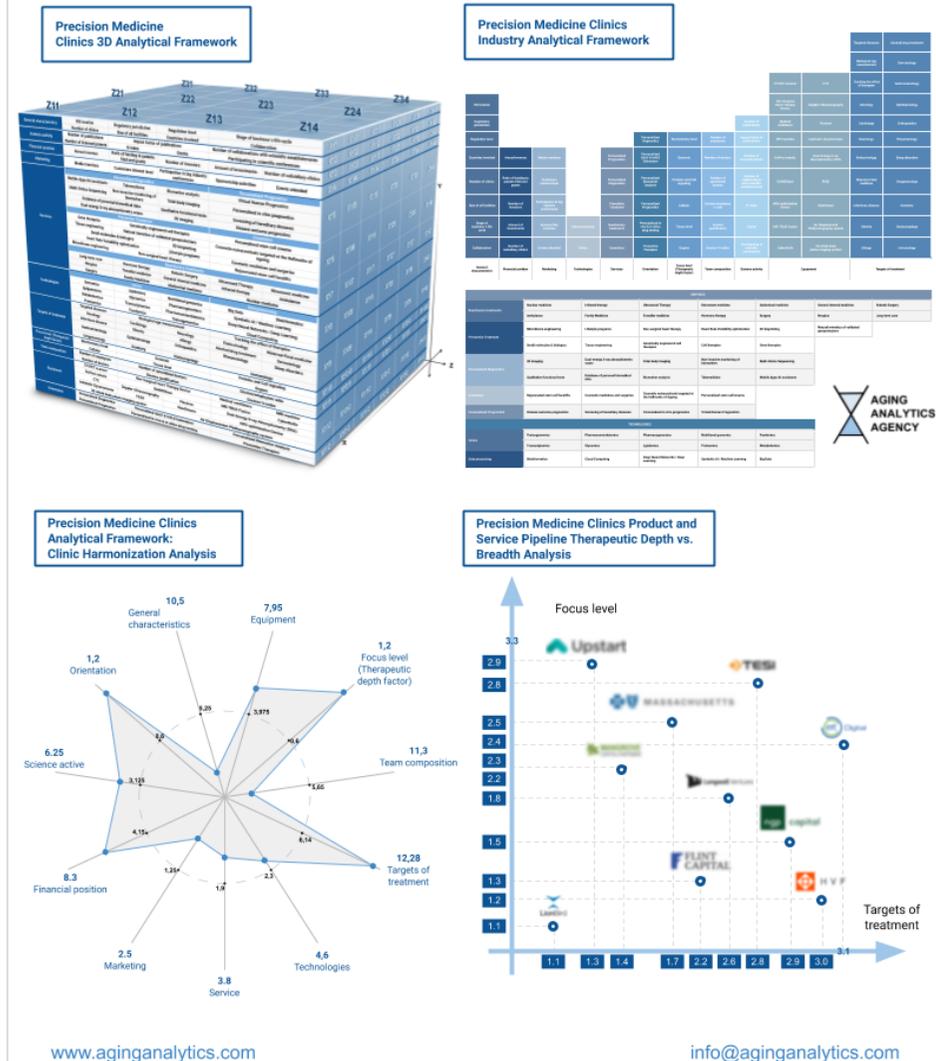
# Proprietary Report: Precision Medicine Clinics Landscape Overview 2019: Most Advanced Clinics, Technologies and Methods

Agging Analytics Agency is producing a 1000+ page report, [Precision Medicine Landscape Overview 2019: Most Advanced Clinics, Technologies and Methods](#), which will feature a list of the Top-100 precision (personalised and preventive) medicine clinics globally, as chosen according to a multidimensional analytical framework that uses tangible, quantitative metrics to rank the level of clinics' scientific validation and technological sophistication. The report will also contain pragmatic, strategy-focused materials on the optimal configuration of integrated preventive and precision medicine service pipelines, as well as a better understanding of industry benchmarking and competitive landscape, targeted towards investors and business development executives, answering several key questions including The parties who will have early access to this report will gain deep expertise on how they can optimize their clinics' strategic, technological and scientific prospects in order to deliver the most sophisticated and comprehensive precision health products and services for their clients.



## Sophisticated Comparative Analytical Framework for Precision Medicine Clinics Ranking and Assessing the Breadth, Depth and Optimal Integration of Precision Health Pipelines

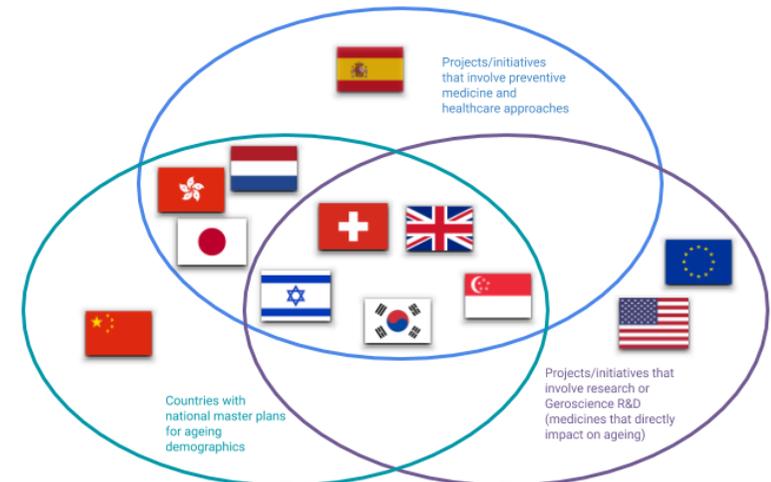
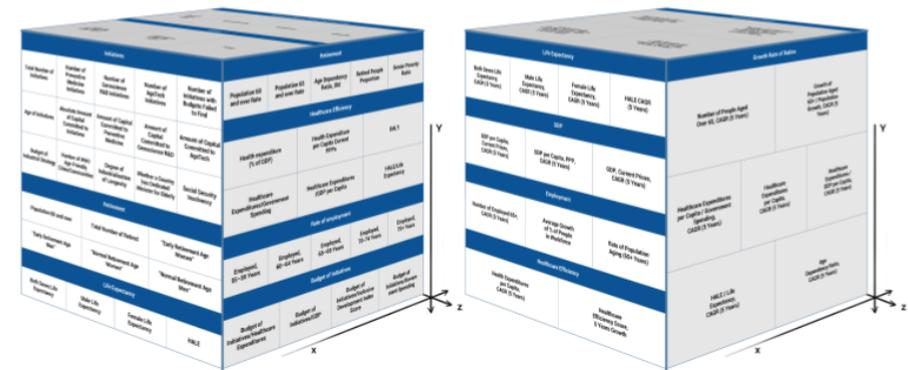
Agging Analytics Agency believes that the effective analysis of as complex and multidimensional an industry as Precision Medicine Clinics requires the application of an equally multidimensional analytical framework. This analytical framework presented in the present white paper includes metrics for identifying the breadth of the industry, identifying the degree of technological development, staff professionalism, range of provided services, financial position and scientific activity.



# National Government Development Plans Report Presented in UK Parliament

Because Aging Analytics Agency is the main source of Longevity industry data and analytics for the recently-established **All-Party Parliamentary Group for Longevity**, representatives of the agency presented some of the major conclusions of its recent **“National Longevity Development Plans Global Landscape Overview 2019”** report at the All-Party Parliamentary Group for Longevity **Strategic Advisory Board** meeting in **UK Parliament** on April 30th, arguing that the UK Government needs to extend existing efforts and create a framework to change the deficit model of the ‘Ageing Society’ to an asset model around ‘Longevity’ and be bold with a national strategy to harness the ‘Longevity Dividend’ to benefit all people in society.

National Government Longevity Development Plans: Country Scoring					
POSITION	COUNTRY	COUNTRY SCORE	POSITION	COUNTRY	COUNTRY SCORE
1	United Kingdom	5.29	7	Hong Kong	3.41
2	Netherlands	4.36	8	Japan	3.10
3	Singapore	4.15	9	USA	3.07
4	South Korea	4.00	10	Spain	1.94
5	Israel	3.94	11	European Union	1.88
6	Switzerland	3.93	12	China	1.85



# Aging Analytics Agency is Now the Main Source of Longevity Industry and Economics of Ageing Data and Analytics for the UK All-Party Parliamentary Group on Longevity

## All Party Parliamentary Group for Longevity



Preventive Medicine  
Innovations in Healthcare  
Problem of Ageing Population  
Financial Reform for Pension System

 [www.parliament.uk](http://www.parliament.uk)

  
[www.longevityinternational.org](http://www.longevityinternational.org)

## APPG for Longevity Officers

Rt Hon Damian Green MP Chair	Rt Hon Norman Lamb MP Vice-Chair	Sir Peter Bottomley MP Vice-Chair	Jonathan Lord MP Vice-Chair
Kevin Foster MP Vice-Chair	Lord Andrew Stone Secretary	Baroness Sally Green Treasurer	Lord Geoffrey Filkin

## Supporting Partners

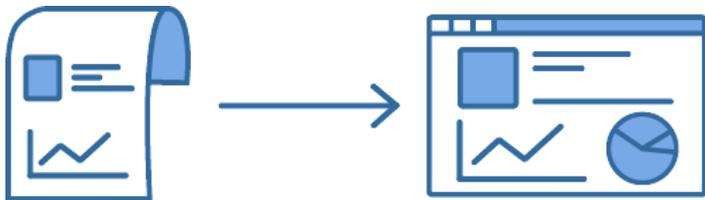

## Executive Team Longevity International UK APPG for Longevity

Eric Kihlstrom	Tina Woods	Dmitry Kaminskiy
Head of Industry Collaboration	CEO & Co-Founder Secretariat Director	Head of International Cooperation Division



# Online Longevity Analytics Platform to Enable a Framework for Cross-Industry Stakeholder Dialogue and Industry Optimization

In 2019, to compliment these reports, Aging Analytics Agency is releasing an advanced online Longevity Analytics Platform and database featuring interactive visuals which can transform static analytical reports into dynamic infographics updated in real-time. This platform will enable complex interactions between industry entities and stakeholders to be visualized, filtered, searched and thus more easily understood.



Once created, this platform will be continuously updated with real-time industry developments and will be significantly upgraded with the integration of elements including:

- A stakeholder smart-matching engine
- Supply chain analysis
- Tools for the syndication of investment rounds
- Customized report production
- Peer-to-peer, distributed stakeholder ranking systems
- Big data analytics and other advanced tools and techniques

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## IT-Platform as the Investment Knowledge Nexus for Longevity.Capital

The platform will be open to qualified stakeholders, and will serve as the framework for industry optimization and cross-disciplinary dialogue and collaboration between companies, investors, entrepreneurs, scientists and government officials. The overarching aim of the platform is to promote the synergistic and integrated development of the Longevity Industry to maximize the benefits of all industry stakeholders. The Longevity Industry continues to grow in size but remains highly fragmented, with different stakeholders displaying disparate opinions on where it is headed and how long it will take to get there. their platform aims to deliver a framework for proper industry unification. In prototype development for over a year, this interactive platform will ultimately serve as the investment knowledge epicenter of Longevity.Capital.

Moving forward, Aging Analytics Agency will serve as the main source of expertise behind Longevity.Capital, providing sophisticated Longevity Industry analytics in order to develop and de-risk the fund's investment strategies. Meanwhile, Longevity.Capital will follow through on and execute the strategy, and provide financial products similar to hedge funds.

# Reports by Aging Analytics Agency 2017 - 2018



**Longevity Industry Landscape Overview 2018**



**Longevity Industry Landscape Overview 2018 Volume I**



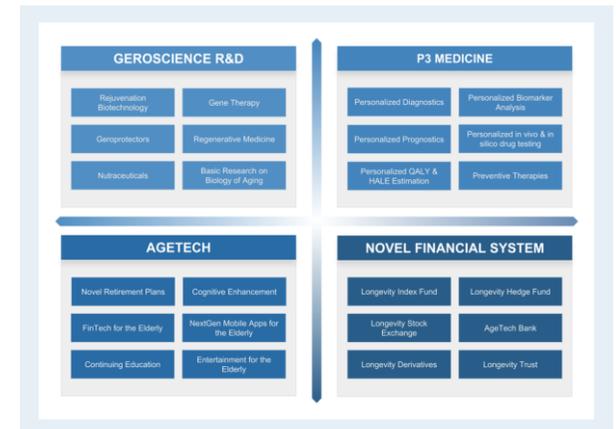
**Longevity Industry Landscape Overview 2018 Volume II**



**Longevity Industry in UK Landscape Overview 2018**



**AI for Drug Discovery Landscape Overview Q2/2018**



**Longevity Industry Classification Framework**

# Longevity Industry Landscape Overview Volume I: The Science of Longevity

**Volume I: The Science of Longevity**, set the landscape of geroscience against the backdrop of the ‘silver tsunami’ of global demographic aging, detailing the present state of precision, predictive and preventive medicine (referred to hereafter as ‘P3’), how it works in conjunction with emerging preventative medical technologies, and the prospects for the next five years. It summarised the history and current state of development in geroscience, examined whether existing proposed solutions measure up to the impending problems.

The consortium’s first report tied together the progress threads of the constituent industries into a coherent narrative, mapping the intersection of biomedical gerontology, regenerative medicine, precision medicine, artificial intelligence, offering a brief history and snapshot of each. It also categorized, systematized and individually profiled 650 longevity-focused entities, including research hubs, non-profit organizations, leading scientists, conferences, databases, books and journals.

## LONGEVITY INDUSTRY LANDSCAPE OVERVIEW 2017

Volume I: The Science of Longevity

Geroscience, Policy, and Economics

The Paradigm Shift: from Treatment to Prevention



# Longevity Industry Landscape Overview Volume II: The Business of Longevity

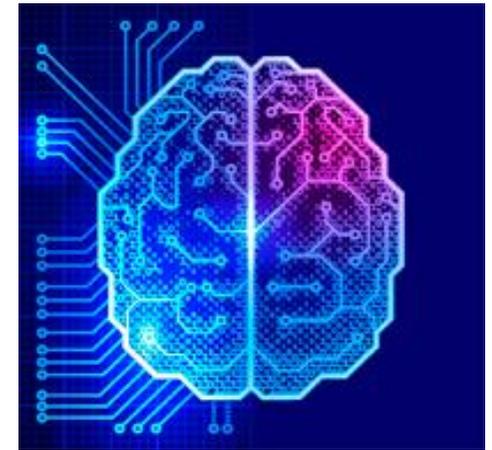
*“Aging is the ultimate evil. To invest in Anti-Aging technologies is the most ethical business, and to donate to longevity research is the most effective form of altruism”*

– **Dmitry Kaminskiy, Managing Partner of Deep Knowledge Life Sciences.**

This report details the present state of precision, personalized, preventive medicine (referred to hereafter as ‘P3’), how it works in conjunction with emerging preventative medical technologies, and the prospects for the next five years. Volume 1: The Science of Longevity, set the landscape of geroscience against the backdrop of the ‘silver tsunami’ of global demographic aging. It summarised the history and current state of development in geroscience, examined whether existing proposed solutions measure up to the impending problems, and profiled 650 distinct entities related to geroscience.

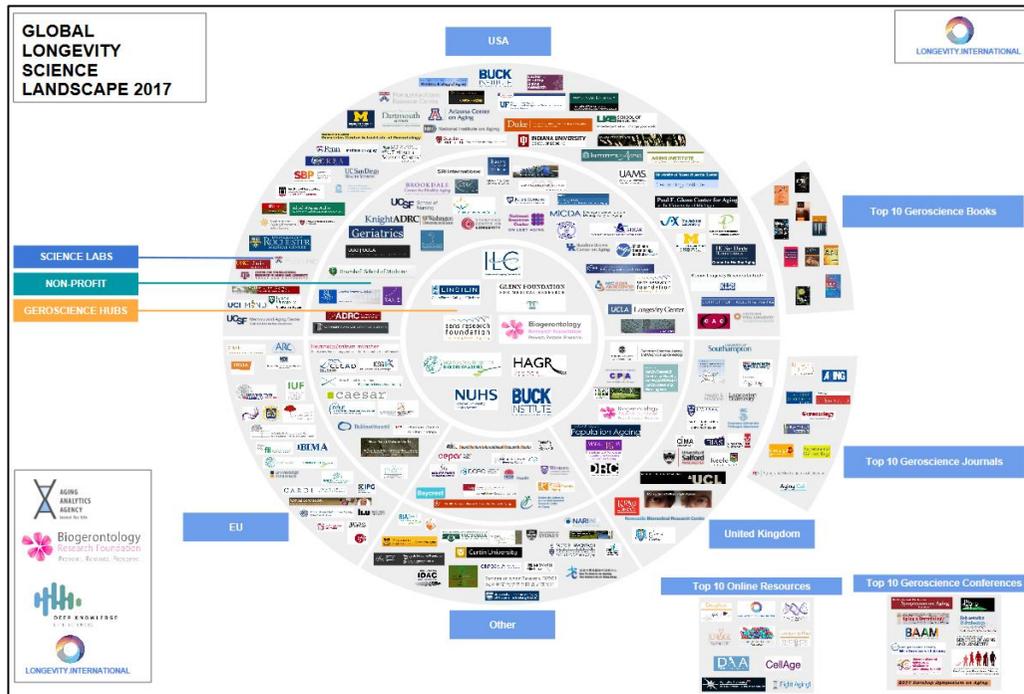
This present volume, entitled “The Business of Longevity”, outlines the commercial side of this emerging industry. It describes the novel financial system that will form the necessary framework of the industry, and introduces AgeTech, and other novel technologies that have the elderly as their prime beneficiaries. These technologies have yet to reach fruition, but are expected to grow rapidly in the next several years as the elderly remain more active than ever before.

This volume, like the last, contains infographics. Mindful of the large size and complexity of the industry, we created specialized mind maps in order to do for longevity industry what Mendeleev, with his Periodic Table of Elements, did for chemistry, so that specialists and non-specialists alike could stand united before a unified vision of the industry landscape.

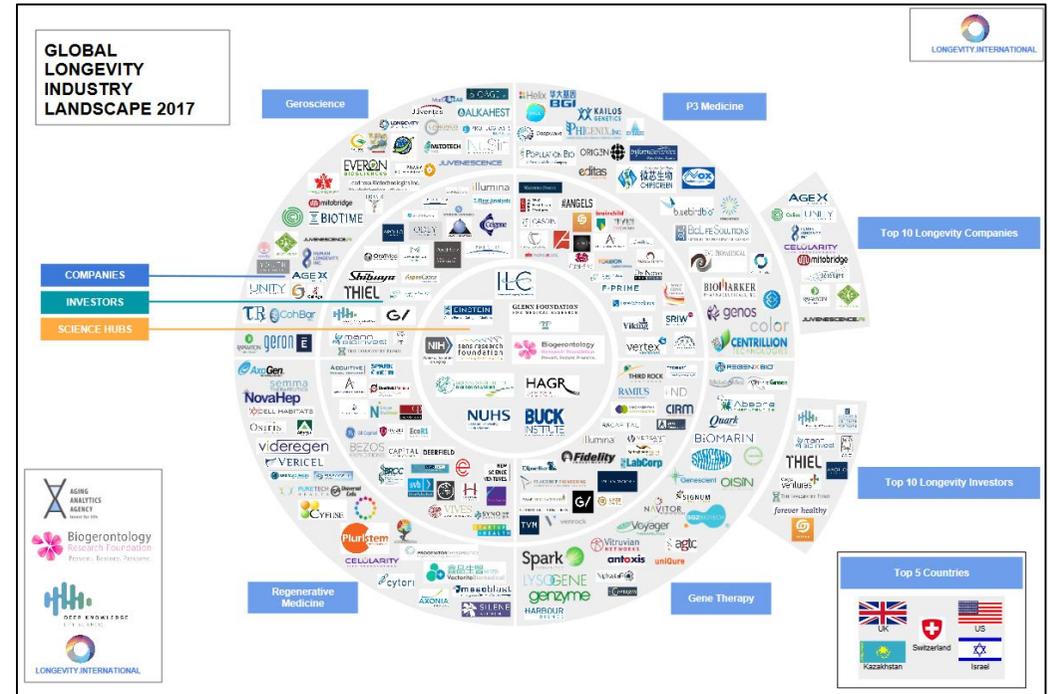


# Longevity Industry Landscape Overview Volume II: The Business of Longevity

## The Science of Longevity Global Landscape



## The Business of Longevity Global Landscape

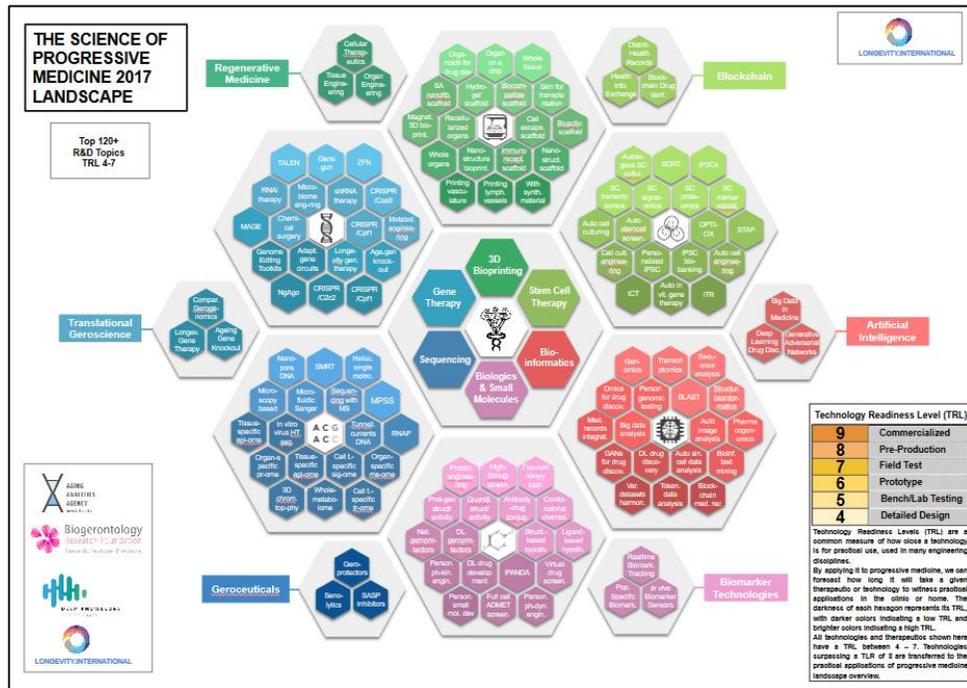


This Volume II, similar to Volume I, includes lists of profiles of companies and investors which we believe play a pivotal role at this juncture. Although these lists are based on dataset analysis and tangible metrics, they are projections and as such, are not exhaustive.

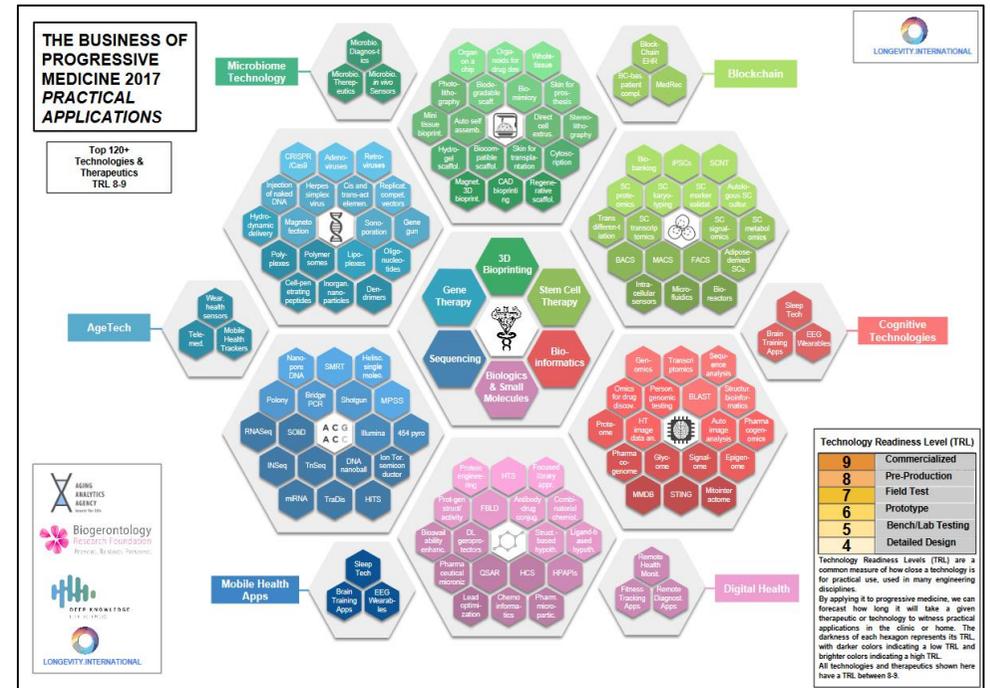
Indeed our aim is not to create a definitive guide. Such an attempt at perfection would make an enemy of good. Our aim is to get the ball rolling. The sooner we produce consistent approximations of the industry, the sooner a consensus can emerge. We are also developing an online platform - [longevity.international](http://longevity.international) - for aggregating and crowdsourcing data, so that various stakeholders in the geroscience and the longevity industry can play a role in fashioning this consensus. We are producing these reports with the expectation that they will themselves eventually will be placed on the platform and will be updated frequently close to real time mode.

# Longevity Industry Landscape Overview Volume II: The Business of Longevity

## The Science of Progressive Medicine TRL



## The Business of Progressive Medicine TRL



Due to the multifaceted nature of geroscience, it's necessary to establish definitions for terms in the geroscience and longevity industries. It is also important to create a framework for establishing consensus in forecasting developments in P3 medicine, and to that end we have made use of mind maps featuring TRLs. We plan to establish workshops with members of the scientific and entrepreneurial communities to create case studies to develop TRLs to improve metrics and predictions. One major problem is the lack of a single consensus panel of biomarkers of aging. A consensus panel would encourage an acceleration of advances in drug discovery and preventive medicine, and at the same time provide tangible metrics for next generation P3 medicine clinics. We are confident that the exponential growth of technologies like wearables, mobile apps, diagnostic and prognostic services, coupled with the exponential growth in AI, will help create effective biomarkers of aging, promoting substantial growth of the Longevity industry in the next 3-5 years.

An aerial photograph of a mountain town at dusk. The town is built on a hillside, with numerous buildings featuring dark roofs and some with illuminated windows. A prominent church steeple is visible in the center. The background shows snow-capped mountains under a dark blue sky. The entire image is framed by a thick yellow border with a white inner line.

# APPENDIX

# 100 Companies: Longevity in Switzerland



# ABCDx



ABCDx (Advanced Brain Companion Diagnostics) is a privately-funded start-up company founded in 2014 by three experienced individuals: Two eminent researchers from the Faculty of Medicine of the University of Geneva and the Vall d’Hebron Research Institute (VHIR) at Vall d’Hebron Hospital, Barcelona. Recognized as key opinion leaders in the field of brain biomarkers, they combine expertise in biomarker discovery, validation and clinical experience. The third founder of ABCDx is an experienced industry and licensing executive with experience in both established and start-up diagnostic and pharmaceutical ventures. Transforming care for patients with brain injury. ABCDx provides powerful new tools for transforming the triage, diagnosis and treatment decision process at the point of care for patients presenting with potential brain injury from stroke and trauma to complications. ABCDx is pioneering the ability to decode the chemical messages of the brain so that brain injury can be detected earlier often before hospitalization and from a single blood drop.

Web site:	<a href="http://abcdx.ch">abcdx.ch</a>
Number of Employees:	Undisclosed
Founded in:	2014
Based in:	Geneva
Sector:	P3
Total Funding Amount:	\$10.1K

# Ability Rehab Solutions



They help people with walking difficulties. Ability offers those with mobility issues a means to effective, simple and affordable gait rehabilitation based on the latest research findings. They are synonymous with innovation and quality. Discover the world of ability – a steadily expanding world. At ability they pursue one goal: Returning the precious good of movement to as many people as possible. They achieve this goal through their technology, expertise, ongoing research and development. And while they continue to grow, make progress and expand, their solutions remain affordable for everyone. Ability opens new doors for patients, therapists and clinics alike.

Web site:	<a href="http://ability-switzerland.com">ability-switzerland.com</a>
Number of Employees:	11-50
Founded in:	2010
Based in:	Zurich
Sector:	AgeTech
Total Funding Amount:	\$28.7K

# Abionic



Abionic SA is ideally positioned at the boundaries of medical technology, biotechnology and nanotechnology. As a spin-off from EPFL (Swiss Federal Institute of Technology Lausanne, Switzerland), Abionic uses these highly advanced technologies to provide the medical profession with a novel diagnostic tool designed to give patients personal allergy profiles. Abionic aims to become an important international player in the field of personalized medicine, in particular in allergy detection. Abionic SA is a certified ISO 9001/13485 company, including research, development and commercialization of in vitro diagnostic devices for allergies detection. The standard ISO 13485 specifies requirements for a quality management system where an organization has to demonstrate its ability to provide medical devices and related services that consistently meet customer and regulatory requirements.

Web site:	<a href="http://abionic.com">abionic.com</a>
Number of Employees:	11-50
Founded in:	2010
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$27.1M

# AC Immune



AC Immune SA, a clinical stage biopharmaceutical company, discovers, designs, and develops therapeutic and diagnostic products for the prevention, diagnosis, and treatment of neurodegenerative diseases associated with protein misfolding. Its SupraAntigen and Morphomer platforms are designed to generate vaccines, antibodies, and small molecules, which selectively interact with misfolded proteins that are common in a range of neurodegenerative diseases. The company's lead product candidate is crenezumab, a humanized, monoclonal, and conformation-specific anti-Abeta antibody, which is in Phase II clinical prevention trial for the treatment of Alzheimer's disease (AD). It is also developing ACI-24, an anti-Abeta vaccine candidate that is in Phase II clinical study for AD, as well as is in Phase Ib clinical study for Down syndrome; ACI-35, an anti-Tau vaccine candidate that has completed Phase Ib clinical study; RG6100, an anti-Tau antibody candidate, which is in Phase II clinical study for AD patients; and Tau-PET imaging tracer that has completed Phase I clinical study. In addition, the company is researching and developing Tau Morphomer aggregation inhibitor small molecules for AD. Further, it has discovery and pre-clinical stage molecules targeting neurodegenerative diseases, as well as diagnostics targeting Tau, alpha-synuclein, and TDP-43 aggregates.

Web site:	<a href="http://acimmune.com">acimmune.com</a>
Number of Employees:	51-100
Founded in:	2003
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$117.4M

# Adipogen International



AdipoGen Life Sciences, Inc. (AdipoGen) consists of two companies, Adipogen SA (Switzerland) (and its branch office Adipogen AG) and Adipogen Corporation (San Diego, USA). The Corporate headquarters is in San Diego, USA and the Operational headquarters is in Liestal, Switzerland. A motivated team of highly-skilled individuals develops and manufactures new products for the Life Science Research Market in the areas of obesity & diabetes, inflammatory diseases, innate immunity, immunology, immuno-oncology, cancer, stem cell biology and neurodegeneration supporting Immunometabolism & Advanced Inflammation Research. In addition to the antibody (special focus functional antibodies) and protein facilities, AdipoGen owns chemical laboratories, enabling the company to isolate unique natural products and to develop new and innovative small molecules and rare antibiotics. Since 2015 AdipoGen operates under the brand “AdipoGen Life Sciences” internationally. In addition to research reagents, AdipoGen is newly developing products for licensing in new market segments (clinical diagnostics/therapeutics).

Web site:	<a href="http://adipogen.com">adipogen.com</a>
Number of Employees:	11-50
Founded in:	2011
Based in:	Liestal
Sector:	P3
Total Funding Amount:	Undisclosed

# ADR AC



ADR-AC has longtime expertise in drug hypersensitivity research. In case of adverse drug reactions during pre-clinical stages, phase I - III clinical trials or in post-marketing stages, ADR-AC offers defined risk assessment to analyze and evaluate the immune-stimulatory potential of culprit substances. Their know-how in the field of small chemical molecules as well as biologicals, eg therapeutic proteins and monoclonal antibodies.

ADR-AC has profound expertise in performing in vitro experiments based on human immune cells. Upon your request ADR-AC will propose a panel of tests designed to reveal the immunogenic potential of your drug.

Web site:	<a href="http://adr-ac.ch">adr-ac.ch</a>
Number of Employees:	1-10
Founded in:	2007
Based in:	Bern
Sector:	P3
Total Funding Amount:	Undisclosed

# aktiia



aktiia is a Swiss startup founded in May 2018 by Mattia Bertschi (CEO) and Josep Sola (CTO). The team currently counts 12 employees and is located in Neuchatel (Switzerland) and Zurich (Switzerland). aktiia's patented core technology for blood pressure monitoring is based on more than 15 years of pioneering work and over 30 peer-reviewed publications at the Swiss research and technology organization CSEM. aktiia's technology combines common optical sensors and clinically validated software algorithms to measure an individual's blood pressure at the wrist. The technology has been validated through trials in acute and low-acute settings with worldwide acknowledgement of its accuracy.

Web site:	<a href="https://aktiia.com">aktiia.com</a>
Number of Employees:	11-50
Founded in:	2018
Based in:	Neuchatel
Sector:	AgeTech
Total Funding Amount:	\$4.1M

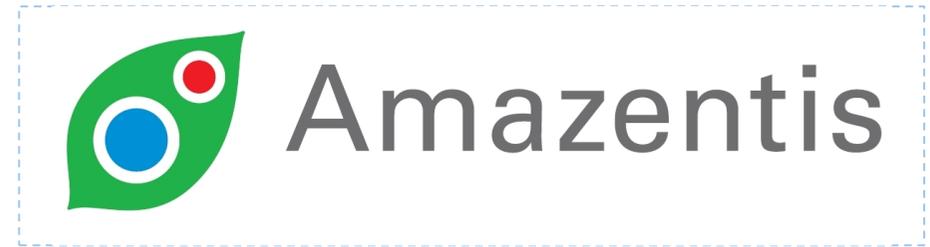
# Amal Therapeutics



Amal Therapeutics SA, a biotech company, engages in the research and development of therapeutic vaccines in oncology. The company uses its cell penetrating peptide platform to develop and progress therapeutic vaccines in oncology, including cancer vaccines, immunotherapy, and therapeutic cancer vaccines. Amal Therapeutics SA was founded in 2012 and is based in Geneva, Switzerland.

Web site:	<a href="http://amaltherapeutics.com">amaltherapeutics.com</a>
Number of Employees:	11-50
Founded in:	2012
Based in:	Geneve
Sector:	P3
Total Funding Amount:	\$45.2M

# Amazentis



Amazentis is a life science company that conducts research on medication and nutrition. The company focuses on the development of products that meet the health requirements of the aging population. Their products target the reversal of age-related muscle decline by improving the activity of mitochondria.

Amazentis was founded in 2007 by Pierre Landolt and Patrick Aebischer and is based in Lausanne.

Web site:	<a href="http://amazentis.com">amazentis.com</a>
Number of Employees:	1-10
Founded in:	2007
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$8.85M

# APR Applied Pharma Research



APR Applied Pharma Research s.a. identifies, develops, manufactures, and licenses healthcare products for patients in various therapeutic areas. The company specializes in the development of oral and topical formulations in various healthcare regulatory areas ranging from Rx and OTC pharmaceuticals, nutraceuticals, dermocosmetics, and medical devices. It offers a portfolio of prescription products in various pharmaceutical forms in a range of therapy areas with innovative drug delivery systems; and consumer healthcare products for acute pain, cough & cold, insect repellent, intimate care, legs healthcare, pediatric, pregnancy, and proctology. The company provides products for various therapeutic areas, such as cancer supportive care, CNS (migraine), dermatology, genetic metabolic diseases, gynecology, pain management, proctology, tissue transplantation, and wound management. Its strategic focus is in Europe and the United States, as well as fast growing markets, such as China, Russia, and Latin America.

Web site:	<a href="http://apr.ch">apr.ch</a>
Number of Employees:	11-50
Founded in:	1990
Based in:	Balerna
Sector:	P3
Total Funding Amount:	Undisclosed

# Aptissen



Aptissen is a company specialized in the research, development and commercialization of biopolymer-based medical devices. Aptissen's team revolutionized the viscosupplement market with Synolis VA and his patented formulation which combines Hyaluronic Acid and Sorbitol. Synolis VA provides rapid mobility recovery, fast long lasting pain relief associated with excellent safety.

The company was founded in 2013 as a spin-off of ANTEIS. It today distributes its products through a worldwide international distributors' network among more than 50 countries including Europe, South America, Canada, Middle East and Asia for instance. Aptissen considers that the future of treatments for the synovial joints requires effective treatments administered in a single session, providing an improvement in mobility and a fast pain relief, as well as the regeneration of cartilage.

Web site:	<a href="http://aptissen.com">aptissen.com</a>
Number of Employees:	11-50
Founded in:	2013
Based in:	Plan-les-ouates
Sector:	P3
Total Funding Amount:	Undisclosed

# Asceneuron



Asceneuron develops effective therapeutics for orphan tauopathies and Alzheimer's disease. By focusing on areas of high unmet medical need, Asceneuron aspires to become a leading biotech company specialized in small molecule drug discovery for neurodegenerative diseases. Tauopathies are currently untreatable neurodegenerative diseases that rapidly progress towards debilitating conditions. The appearance of deposits of the microtubule-associated tau protein as e.g. neurofibrillary tangles in neurons of the brain is a common feature of tauopathies that is shared with Alzheimer's disease. Due to increasing life expectancy, Alzheimer's disease is viewed as one of the largest healthcare problems of this century, imposing a major economic burden on societies in the Western and developing world. Current treatment options provide limited benefits supporting the urgent need for more efficacious and better tolerated medicines that address symptomatic relief as well as disease progression.

Web site:	<a href="http://asceneuron.com">asceneuron.com</a>
Number of Employees:	1-10
Founded in:	2012
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$30M

# Atracsys



Atracsys was established in 2004, capitalizing years of research at the Swiss Federal Institute of Technology in Lausanne (EPFL). Its name is an acronym for Advanced Tracking Systems, and that's what Atracsys started out with: developing high-precision optical measurement solutions for medical surgery. In 2007, upon an increasing demand to apply its technological optical expertise in touchless interaction and multi-touch systems, Atracsys created a new department called Interactive Solutions.

Atracsys solutions combine utmost measurement accuracy, speed and reliability. Atracsys technology is entirely designed, engineered, manufactured and verified in Switzerland and follows the ISO 13485 medical quality system.

Web site:	<a href="http://atracsys.com">atracsys.com</a>
Number of Employees:	11-50
Founded in:	2004
Based in:	Puidoux
Sector:	P3
Total Funding Amount:	Undisclosed

# Auris Medical



Auris Medical are dedicated to developing novel pharmaceutical therapies to protect hearing, silence tinnitus and restore balance.

Auris Medical is the leading pioneer in the emerging field of therapies for neurotologic disorders affecting the inner ear. They have two projects in advanced clinical development, Keyzilen® for the treatment of acute inner ear tinnitus and AM-111 for the treatment of acute inner ear hearing loss. In addition, they have AM-125 in early clinical development for the treatment of vertigo.

Company has additional projects under development and are further strengthening their pipeline through collaborations with leading academic institutions in this field.

Web site:	<a href="http://aurismedical.com">aurismedical.com</a>
Number of Employees:	11-50
Founded in:	2003
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Axovant Sciences



Axovant Sciences is a leading clinical-stage neurology company focused on the treatment of dementia and related neurological disorders. Axovant is developing a pipeline of product candidates to comprehensively address the cognitive, functional, and behavioral aspects of dementia. Vision of the company is to become the leading company focused on the treatment of dementia by broadly addressing multiple forms of this condition through developing innovative new medicines for patients.

Web site:	<a href="http://axovant.com">axovant.com</a>
Number of Employees:	51-200
Founded in:	1905
Based in:	Basel
Sector:	Regenerative Medicine
Total Funding Amount:	\$55M

# Bacoba

The Bacoba is a young Swiss pharmaceutical company that developed on the basis of unique natural substances innovative new therapeutics. Their diverse research uses the chemical diversity of the living world, traditional medical knowledge, molecular pharmacology, computer-based drug development and synthetic medicinal chemistry to develop novel drugs for the treatment of infectious diseases that are currently insufficiently treatable.

Bacoba has it`s own vision to develop innovative therapeutics derived from the unique chemicals nature supplies. In their multifaceted research they incorporate natural chemodiversity, traditional medicinal knowledge, molecular pharmacology, computer-aided drug design, and synthetic medicinal chemistry, to develop novel drugs for unmet medical needs in the field of infectious diseases.

Web site:	<a href="http://grow-waedenswil.ch">grow-waedenswil.ch</a>
Number of Employees:	Undisclosed
Founded in:	2004
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# BalOnco



BalOnco, founded in 2009, is a Swiss BioPharmaceutical company dedicated to develop innovative medicines in areas of high Medical need, in particular in Oncology and Women's Health. BalOnco has partnered with leading Academic institutions, thus efficiently combining basic research and drug development expertise.

Web site:	<a href="http://balonco.com">balonco.com</a>
Number of Employees:	1-10
Founded in:	2009
Based in:	Kaiseraugst
Sector:	P3
Total Funding Amount:	Undisclosed

# Basilea Pharmaceutica



Basilea Pharmaceutica Ltd. is headquartered in Basel, Switzerland, and listed on the SIX Swiss Exchange (SIX: BSLN). Through the integrated research, development and commercial operations of its Swiss subsidiary Basilea Pharmaceutica International Ltd., the company focuses on providing innovative pharmaceutical products in the therapeutic areas of bacterial infections, fungal infections and oncology, targeting the medical challenge of rising resistance and nonresponse to current treatment options.

Their portfolio comprises of two marketed anti-infective brands (Cresemba® and Zevtera®) and three oncology drug candidates in development. Basilea Pharmaceutica Ltd is building on it`s potential for sustainable growth and valuation generation, based on increasing revenues and selective investments into internal and external innovation.

Web site:	<a href="https://www.basilea.com">basilea.com</a>
Number of Employees:	201-500
Founded in:	2000
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Biocartis



Biocartis SA, a molecular diagnostics company, develops diagnostics technology platform for multiplexed detection of bio-analytes. It focuses on integrated molecular and immunodiagnostics based on its proprietary micro-technology platform. The company develops and licenses a series of technologies to build a diagnostics platform for multiplexed detection, quantification, and amplification of bio-analytes, including proteins, nucleic acids, and small molecules. Its products are used for various applications, including analysis of bio-molecules associated with risks factors, early detection, staging, treatment selection, and monitoring of a disease. Biocartis SA was founded in 2007 and is based in Lausanne, Switzerland.

Web site:	<a href="http://biocartis.com">biocartis.com</a>
Number of Employees:	201-500
Founded in:	2007
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$366.3M

# BioVersys



The Swiss biopharmaceutical company BioVersys focuses on research and development of small molecules which switch off drug resistance against existing antibiotics. With the company's award-winning TRIC technology (Transcriptional Regulator Inhibitory Compounds) it is possible to restore the efficacy of approved antibiotics. By this, BioVersys addresses the high medical need for new treatments against life-threatening infections that emerged in recent years due to the resistance of bacterial strains against existing antibiotics. BioVersys' compounds will be used in combination with existing antibiotics, thereby renewing efficacy as well as intellectual property for the established drug. The current research focus is Nosocomial Infections (hospital acquired infections) and Tuberculosis.

In collaboration with GlaxoSmithKline (GSK) and a consortium of the University of Lille, BioVersys is developing a preclinical candidate for the treatment of multidrug-resistant tuberculosis.

Web site:	<a href="http://bioversys.com">bioversys.com</a>
Number of Employees:	1-10
Founded in:	2008
Based in:	Basel
Sector:	P3
Total Funding Amount:	\$7.8M

# BioXpress Therapeutics



BioXpress creates biosimilars of uncompromising quality. They develop in Switzerland and manufacture for distribution worldwide.

BioXpress was founded in Geneva by the industry leaders in cell-line development and analytical characterization and has built a team of experts in the development of biopharmaceuticals and biosimilars, their manufacturing, characterization, clinical and regulatory development. The company's partnership with Selexis ensures highest standards in cell-line development, coupled with a collaboration with SGS for analytics, and priority access to laboratories and a CMO in Switzerland for optimal process development and GMP manufacturing so that the development of their biosimilars can be managed in a cost-effective and streamlined process.

Web site:	<a href="http://bioxpress.com">bioxpress.com</a>
Number of Employees:	1-10
Founded in:	2010
Based in:	Plan-les-ouates
Sector:	P3
Total Funding Amount:	Undisclosed

# Cardiola



Cardiola AG was founded in 2000 in Winterthur (Switzerland) as CardioRest AG with the singular goal of developing a completely new approach to treating heart failure based on Muscular CounterPulsation research.

m.pulse® is currently the only non-invasive therapeutic system in the world able to treat heart failure not only in hospitals but also on an outpatient basis and even by patients themselves at home. After having actually been awarded a brand new device class, m.pulse® constitutes a completely new market segment.

Web site:	<a href="http://cardiola.ch">cardiola.ch</a>
Number of Employees:	1-10
Founded in:	2000
Based in:	Winterthur
Sector:	P3
Total Funding Amount:	\$6M

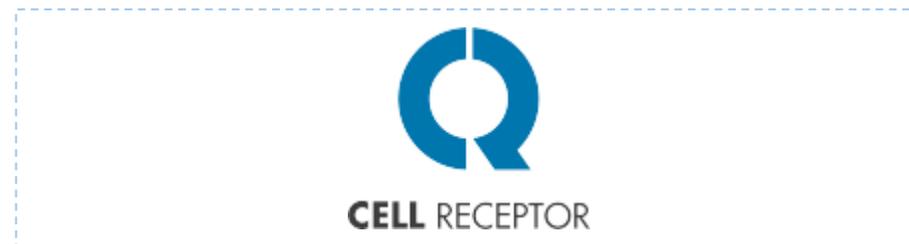
# Cardiorentis



Cardiorentis AG, a biopharmaceutical company, develops drug therapies for the treatment of acute heart failure and related cardiovascular diseases. The company develops TRUE-AHF (TRial of Ularitide’s Efficacy and safety in patients with Acute Heart Failure), an ularitide, which is an intravenous infusion treatment for acute heart failure; and SIRIUS I and II, a safety and efficacy study of an intravenous placebo controlled randomized infusion of ularitide in a prospective double-blind study in patients with symptomatic and decompensated chronic heart failures. Its disease-based technology platform includes protein biology to identify novel targets; and design small molecule compounds and peptides for healthcare markets. The company was founded in 2010 and is based in Zug, Switzerland.

Web site:	<a href="http://cardiorentis.com">cardiorentis.com</a>
Number of Employees:	Undisclosed
Founded in:	2010
Based in:	Zug
Sector:	P3
Total Funding Amount:	\$118.4M

# Cell Receptor



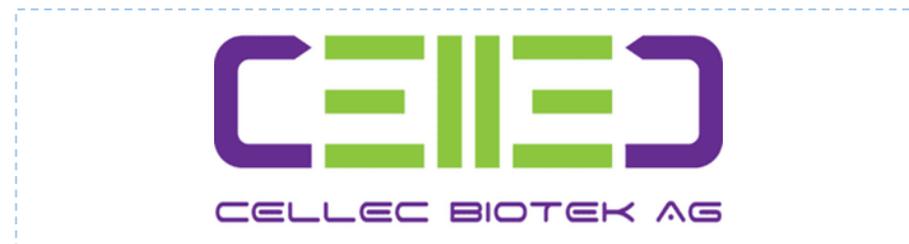
Cell Receptor develops a future-oriented therapy for high medical needs: cancer and autoimmune diseases. Cell Receptor is a small Geneva based startup company, aiming to establish a new option in the treatment of cancer and autoimmune diseases:

The Cell Receptor team has since 2010 been actively engaged in research on cell proliferation and possesses unique knowledge of a very basic control mechanism of cell growth in the body, that was previously unknown and therefore has not been the subject of therapeutic efforts.

Cell Receptor has also knowledge of groups of pharmacological substances able to interfere with this mechanism, and has, basing thereupon, developed a new method for the prevention of cancer metastases. The treatment has the potential to inhibit cancer metastasis at very reasonable costs.

Web site:	<a href="http://cellreceptor.ch">cellreceptor.ch</a>
Number of Employees:	Undisclosed
Founded in:	2010
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# CELLEC Biotek



CELLEC BIOTEK is a biotechnology startup that develops and commercializes bioreactors for 3D cell culture and tissue generation. CELLEC BIOTEK is a biotechnology startup that develops and commercializes bioreactors for 3D cell culture and tissue generation. Its team is comprised of an international team of engineers, biotechnologists, and clinicians.

CELLEC BIOTEK's products supports growing 3D living tissues, as advanced model systems for tissue development and drug testing, applied to life sciences and pharmaceutical research, and potentially as biological grafts for tissue and organ regeneration, applied to clinical translation in regenerative medicine.

CELLEC BIOTEK was founded in 2011 and is based in Basel, Basel-Stadt. It is a spin-off of a lab of University Hospital Basel, Switzerland, active in the world of tissue engineering and regenerative medicine.

Web site:	<a href="http://cellecbiotek.com">cellecbiotek.com</a>
Number of Employees:	1-10
Founded in:	2011
Based in:	Basel
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Cellestia Biotech



Cellestia is a bio-pharmaceutical company with strategic focus on anti-cancer drugs modulating the NOTCH signaling pathway. Cellestia is actively engaged in clinical development of first-in-class targeted therapeutics with untapped mode of action, to address unmet medical need in patients with oncology and immunological disorders.

Cellestia Biotech was founded in 2014 as a spin-off from EPFL (Ecole Polytechnique Fédérale de Lausanne, Switzerland). Cellestia's pipeline including lead candidate, oral small molecule CB-103 is based on proprietary know-how and more than two decades of research in Prof. Radtke's laboratory at Swiss Institute for Experimental Cancer Research (ISREC) at EPFL. Prof. Freddy Radtke is an internationally recognized key opinion leader in NOTCH pathway and cancer stem cells research. Dr. Rajwinder Lehal, CSO, has established Cellestia's drug discovery platform and leading the early development phase of the program for a decade.

Web site:	<a href="http://cellestiabiotech.com">cellestiabiotech.com</a>
Number of Employees:	1-10
Founded in:	2014
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$28M

# CeQur



CeQur SA is dedicated to developing and commercializing advanced insulin delivery systems that make it easier for people living with type 2 diabetes to comply with therapy and stay in control of their disease.

CeQur is developing the CeQur Insulin Infuser, a simple and discrete insulin delivery tool for people who could benefit from intensive insulin therapy but want flexibility and freedom from multiple daily injections.

CeQur was established in January 2008 as a spin out from Danfoss A/S, a large, global Danish industrial products group.

Web site:	<a href="http://cequrcorp.com">cequrcorp.com</a>
Number of Employees:	51-100
Founded in:	2008
Based in:	Luzern
Sector:	P3
Total Funding Amount:	\$156.6M

# Ciliatech

**CILIATECH**

Ciliatech is the research, development, production, acquisition and distribution of pharmaceutical and diagnostic products and technologies. The purpose of the Ciliatech is the research, development, production, exploitation, acquisition and distribution of pharmaceutical and diagnostic products and technologies. The company may acquire, hold and dispose of any intellectual property rights or licenses of any kind.

Web site:	<a href="http://ciliatech.com">ciliatech.com</a>
Number of Employees:	1-10
Founded in:	2011
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Clinerion



Clinerion enables early patient access to innovative treatment through solutions for clinical trial patient search, RWE, & market access. Clinerion accelerates clinical research and medical access to treatments for patients. They use proprietary technologies for analysis of patient data from the global network of partner hospitals. Clinerion's Patient Network Explorer radically improves the efficiency and effectiveness of clinical trial recruitment by offering data-driven protocol optimization, site feasibility evaluation and real-time patient search and identification to match patients to treatments. Their technology solution provides real-world evidence analytics for medical access. Clinerion facilitates the participation of partner hospitals in leading-edge, industry-sponsored trials and time savings in patient recruitment. Company creates innovative and disruptive fit-for-purpose solutions which enable pharmaceutical companies to shorten patient recruitment and save costs by streamlining operations and leveraging strategic intelligence. Clinerion's proprietary Big Data analytics technologies leverage real-time data from electronic health records which comply with international patient privacy and data security regulations.

Web site:	<a href="http://clinerion.com">clinerion.com</a>
Number of Employees:	11-50
Founded in:	2008
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# codiag



codiag is a research-driven company that builds softwares to augment doctors and improve patient outcome. codiag provides AI and big data driven real-time matching of patient medical files with virtually every documented disease to support diagnostics, prevention, administration, automation, legal and cost control in hospitals, clinics, GP practices and healthcare related service providers.

codiag is a research-driven company that offers integration of its patent-pending, CE-certified platform ""codiag+Pro"" into existing EHR or other health-data systems.

codiag+Pro processes text-based patient medical files in multiple languages and can produce diagnostic guidance explained by peer-reviewed biomedical literature, patient readmission warnings and other key insights. codiag+Pro can be easily and seamlessly integrated into on-site IT systems as well as off-site patient data storages without the use of specialized AI hardware.

Web site:	<a href="http://codiag.com">codiag.com</a>
Number of Employees:	1-10
Founded in:	2018
Based in:	Zurich
Sector:	P3
Total Funding Amount:	Undisclosed

# Corporate Health Solutions



Corporate Health Solutions offers products and services for the analysis and optimization of the team climate and the work situation. Corporate Health Solutions (CHS) GmbH is a spin-off of the University of Zurich (UZH) founded in 2014. They offer products and services for the analysis and optimization of the team climate and the work situation .

As a spin-off of the "Public & Organizational Health" department of UZH, they have extensive research and implementation know-how in the area of work, health and organization.

Their products and services are both scientifically sound and practicable .They are closely networked with companies, associations, universities and management consultants. For the technical solutions, they have a partnership with IT experts from the University of St. Gallen / ETH Zurich.

Web site:	<a href="https://chsolutions.ch">chsolutions.ch</a>
Number of Employees:	1-10
Founded in:	2014
Based in:	Zurich
Sector:	P3
Total Funding Amount:	Undisclosed

# Covagen



Covagen develops bispecific FynomAbs by fusing its human Fynomer binding proteins to antibodies, resulting in therapeutics with novel modes of action and enhanced efficacy in the treatment of inflammatory diseases and cancer. The ability to fuse Fynomers to multiple sites on an antibody allows Covagen to create FynomAbs with tailored architectures to maximize efficacy.

Their goal is to access novel biology for each product candidate. Covagen's lead FynomAb COVA322 is being developed for the treatment of inflammatory diseases such as rheumatoid arthritis and psoriatic arthritis.

In October 2012 Covagen entered into a strategic research collaboration and license agreement with Mitsubishi Tanabe / TRL for the development of bispecific FynomAbs against target pairs selected by Mitsubishi Tanabe / TRL. Covagen was founded in 2007 as a spin-off company from ETH Zurich (Swiss Federal Institute of Technology). A strong syndicate of investors supports Covagen's drug development programs including Novartis Venture Fund, Edmond de Rothschild Investment Partners, Gimv, Seroba Kernel Life Sciences, Ventech and others.

Web site:	<a href="http://covagen.com">covagen.com</a>
Number of Employees:	11-50
Founded in:	2007
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	\$106M

# CovalX



CovalX develops and manufactures scientific instrumentation for academic research and industrial use. CovalX AG was founded in 2006. The company's vision is to become a leading provider of technology and services in the field of protein interaction analysis based on mass spectrometry. With support offices in Switzerland, France and USA, CovalX is a global company offering leading product and services for major pharmaceutical companies as well as academic laboratories. CovalX High-Mass systems and services are sold worldwide through direct offices (Europe, USA) or distributors (China, Japan, Korea). CovalX is a fast growing company, developing innovative analysis solutions for the characterization of therapeutic proteins and protein interactions for the life science industry.

Web site:	<a href="http://covalx.com">covalx.com</a>
Number of Employees:	11-50
Founded in:	2006
Based in:	Zurich
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Covalys Biosciences



Covalys Biosciences AG develops products that help researchers in academic institutions and pharmaceutical and biotech companies to improve the efficiency of research into proteins and their function. Its SNAP-tag technology is a protein tag that covalently links itself to any chemical probe and is provided as a substrate. The company's ACP-tag allows site-specific labeling of proteins on cell surfaces. The company was founded in 2002 and is based in Witterswil, Switzerland.

Web site:	Undisclosed
Number of Employees:	1-10
Founded in:	2002
Based in:	Witterswil
Sector:	Regenerative Medicine
Total Funding Amount:	\$4.8M

# Crisalix



Crisalix is the inventor of a 3D, web-based simulator for plastic surgery. Crisalix aims to develop scientific technologies in the field of plastic and aesthetic surgery to improve surgeon-patient relationships. Thanks to its unique solution available on the Internet, Crisalix offers practitioners new consultation standards.

Crisalix is the inventor of e-Setix, the first web-based 3D preview technology for plastic surgery based on physical properties of the body. As a pioneer in its field, Crisalix has developed a system for reconstructing the patient's body in 3D from 2D images. Spin-off of internationally renowned academic R&D centers such as the Institute of Surgical Technology and Biomechanics (ISTB) of the University of Bern (Switzerland) and Ecole Polytechnique Federale de Lausanne (EPFL - Switzerland), Crisalix was initiated in 2006 with the support of CO-ME network (Computer Aided and Image Guided Medical Interventions) in Switzerland. In 2008, Crisalix started collaborating with ISTB, EPFL and the Department of Plastic and Reconstructive Surgery of the Inselspital Bern. In 2009 the Innovation Promotion Agency (CTI) Switzerland, decided to co-finance Crisalix for its unique technology and for being the pioneer in the field of surgery.

Web site:	<a href="http://crisalix.com">crisalix.com</a>
Number of Employees:	51-100
Founded in:	2008
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	Undisclosed

# CT Atlantic



CT Atlantic AG is a biotech company focused on the identification and development of human-derived monoclonal antibodies – HD-MABs™ as novel therapeutics for the treatment of cancer. CT Atlantic is a spin-off of the University of Zurich (Zurich, Switzerland) and the Ludwig Institute for Cancer Research (LICR) (Zurich, Switzerland and New York, USA) and has a strong focus on clinical research and applications in the field of oncology. It was founded by Prof. Alexander Knuth, Chairman of the Department of Clinical Oncology at the University of Zurich and one of the pioneers in cancer immunotherapy. He was previously Professor for Oncology at the Klinikum Nordwest (Frankfurt, Germany) and University of Frankfurt, Germany. Prior to this he led the clinical trials and research activities in the Ludwig Institute for Cancer Research, New York and its affiliate in the Krankenhaus Nordwest.

In addition, it has built a network of clinicians and clinical institutions that are closely allied with the Ludwig Institute for Cancer Research, the University of Zurich and Krankenhaus Nordwest (Frankfurt, Germany).

Web site:	<a href="http://ct-atlantic.com">ct-atlantic.com</a>
Number of Employees:	1-10
Founded in:	2008
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	\$9M

# Cureab



Cureab is a swiss based biotech company that was founded in 2012.

Cureab is focussed on research in inflammation and oncology. Cureab develops therapeutic antibodies from target identification to clinical testing. Two monoclonal antibodies are in late stage pre-clinical development. Cureab welcomes new partnerships with academia and industry.

Web site:	<a href="http://cureab.ch">cureab.ch</a>
Number of Employees:	Undisclosed
Founded in:	2012
Based in:	Riehen
Sector:	P3
Total Funding Amount:	Undisclosed

# CyanoGuard



Cyanoguard AG is a chemical technology company specialised in the development of novel toxin detection methods to improve environmental monitoring, food safety and health care in remote settings and locations.

Its innovative technology enables fast and safe cyanide detection in food, waste water and other samples. Its method is selective and requires no special training and/or equipment.

Equipped with the latest research, and with over six years of close collaboration with leading industry partners, the company is dedicated to resolve today's cyanide issues, offering fast and safe toxin detection in any setting at any time.

Web site:	<a href="http://cyanoguard.com">cyanoguard.com</a>
Number of Employees:	1-10
Founded in:	2016
Based in:	Wädenswil
Sector:	P3
Total Funding Amount:	Undisclosed

# diagene laboratories



diagene laboratories inc. is a worldwide operating company (GmbH) in providing comprehensive molecular and pharmacogenomics services as well as genetic tests to improve patient care. Diagene laboratories inc. is organized under two divisions, Routine Laboratories and Research Laboratories, with offices in Switzerland and Germany.

Founded in 1999, diagene is leading in the diagnostics of familial forms of high cholesterol (familial hypercholesterolemia, familial-defective apolipoprotein B-100, familial dysbetalipoproteinemia, familial combined hyperlipidemia, etc.). Besides a large series of genetic analyses, diagene offers also biochemical and daily routine laboratory analyses. Recently, several new gene test have been introduced, one of them for the prediction, of severe side effects of antiretroviral treatment of patients with HIV, another for the diagnosis of the long qt syndrome.

Web site:	<a href="http://diagene.ch">diagene.ch</a>
Number of Employees:	501-1000
Founded in:	1999
Based in:	Reinach
Sector:	P3
Total Funding Amount:	Undisclosed

# Dividat



Dividat develops evidence based training concepts to improve mobility in older adults for prevention and rehabilitation. Dividat is a Spin-off company from the ETH Zurich and develops evidence based training concepts to improve mobility in older adults for prevention and rehabilitation. As a spin-off company of ETH Zurich, their solutions are inspired by recent research articles. On a regular basis, their solutions are evaluated in field trials under consideration of the guidelines of international scientific journals.

Web site:	<a href="http://dividat.com">dividat.com</a>
Number of Employees:	1-10
Founded in:	2013
Based in:	Schindellegi
Sector:	P3
Total Funding Amount:	Undisclosed

# Dorphan



Dorphan is a preclinical stage drug development company. Dorphan S.A. was founded in 2011 by the members of the Swiss Sanfilippo Foundation in order to discover and pursue the development of drug candidates for orphan and rare genetic diseases. The company R&D activities are built on worldwide innovative research to identify, evaluate and develop preclinical molecules and deliver promising drug candidates to patients.

Web site:	<a href="http://dorphan.com">dorphan.com</a>
Number of Employees:	2-10
Founded in:	2011
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	Undisclosed

# ecogenics



ecogenics is the leading trusted partner for microsatellite marker development and genotyping projects. ecogenics proudly looks back onto 14 years experience of serving customers in various fields of molecular biology. Founded as a spin-off company from the University of Zurich, ecogenics successfully managed to establish a good reputation for being a reliable partner and providing high quality services.

ecogenics provides comprehensive molecular marker development, and at the same time related services such as genotyping. Their goal is satisfied customers who retain confidence in their products and services in the long run. With most of their customers (research institutes and private companies worldwide) they have recurring projects or long-lasting collaborations.

Web site:	<a href="http://ecogenics.ch">ecogenics.ch</a>
Number of Employees:	Undisclosed
Founded in:	2001
Based in:	Balgach
Sector:	P3
Total Funding Amount:	Undisclosed

# Ennar Pharma

The purpose of the Ennar Pharma is the research and development of products for the treatment of psoriasis as well as the consultation, manufacture, distribution and trade of developed products for the treatment of psoriasis. The company can use processes and patents. Ennar Pharma may enter into any kind of business and enter into contracts that are conducive to the purpose of the Company or directly or indirectly related thereto. The Company may participate in, or associate with, other companies. The Company may acquire, hold or sell real estate. It may set up branches and agencies in Germany or abroad by resolution of the Board of Directors.

Web site:	Undisclosed
Number of Employees:	Undisclosed
Founded in:	2010
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Evasensor



Evasensor Ltd. is focused on bringing advanced and affordable biosensor systems to the market for rapid testing at the point-of-use. Evasensor Ltd. is a company focused on bringing advanced and affordable biosensor systems to for OEM-customers to the market for rapid testing at the point-of-use.

The technology offered by Evasensor fulfills the need for rapid, sensitive biochemical testing. For biochemical analysis, the advanced optical reader instruments can be placed directly at the point-of-use and enable decentralized biochemical testing at any place where needed by any person. This offers optimal, cost-effective workflow in research, quality control and analytical laboratories and – most important – after only a few manipulation steps the results are available within 10 minutes.

Web site:	<a href="http://evasensor.com">evasensor.com</a>
Number of Employees:	1-10
Founded in:	2010
Based in:	Neuchatel
Sector:	AgeTech
Total Funding Amount:	Undisclosed

# ExCellness Biotech



ExCellness provides non-degradable tissue culture surfaces with the elasticity of human tissue, ranging from the stiffness of bone to the softness of brain. Culturing your cells on their adapted culture substrates makes them "FEELING AT HOME"! ExCellness Biotech was incorporated in 2009 as a spin-off project from the Ecole Polytechnique Fédérale de Lausanne (EPFL) in Switzerland. ExCellness maintains close contact with the EPFL research competencies but is also actively collaborating with the University of Toronto (UoT), Ontario, Canada to further develop elastic substrates to culture cells in biomimetic conditions.

Web site:	<a href="http://excellness.com">excellness.com</a>
Number of Employees:	1-10
Founded in:	2009
Based in:	Lausanne
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Exquiron Biotech



Exquiron is dedicated to contract research in early stage drug discovery. Exquiron Biotech is dedicated to state-of-the-art hit identification and validation services for its customers. With a combined team track record of over 60 years in early stage drug discovery and a high level of expertise and flexibility, they help their customers advance their programs and generate added value in the areas of pharmaceutical drug discovery and nutraceuticals.

Web site:	<a href="http://exquiron.com">exquiron.com</a>
Number of Employees:	11-50
Founded in:	2013
Based in:	Reinach
Sector:	P3
Total Funding Amount:	Undisclosed

# Fasteris



Fasteris is a Swiss biotechnology company based in Geneva. Since 2007, Fasteris developed a broad range of applications to analyze genomes and transcriptomes, from library preparation to bioinformatics analyses: whole genome sequencing, de novo assembly; targeted re-sequencing and exomes; transcriptomes, directional stranded mRNA protocols; small RNAs; CHIP-SEQ to study protein-DNA binding sites; metagenomics; custom projects such as Trypanosoma splice leader, phage display, etc. Fasteris provides services for research laboratories, from small-scale projects to thousands of samples using automated protocols. Since 2013, Fasteris joined the Medisupport Network and produced many thousands of NGS analyses under medical diagnostics conditions for the prenatal diagnostics test Prendia.

Web site:	<a href="http://fasteris.com">fasteris.com</a>
Number of Employees:	11-50
Founded in:	2003
Based in:	Plan-les-ouates
Sector:	P3
Total Funding Amount:	Undisclosed

# Frimorfo



Frimorfo is a preclinical Contract Research Organization (CRO) located in Marly (Fribourg), Switzerland. Frimorfo offers its expertise on a worldwide basis to pharmaceutical industry, biotechnology firms and universities. As a small and focused company, Frimorfo is in a unique position to play a significant role as a product and service supplier in the discovery and evaluation of novel genes, ultimately leading to the development of new diagnostic and therapeutic approaches.

Frimorfo has established itself as a respected, reliable partner providing high quality products and services and continuously expanding its portfolio. The company provides those kind of services like efficacy studies of drug candidates and phenotyping genetically modified mice.

Web site:	<a href="http://frimorfo.com">frimorfo.com</a>
Number of Employees:	Undisclosed
Founded in:	1998
Based in:	Fribourg
Sector:	P3
Total Funding Amount:	Undisclosed

# Gene Signal



Gene Signal is a research based biotechnology company specialized in the discovery, development, and commercialization of a new class of oligonucleotides, proteins and monoclonal antibodies to treat a range of conditions where angiogenesis plays a determinant role. Gene Signal's innovative therapies use precisely targeted angiogenic (inducing vascular growth) or angiostatic (inhibiting vascular growth) agents, derived from genes that are exclusively involved with the angiogenesis process.

Gene Signal's therapies aim to provide a more targeted alternative to existing solutions like Vascular Endothelial Growth Factors which impact other physiological phenomena in addition to angiogenesis. Gene Signal's targeted therapies represents a novel, next-generation approach to the management of angiogenesis based conditions and offer the potential to improve treatment options for concerned patients.

Web site:	<a href="http://genesignal.com">genesignal.com</a>
Number of Employees:	11-50
Founded in:	2000
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	Undisclosed

# Genedata



Genedata is a bioinformatics company that specializes in developing software systems for the comprehensive analysis of genomes, transcriptomes, proteomes, metabolomes, and biochemical compounds and uses sophisticated computational solutions for related research processes in the life sciences. By working closely with key partners, the company combines its extensive product portfolio with expert scientific consulting services to offer tailor-made solutions for specific applications and multiple therapeutic areas. The company's solutions are key for moving the focus of life science research from high-throughput data acquisition to high-content data interpretation.

Web site:	<a href="http://genedata.com">genedata.com</a>
Number of Employees:	51-100
Founded in:	1997
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Genentech



Genentech is a biotechnology company that discovers, develops, manufactures, and commercializes medicines to treat patients with serious or life-threatening medical conditions. It creates multiple products on the market and a development pipeline.

The company became a member of the Roche Group in 2009. As part of their merger agreement, Roche and Genentech combined their pharmaceutical operations in the United States. Genentech's South San Francisco campus now serves as the headquarters for Roche pharmaceutical operations in the United States. Genentech's Research and Early Development section operates as an independent center within Roche.

Web site:	<a href="http://gene.com">gene.com</a>
Number of Employees:	10001+
Founded in:	1976
Based in:	Basel (Roche), San Francisco, CA, USA (Subsidiary)
Sector:	Regenerative Medicine
Total Funding Amount:	\$1.64B

# Geneva Biotech Center



Geneva Biotech Center responds to the growing trend of pharmaceutical companies outsourcing research and development capabilities and acquiring projects in more advanced stages.

Consequently, the GBC operates as a pre-pharmaceutical company: collaborating with selected partners to develop promising and innovative molecules, to be licensed to a pharmaceutical company for their commercialization. The Geneva Biotech Center is composed of a group of business and scientific experts passionate about their work, each with more than twenty years of experience, mainly in research and development in the pharmaceutical industry. The GBC selects promising projects, builds a de-risked development path according to pharmaceutical quality standards, and offers optimal development and valorization to its academic, commercial and financial partners.

Web site:	<a href="http://genevabiotechcenter.com">genevabiotechcenter.com</a>
Number of Employees:	2-10
Founded in:	2013
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# Genkyotex



Genkyotex is dedicated to the development of innovative drugs which block enzymes that produce oxygen radicals. Such novel drugs will allow the treatment of oxygen-radical mediated acute and chronic diseases, with improved specificity, safety and efficacy over existing antioxidants therapy, giving them a significant competitive advantage. Genkyotex targets its technology initially to the therapeutic areas of cardiovascular, metabolic and neurodegenerative diseases.

Web site:	<a href="http://genkyotex.com">genkyotex.com</a>
Number of Employees:	11-50
Founded in:	2006
Based in:	Geneve
Sector:	Regenerative Medicine
Total Funding Amount:	\$81.8M

# GenomSoft



GenomSoft is a Swiss company located at the Campus Biotech EPFL Innovation Park in Geneva, a state-of-the-art hub hosting companies and institutions working on biotechnology and life science projects.

GenomSoft's team is composed of engineers and entrepreneurs with an extensive experience in research, development, and project management of high-end domains and industrial segments, such as digital signal processing, telecommunications, information security and avionics.

They are developing a new set of software tools, derived from the digital-media industry, in order to provide every organization working with genomic data with enterprise-grade technologies and devices able to store, transport and process genomic information in compliance with MPEG-G, the new ISO standard for genomic information representation.

Web site:	<a href="http://genomsoft.com">genomsoft.com</a>
Number of Employees:	2-10
Founded in:	2017
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# GenomSys



GenomSys is a Swiss company composed by engineers with extensive experience in research, development and project management in high-end domains and industrial segments such as digital signal processing, telecommunications, information security and avionics. Their experience spans from embedded software and firmware for low-power devices to hard real-time programming in safety-critical environments up to the design and integration of desktop and server applications in the digital multimedia and telecommunications market.

All the engineers are extensively accustomed to the ISO process of standardization, with experience in development and normative editing of audiovisual coding, systems and conformance testing standards. GenomSys develops technology powering a new generation of tools and devices for the efficient compression, storage, transport and manipulation of genomic data in compliance with MPEG-G, the new ISO standard for genomic information representation.

Web site:	<a href="http://genomsys.com">genomsys.com</a>
Number of Employees:	1-10
Founded in:	2016
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	Undisclosed

# Gnothis



Gnothis represents a unique source of knowledge within the field of molecular medicine. Gnothis was founded year 2000 by Professor Rudolf Rigler as well as a gremium of leading scientists, supported by institutional as well as private investors. The company covered two operational units: Gnothis AB, Kista, Sweden, and Gnothis SA, Lausanne, Switzerland. During the years 2000-2003 these operational units developed the Direct Gene expression Analysis (DGA) application and made considerable research and development concerning single-molecule DNA sequencing.

In June 2003 a strategic partnership was initiated with Evotec Technologies GmbH, Hamburg, Germany. The purpose of the partnership with Evotec Technologies GmbH is to enable a full scale commercialization of Direct Gene expression Analysis (DGA).

Web site:	<a href="http://gnothis.com">gnothis.com</a>
Number of Employees:	1-10
Founded in:	2000
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	Undisclosed

# Gondola Medical Technologies



Gondola Medical Technologies is a Swiss company specialized in research and the development of new technologies in the fields of physiotherapy, neurological and osteoarticular rehabilitation. It has developed and brought to the market the GONDOLA™ medical device to give the AMPS treatment, a non-invasive add on therapy to treat motor symptoms in Parkinson's Disease; symptoms that best respond to the GONDOLA™ treatment are Freezing of Gait, walking, slowness of movement and balance.

The GONDOLA™ device has been designed to be used at home; its use requires few minutes, and benefits remain for a period ranging from 3 to 5 days. Regular use of the device twice a week allows to maintain benefits overtime.

Web site:	<a href="http://gondola-parkinson.com">gondola-parkinson.com</a>
Number of Employees:	1-10
Founded in:	2011
Based in:	Lugano
Sector:	AgeTech
Total Funding Amount:	Undisclosed

# GTX medical



GTX medical was founded in December 2014, splitting off from the Swiss federal institute of technology Lausanne (EPFL) to specifically develop a new neurostimulation therapy. Company is based at the High-Tech Campus in Eindhoven, Netherlands, and at the Technical and Life Science Faculties of EPFL, Lausanne, Switzerland. Both sites are locations where world class research is developed, and they are proud to continue in this tradition.

Based on years of research by Professor Grégoire Courtine at EPFL CNP, company have developed an advanced therapy to help people with paraplegia recover the strength and ability to once again use their legs. Using a targeted neuro-stimulation implant with real-time motion feedback, combined with bodyweight support assisting training tools, our technology has the potential to restore the function of the spinal cord and improve the rehabilitation of individuals with SCI. Company calls this approach Targeted Epidural Spinal Stimulation (TESS). The therapy allows remodeling of neural pathways, repairing the connection between brain, spine, and lower extremities – with the potential of improving other symptoms related to spinal cord injuries.

Web site:	<a href="http://gtxmedical.com">gtxmedical.com</a>
Number of Employees:	11-50
Founded in:	2014
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$40M

# healthbank innovation

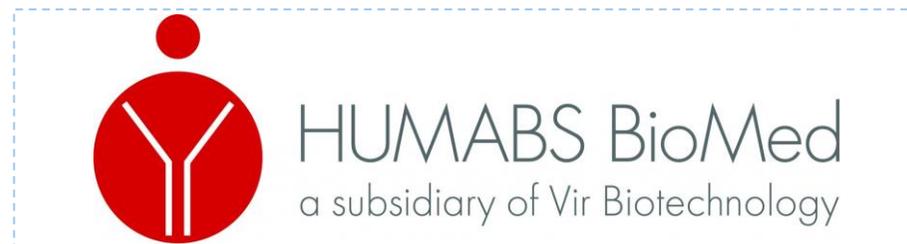


healthbank, a health-related data transaction platform, allows people across the globe to exchange health data in a secure & compliant way. healthbank is the world's first people-owned, neutral and independent health data transaction platform that empowers people across the globe to exchange their health data in a secure and compliant way.

healthbank connects data sources from all facets of the healthcare ecosystem and rewards participants for sharing their data for research purposes. Based in Switzerland, healthbank leverages Swiss neutrality, trust and data privacy to enable citizen users, researchers and organizations with large data sets to unlock the value of health and medical data on its independent, global transaction platform. By doing so, healthbank drives innovation in health sciences, from prevention to cure, at a better price with better quality for the benefit of both the individual and society.

Web site:	<a href="https://healthbank.coop">healthbank.coop</a>
Number of Employees:	1-10
Founded in:	2011
Based in:	Baar
Sector:	P3
Total Funding Amount:	\$6.27M

# Humabs



Humabs, a subsidiary of Vir Biotechnology, is an antibody therapeutics biotechnology company based in Switzerland, a spin-off from the Institute of Biomedical Research (IRB), Bellinzona, with which Humabs has a strong collaborative relationship. The Company is focused on discovering and developing fully human monoclonal antibodies to treat serious infections. Humabs has proprietary discovery technologies – CellClone – that were utilized successfully to advance from discovery to lead compounds in only a few months. The CellClone technology platforms enable the isolation of antibodies that have passed natural selection by the human immune system in response to infectious diseases and can generally be further developed without extensive lead optimization.

Humabs has a portfolio of more than a dozen immunotherapy product candidates, some addressing large markets and others against orphan diseases, which, while small in terms of patient numbers, have high morbidity and mortality rates.

Web site:	<a href="http://humabs.com">humabs.com</a>
Number of Employees:	11-50
Founded in:	2004
Based in:	Bellinzona
Sector:	P3
Total Funding Amount:	Undisclosed

# IDUN Technologies



Developing meaningful wearable devices with great user experience together with strong partners. IDUN Technologies Ltd. is an electrode company based in Zurich, Switzerland, founded in November 2017. Based on work done in a collaboration between the bioelectronics and micro- and nanosystems research groups at the ETH Zurich, IDUN is developing and producing soft and dry conductive electrodes for biopotential monitoring (ECG, EEG, EMG).

They are focusing on business-to-business partnerships with device manufacturers. Their technology is compatible to user's unique device architecture and will increase the impact of your recordings. IDUN offers a range of electrode designs for client's application. Bioinspired adhesion mimicking grasshopper feet, skin conformal soft electrodes for brain wave, heart and muscle monitoring belong to the core competences. The company's emphasis is on products that are unobtrusive in daily life and offer sufficient signal quality for various data analysis tools. Get in contact to find out more about their EEG, ECG and EMG electrodes.

Web site:	<a href="http://iduntechnologies.ch">iduntechnologies.ch</a>
Number of Employees:	1-10
Founded in:	2017
Based in:	Zurich
Sector:	AgeTech
Total Funding Amount:	\$130K

# IFPMA



IFPMA is involved in the discovery of and access to life-saving and life-enhancing medicines & vaccines for people everywhere. At IFPMA they advocate policies and practices that encourage the discovery of and access to life-saving and life-enhancing medicines and vaccines, for people everywhere. IFPMA represents research-based biopharmaceutical companies, and regional and national associations across the world. The company facilitates collaboration, dialogue, and understanding within its industry and with other global players in the health community.

IFPMA brings the industry and broader health community together to foster innovation, promote resilient regulatory systems and high standards of quality, uphold ethical practices, and advocate sustainable health policies to meet global needs. IFPMA is the unique, informed, and credible voice in conversation with the global health community to address the many challenges in public health policy for current and future generations.

Web site:	<a href="http://ifpma.org">ifpma.org</a>
Number of Employees:	11-50
Founded in:	1968
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# InPheno



Precisely Swiss - InPheno AG, Basel provides quality services in drug discovery. The company strives to be the one-stop solution for clients needs in research and profiling of drug candidates. InPheno offers to act as an extension of clients drug development team, partnering small virtual biotech companies or large pharmaceutical organizations.

The high rate of contract renewals may serve as indicator for their customer's high confidence in the InPheno's services. InPheno's founding team consists of specialists in the fields of virology and oncology with long-term experience in the pharmaceutical industry. The company's scientists combine a broad expertise in molecular and cellular assay technology as well as in the development of modern therapeutics.

Web site:	<a href="http://hosteurope.ch">hosteurope.ch</a>
Number of Employees:	1-10
Founded in:	2001
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# iOnctura



iOnctura is a late stage preclinical biotechnology company developing a pipeline of next generation, best-in-class molecules for the treatment of cancer and fibrosis.

iOnctura is developing a pipeline of carefully selected assets. Programs in oncology aim to harness both immune-mediated and direct anti-tumour activity to deliver superior clinical efficacy in monotherapy or combinations. By building on complementary mechanisms between cancer and fibrosis iOnctura further aims to address high unmet need in fibrotic disease.

Web site:	<a href="http://ionctura.com">ionctura.com</a>
Number of Employees:	1-10
Founded in:	2017
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# Juvaplus

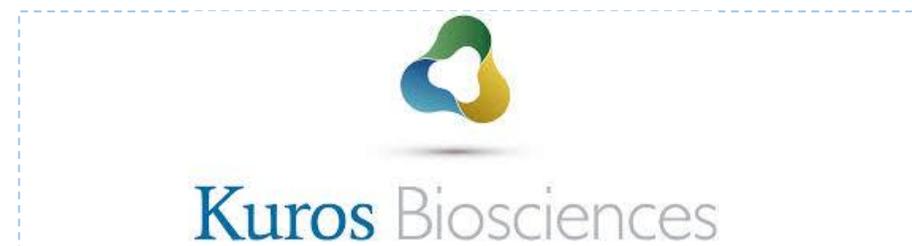


Juvaplus was founded by Bernard-Pierre Legrand in 2011. Specializing in the design and production of compact and wireless motorized devices, Juvaplus quickly imposed itself as a leading innovative company in the medicine market. Juvaplus develops products that combine research, design and technology at the service of medicine. Based in Neuchâtel, Switzerland, their offices are located inside the brand new NEODE Innovation Park.

JUVAPLUS worked closely with EPFL (the Swiss Federal Institute of Technology in Lausanne) for the development of its technology, while receiving support from the Swiss Confederation. EPFL is the most cosmopolitan research university in Europe and is ranked amongst the best universities in the world. With numerous publications, inventions and patents under its belt, EPFL is an ideal partner to guide research works at JUVAPLUS.

Web site:	<a href="http://juvaplus.com">juvaplus.com</a>
Number of Employees:	11-50
Founded in:	2011
Based in:	Neuchatel
Sector:	AgeTech
Total Funding Amount:	Undisclosed

# Kuros Biosciences



Kuros Biosciences AG, a biopharmaceutical company, engages in the discovery, development, and commercialization of biopharmaceutical products for the treatment and prevention of chronic diseases in the United States, the Kingdom of Saudi Arabia, and internationally. Its sealants pipeline products include Neuroseal EU and US for the treatment of dural sealant cranial. The company has collaborations with Checkmate Pharmaceuticals LLC for the licensing of CYT003 for the treatment of oncology; Pfizer Inc. to develop a novel anti-IgE vaccine; and Singapore's Agency for Science, Technology and Research, which researches, develops, and commercializes an influenza vaccine. Kuros Biosciences AG was founded in 2000 and is headquartered in Schlieren, Switzerland.

Web site:	<a href="http://kuros.ch">kuros.ch</a>
Number of Employees:	11-50
Founded in:	2000
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	\$70.9M

# Leucogenics

The purpose of the Leucogenics is the research, development and marketing of immunosuppressive therapies and diagnoses. Leucogenics may acquire, manage and sell real estate as well as any business directly or indirectly related to the purpose of the Company. The company also participates in other, domestic or foreign companies of all kinds.

Web site:	Undisclosed
Number of Employees:	Undisclosed
Founded in:	2009
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# MacKenzie Innovations



MacKenzie Innovations provides external research, development and product innovation specialized in the areas of biomedical engineering and nanotechnology. In other words, they discover, they create, they solve and they invent and/or improve medical devices, sensors and systems, in partnership with customers or independently. At present MacKenzie Innovations is a sole proprietorship, owned and operated by Dr. Robert MacKenzie. Although not a pure social enterprise, MacKenzie Innovations does consider the health of people and the planet, in addition to profit, in its core business strategy. Recognized as an spin-off company of the ETH Zurich.

Web site:	<a href="http://mackenzieinnovations.com">mackenzieinnovations.com</a>
Number of Employees:	0-1
Founded in:	2010
Based in:	Zurich
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# MaxWell Biosystems



MaxWell Biosystems AG provides solutions to advance basic neuroscience research and accelerate preclinical drug discovery. MaxWell Biosystems develops and markets advanced electrophysiology platforms for cell assays in preclinical drug discovery, safety pharmacology and basic neuroscience research. MaxOne (single-well) and MaxTwo (multi-well) allow stimulation and recording of every active cell on a dish at unprecedented spatio-temporal resolution. These instruments will advance and accelerate drug discovery and basic neurosciences.

Cell types: Neurons, cardiomyocytes, induced pluripotent stem cell (iPSC), others. Preparations: acute brain slice and retina, dissociated cell culture, organotypic slice culture, embryoid body. Applications: phenotype screening, detailed single cell analysis, multi-parametric network analysis, drug efficacy testing, toxicity testing

Web site:	<a href="http://mxwbio.com">mxwbio.com</a>
Number of Employees:	11-50
Founded in:	2016
Based in:	Basel
Sector:	P3
Total Funding Amount:	\$102K

# Meierhofer



Meierhofer has been one of the leading solution providers for digital patient care in the German-speaking market for more than 30 years. Right from the start, their focus is on supporting their customers on their way to digitization so that they can concentrate on their medical and nursing skills. They focus specifically on hospitals, clinics and hospitals in Germany, Austria and Switzerland. They owe this approach to their healthy, continuous growth and stability that is exceptional to the healthcare industry, giving their clients a high degree of investment security.

They support health care institutions with the consistently interoperable and process-oriented approach of their entire portfolio. Their solutions can not only be combined with each other, but above all integrated into existing IT infrastructures - both in individual areas as well as the entire organization. In doing so, they strive to advance networking, both at ward level within the hospital and across sectors, to the integration of care and research.

Web site:	<a href="https://meierhofer.com">meierhofer.com</a>
Number of Employees:	11-50
Founded in:	1998
Based in:	Liebefeld
Sector:	AgeTech
Total Funding Amount:	Undisclosed

# Memo Therapeutics



Memo Therapeutics AG (MEMO) is an innovator in the field of antibody discovery and immune repertoire analysis. Its MemoMAB™ platform creates a recombinant in vitro copy of an individual's B cell / antibody repertoire, which is then banked as a library. The resulting unique, large and relevant antibody libraries represent the individual's immune repertoire and are expected to contain an unprecedented number of relevant and rare antibodies. This leads to entirely new possibilities in immune repertoire analysis and antibody discovery.

MemoMAB™ is deployed in proprietary antibody lead discovery programs and is made available in collaborations.

Web site:	<a href="http://memomab.com">memomab.com</a>
Number of Employees:	1-10
Founded in:	2012
Based in:	Zurich
Sector:	P3
Total Funding Amount:	\$3.3M

# Memocare



In the fight against dementia, one of the most threatening diseases of our times, new chances and perspectives arise in the early detection, diagnosis and treatment. In close collaboration with the University of Zurich memocare AG transfers findings of scientific research into the development of innovative medical technology, applications and services.

Web site:	<a href="http://memocare.com">memocare.com</a>
Number of Employees:	Undisclosed
Founded in:	2011
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	Undisclosed

# MIAC



Since 1995, MIAC has been committed to deliver fully-personalized data analysis for pharmaceutical and academic research. The Medical Image Analysis Center (MIAC) is a clinical research organisation supporting international trials with advanced image acquisition and analysis technologies. As an academic corporation that was founded at the Basel University Hospital in 1995, MIAC today is tightly embedded in a national and international institutions and research network, driving the translation of novel imaging and post-processing modalities from development to application in clinical trials.

A highly specialized team of board-certified neuro-/radiologists, physicists, biomedical engineers, IT specialists, technicians and clinicians deliver tailor-made image data analysis services and international trial support to the leaders of the pharmaceutical industry. All MIAC services follow the high standards of Swiss quality and comply with the requirements of FDA – 21 CFR Part 11 & ICH – Good Clinical Practices.

Web site:	<a href="http://miac.swiss">miac.swiss</a>
Number of Employees:	11-50
Founded in:	1995
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# NBE-Therapeutics



NBE-Therapeutics is a privately owned Swiss, Basel-based Biotech company that was founded in 2012 with the vision to develop next-generation ADCs improving treatment options for cancer patients. The company is financially backed by the Boehringer Ingelheim Venture Fund and additional private investors. NBE-Therapeutics GmbH engages in the development of antibody drug conjugates for the therapy of cancer.

Web site:	<a href="http://nbe-therapeutics.com">nbe-therapeutics.com</a>
Number of Employees:	Undisclosed
Founded in:	2012
Based in:	Basel
Sector:	P3
Total Funding Amount:	\$43M

# Nebion



Nebion is a Swiss company founded by an interdisciplinary group of scientists. The goal of NEBION is to support drug discovery, translational biology and personalised medicine research in academia and industry by curating, integrating and mining molecular data on a very large scale. Nebion currently commercializes GENEVESTIGATOR®, the premier gene expression search engine used by over 75'000 researchers world-wide.

Over more than a decade, they have continuously perfected techniques and vocabularies for the biocuration of biological experiments. Their unique collections of deeply curated and high quality transcriptomic data, combined with their high-performance but easy-to-use tools, enable global and instant analysis of the world's transcriptomic data for novel discoveries and for validation.

Web site:	<a href="http://nebion.com">nebion.com</a>
Number of Employees:	11-50
Founded in:	2008
Based in:	Zurich
Sector:	P3
Total Funding Amount:	Undisclosed

# Neurimmune Holding



Neurimmune is a biopharmaceutical company dedicated to the development of immunotherapeutics for the treatment and prevention of human disorders with high unmet medical needs.

With its unique Reverse Translational Medicine™ platform, Neurimmune creates recombinant human-derived monoclonal antibodies with biophysical characteristics closely resembling those occurring in healthy elderly. These antibodies display unique properties such as target selectivity, superior pharmacodynamics and low immunogenicity, resulting in superior risk profiles and excellent efficacy.

Neurimmune's pipeline comprises programs for a broad variety of disease related targets and specific target conformations. These include misfolded, oligomeric, fibrillar or post-translationally modified forms of disease-associated proteins as well as physiological conformations involved in major disease pathways.

Web site:	<a href="http://neurimmune.com">neurimmune.com</a>
Number of Employees:	1-10
Founded in:	2006
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	\$150M

# Novartis



Novartis researches, develops, manufactures, and markets healthcare products worldwide. The company's Innovative Medicines segment offers prescription medicines for patients and healthcare providers. It also provides ophthalmology, neuroscience, immunology, hepatology and dermatology, respiratory, cardio-metabolic, and established medicine products. The company's Sandoz segment provides active ingredients and finished dosage forms of pharmaceuticals in cardiovascular, central nervous system, dermatology, gastrointestinal and hormonal therapy, metabolism, oncology, ophthalmic, pain, and respiratory areas; and finished dosage form anti-infective. It also provides active pharmaceutical ingredients and intermediates primarily antibiotics; protein- or other biotechnology-based products, including biosimilars; and biotechnology manufacturing services. It also provides viscoelastics, surgical solutions, diagnostic ophthalmic products, surgical packs, and other disposable products for cataract and vitreoretinal surgery. In addition, this segment offers contact lenses and ocular health products; over-the-counter ophthalmic products; eye drops for the temporary relief of ocular itching due to allergies; vitamins for ocular health; and iLux Device, a therapeutic device used to treat meibomian gland dysfunction.

Web site:	<a href="http://novartis.com">novartis.com</a>
Number of Employees:	10001+
Founded in:	1895
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# OncoEthix



Oncoethix SA is a private Swiss company that was founded in 2007 by Esteban Cvitkovic, MD, Kay Noel, PhD, Yves Paternot, and Patrice Herait, MD (all former associates at Cvitkovic & Associates Consultants SA) to develop a portfolio of 3 to 5 promising new drugs for cancer treatment. The company intends to develop its compounds through clinical proof of concept and the identification of an expedited registration strategy, after which pharmaceutical partners will be sought to fund pivotal trials and handle commercialization.

Since its founding, Oncoethix has in-licensed three promising cancer drug candidates, each a first-in-class agent to a novel target or with a novel mode of action. Currently, two portfolio compounds are in clinical development.

Oncoethix was launched with an initial financing of 1.30 million Swiss francs from the founders to finance portfolio development. In December 2009, the company closed a Series A financing of 3.7 million Swiss francs with leading venture capital firms Index Ventures and Endeavour Vision.

Web site:	<a href="http://oncoethix.com">oncoethix.com</a>
Number of Employees:	Undisclosed
Founded in:	2007
Based in:	Lausanne
Sector:	P3
Total Funding Amount:	\$24.08M

# Photoderma



PhotoDerma SA is a development stage company engaged in research and development of novel cosmetics and pharmaceuticals as well as of related medical devices in the field of photodynamic therapy (PDT) and photodiagnosics. It is a spin-off of the photomedicine group of the Swiss Federal Institute of Technology in Lausanne (EPFL) and has been founded in May 2003 by private shareholders and the EPFL.

The main focus of PhotoDerma SA's activity lies on applications of photodynamic therapy (PDT) for cosmetic and therapeutic applications in dermatology. The company also carries out research mandates in various segments of PDT and photodiagnosics.

PhotoDerma SA has active collaborations with the Swiss Federal Institute of Technology in Lausanne (EPFL) and the University Hospitals of Geneva (HUG) and Lausanne (CHUV).

Web site:	<a href="http://photoderma.com">photoderma.com</a>
Number of Employees:	Undisclosed
Founded in:	2003
Based in:	Ecublens
Sector:	P3
Total Funding Amount:	Undisclosed

# PIQUR Therapeutics



PIQUR Therapeutics AG is a clinical-stage pharmaceutical company that manufactures and markets cancer therapeutics. The company focuses on the discovery and development of anti-cancer drugs based on phosphoinositide 3-kinase (PI3K) and mammalian target of rapamycin inhibition (mTOR). PIQUR Therapeutics AG was founded in 2011 and is based in Basel, Switzerland.

Web site:	<a href="http://piqur.com">piqur.com</a>
Number of Employees:	11-50
Founded in:	2011
Based in:	Basel
Sector:	P3
Total Funding Amount:	\$86.9M

# Pregnolia

The logo for Pregnolia, featuring the word "pregnolia" in a blue, lowercase, serif font with a registered trademark symbol (®) to the upper right. The logo is enclosed in a dashed blue rectangular border.

Pregnolia AG is a medical device startup based in Zurich. Their company is at the stage of clinical development. They focus on the development and commercialization of a diagnostic device to identify women at risk for preterm delivery early in pregnancy such that gynecologists can make key decisions about preterm birth management. It is their mission to reduce the number of premature babies worldwide.

Pregnolia ensures that every woman can have a happy, healthy and informed pregnancy until term. Their team knows that the existing research about preterm birth assessment is very promising, but this alone does not guarantee success. Sabrina, Francisco and Annette are highly committed to develop the commercial version of the device, complete the clinical trial, follow the regulatory roadmap and execute on their business vision to successfully support gynaecologists in improving the preterm birth risk assessment and birth management.

Web site:	<a href="http://pregnolia.com">pregnolia.com</a>
Number of Employees:	1-10
Founded in:	2015
Based in:	Zurich
Sector:	AgeTech
Total Funding Amount:	\$3.6M

# Prexton Therapeutics



Prexton Therapeutics has the mission to develop innovative drugs to improve the quality of life.

Prexton Therapeutics is a Swiss-based biopharmaceutical company, founded in 2012 by Francois Conquet and MS Ventures as part of the Merck Serono Entrepreneur Partnership Program, a facility to support the creation of spin-offs from Merck Serono. Prexton Therapeutics applies a new scientific approach that fully integrates molecular, behavioural and chemistry technologies to address Parkinson's disease and other brain disorders. Prexton Therapeutics uses its powerful discovery platform to target specific novel compounds focused on the treatment of Parkinson's disease.

Web site:	<a href="http://prextontherapeutics.com">prextontherapeutics.com</a>
Number of Employees:	1-10
Founded in:	2012
Based in:	Geneve
Sector:	P3
Total Funding Amount:	\$41.1M

# Roche



Roche Holding AG is the owner of F. Hoffmann-La Roche Ltd., a provider of in-vitro diagnostics and drugs for cancer and transplantation. It specializes in medicines for oncology, virology, inflammation, metabolism, CNS, clinical chemistry, immunology, urinalysis, blood screening, genetics, infectious diseases, and microbiology. F. Hoffmann-La Roche Ltd. serves hospitals, research labs, private medical labs, practicing physicians, and patients.

Its products include cancer treatments, such as Avastin, Herceptin, and MabThera that are also effective in the treatment of rheumatoid arthritis, anemia, and osteoporosis. F. Hoffmann-La Roche Ltd., also conducts research and development as well as production related to molecular diagnostic reagents, test systems, and test kits. In addition, it provides automated instruments, software, consumables, and IT solutions used in in-vitro diagnostics and research.

F. Hoffmann-La Roche Ltd was established in 1896 and is based in Basel, Switzerland.

Web site:	<a href="http://roche.com">roche.com</a>
Number of Employees:	10001+
Founded in:	1896
Based in:	Basel
Sector:	P3
Total Funding Amount:	\$2.7B

# Roche Diagnostics



Roche Diagnostics GmbH manufactures instruments and reagents for genome sequencing, microarray analysis, nucleic acid purification, real-time PCR, and cell analysis. It offers sequencing, PCR/RT-PCR, sample preparation, cell biology, and discovery reagent solutions for cancer research, cellular analysis, gene expression, gene knockdown, protein expression, and bio-processing/manufacturing applications. The company also provides resources to support the life science community, including online technical and application information, on-site product supply programs, and technical and customer service; and specialty bio-chemicals for industrial applications and custom manufacturing. It offers its products online. Roche Diagnostics GmbH was formerly known as Boehringer Mannheim GmbH and changed its name to Roche Diagnostics GmbH in January 1999. The company was founded in 1859 and is based in Mannheim, Germany. Roche Diagnostics GmbH operates as a subsidiary of Roche Holding AG.

Web site:	<a href="http://roche-diagnostics.co.in">roche-diagnostics.co.in</a>
Number of Employees:	Undisclosed
Founded in:	1988
Based in:	Basel
Sector:	P3
Total Funding Amount:	Undisclosed

# Roche Glycart



Roche Glycart develops antibody drug candidates, which include GA101, a humanized anti-CD20 monoclonal antibody to increase direct- and immune-mediated target cell death; and GA201, a humanized glycoengineered antibody for solid tumors.

Areas of operating include: Glycart's detailed financings; Comprehensive pipeline breakdown, including molecular targets & partnerships. The company has 17 years of in-depth BioPharma industry analysis.

Web site:	<a href="http://roche.ch">roche.ch</a>
Number of Employees:	11-50
Founded in:	2000
Based in:	Schlieren
Sector:	P3
Total Funding Amount:	\$13.6M

# RodanoTech



RodanoTech is a Swiss based CRO specialised in clinical Data Management services and EDC solutions. RodanoTech provides effective strategies and solutions that meet the unique needs of the post-approval market, including Phase IV studies, Registries and online Medical Communities. They provide solid Data Management and EDC services. They build Investigator focused Clinical Trial solutions. They setup your online Medical Community platform. They provide creative e-Solutions for the post-approval Market.

RodanoTech highly skilled DM team provides comprehensive Data Management and eCRF design services to the pharma industry and CROs as well as academic research organisations. They assist you with any size study, from small Phase I studies to large-scale trials involving sophisticated designs and long-term follow-up across clinical settings and geographies. They work in collaboration with your preferred CRO or one of their partner CROs to combine the full range of services needed for the execution of your study.

Web site:	<a href="http://rodanotech.ch">rodanotech.ch</a>
Number of Employees:	1-10
Founded in:	2007
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# Scailyte



A new and emerging type of analytical devices produce rich data-sets by measuring hundreds of parameters from millions of individual cells. The resulting single-cell data holds the information needed for early disease detection, but it requires sophisticated and innovative computational approaches in order to extract the relevant information.

Scailyte AG addresses this problem by developing artificial intelligence (AI) software for single-cell data analysis. The underlying algorithms allow them to associate patterns in single-cell data with disease status, similar to how state-of-the-art methods for object recognition associate pixel patterns with objects. They provide a software solution (ScaiVision), wrapping the AI technology for R&D customers from academia, pharmaceutical and clinics.

Additionally, through their ScaiBioMarker Discovery service, by partnering with pharmaceutical & biotechnology companies they provide special single-cell technology and expertise for novel biomarker discovery, which will yield ultra-sensitive biomarkers for early and precise detection of a wide range of complex diseases.

Web site:	<a href="https://scailyte.com">scailyte.com</a>
Number of Employees:	1-10
Founded in:	2017
Based in:	Sursee
Sector:	P3
Total Funding Amount:	\$2.76M

# Sensometrix



Sensometrix is a limited liability security company founded in Geneva (Switzerland) in 2006 by Nicolas Rebetez and Adrien de Loës.

Sensometrix brings biometrics for a convenient and secure daily usage.

Sensometrix brings you the next generation of biometrics technologies. Convenience, speed and security form the bedrock of their product offering. Sensometrix products are leveraging years of research and development and enable competitive advantages such as system simplicity, seamless performance and high reliability. With a growing network of global partners, Sensometrix operates internationally in the following sectors: healthcare, banking / retail, education.

Web site:	<a href="https://sensometrix.ch">sensometrix.ch</a>
Number of Employees:	11-50
Founded in:	2006
Based in:	Geneva
Sector:	P3
Total Funding Amount:	Undisclosed

# SonoView



SonoView is a Swiss company founded by Dr. Ivana Jovanovic Balic in 2010 as a spin-off from Ecole Polytechnique Fédérale de Lausanne (EPFL). It is located at the Swiss Innovation Park in Biel – an innovation hub for application-oriented research and development.

SonoView is developing an advanced 3D ultrasound imaging technology for early and more accurate diagnosis of breast cancer.

Specialties: ultrasound imaging, temperature monitoring with acoustic tomography, 3D/4D ultrasound image reconstruction, development of new ultrasound scanners, inverse problems, advanced signal and image processing, nonlinear tomography, beamforming, and time delay estimation.

Web site:	<a href="http://sono-view.com">sono-view.com</a>
Number of Employees:	1-10
Founded in:	2010
Based in:	Nidau
Sector:	P3
Total Funding Amount:	Undisclosed

# Stemmedica International



Stemmedica International S.A. was founded in 2008 as a global, biotechnology company that explores therapeutic applications of patented stem cells to treat degenerative diseases. In 2012 the Swiss Commission for Technology and Innovation (CTI) awarded Stemmedica International and the Laboratory of Biomedical Optics at the École Polytechnique Fédérale de Lausanne (EPFL) a grant to develop practical applications of stem cell therapies and brain imaging for Alzheimer's disease. Stemmedica International has an exclusive rights to manufacture and apply Stemmedica's allogeneic, ischemia-tolerant mesenchymal (itMSC) and neural (itNSC) stem cell lines and stem cell factors to create therapies for the treatment and prevention of Alzheimer's disease and vascular dementia. The company also has Swissmedic licenses to import, export and distribute Stemmedica's cell lines worldwide for human use in approved clinical trials. Stemmedica's stem cell lines have a unique, proprietary technology based on the expansion of cells in constant hypoxia, which provides critical benefits in terms of safety, efficacy and scalability. Manufactured in compliance with cGMP, the technology is based on more than 30 years of research and clinical experience conducted by scientists and physicians in the United States, Europe and the former Soviet Union.

Web site:	<a href="http://stemmedica-intl.com">stemmedica-intl.com</a>
Number of Employees:	Undisclosed
Founded in:	2008
Based in:	Lausanne
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Straumann



Straumann conducts research, develops and manufactures dental implants, instruments, prosthetics, as well as dental biomaterials for use in tooth replacement and restoration, or to prevent tooth loss.

As technological advancements are changing dentistry fundamentally, Straumann offers a broad range of products and solutions for both conventional treatment and digital workflows including guided surgery, intra-oral scanning and CAD/CAM restorations.

Web site:	<a href="https://straumann.com">straumann.com</a>
Number of Employees:	5001-10000
Founded in:	1954
Based in:	Basel
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Swiss Cardio Technologies



Swiss Cardio Technologies supports Research, Development and Commercialisation of Health focused ideas, in particular in the field of Cardiovascular Medicine.

Swiss Cardio Technologies, by connecting academy and industry, is in an ideal position to evaluate medical innovations. They provide personalized strategies to convert research results into commercial reality, without impairing academicians' needs. They are committed to support and promote academic R&D while promoting ethics, integrity and respect regarding human being and environment.

Web site:	<a href="http://swisscardiotech.com">swisscardiotech.com</a>
Number of Employees:	Undisclosed
Founded in:	2008
Based in:	Stansstad
Sector:	P3
Total Funding Amount:	Undisclosed

# Swortec



Established in 2004, SWORTEC was formed in collaboration with the Swiss Foundation of Cyberthosis (FSC) and as a result of extensive scientific research work previously undertaken at the Federal Institute of Technology in Lausanne (EPFL). The FSC is an interdisciplinary Research & Development institute in the field of neurotechnologies, specialising in neurological re-education, particularly for paraplegic and hemiplegic patients.

Their Cyberthosis product line consists of innovative devices and methods. The first stationary device MotionMaker™ and its accessories has been launched on the market in 2008 and has been successfully employed at online gambling sites with real money three different rehabilitation and research institutions in Switzerland.

Another important milestone in the enhancement of SWORTEC product portfolio is the development of a mobile and autonomous vertical device WalkTrainer™, the launch of which is planned for 2011.

Web site:	<a href="http://swortec.ch">swortec.ch</a>
Number of Employees:	Undisclosed
Founded in:	2004
Based in:	Monthey
Sector:	AgeTech
Total Funding Amount:	Undisclosed

# TOLREMO Therapeutics

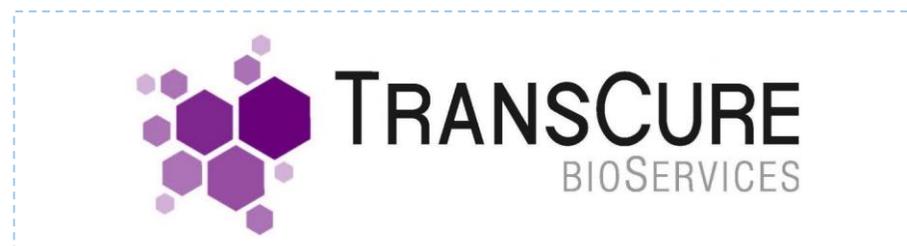


TOLREMO has created ground-breaking scientific knowledge that allows it to pursue its passion to discover and develop novel targeted therapeutics that will meaningfully extend the lives of patients suffering from cancer.

TOLREMO therapeutics AG (“TOLREMO”) is a privately held research-stage biotechnology company. TOLREMO was founded in March 2017 as an ETH Spin-off by Dr. Stefanie Flückiger-Mangual, Prof. Dr. Wilhelm Krek, Prof. Dr. Karl-Heinz Altmann, Dr. Isaac Kobrin, and Emmanuel Savioz (MBA). The company engages in the discovery and development of small molecule drugs that target novel drug resistance pathways in cancer therapy. Despite medical advances, resistance to cancer therapies continues to limit the long-term survival of many cancer patients. TOLREMO’s vision is to meaningfully prolong the lives of cancer patients using its personalized anti-drug resistance therapies.

Web site:	<a href="http://tolremo.com">tolremo.com</a>
Number of Employees:	1-10
Founded in:	2017
Based in:	Zurich
Sector:	P3
Total Funding Amount:	\$11.4M

# TransCure bioServices



TransCure offers pre-clinical contract research services to pharmaceutical, biotech, start-up and academic researchers who need faster, smarter and cost-effective solutions for drug profiling. Uniquely designed animal models with functional humanized systems have been developed to provide predictive in vivo pharmacology testing in the field of inflammation, and autoimmune (IBD, RA, SLE, MS), anti-infective (HIV, EBV, CMV, Dengue), vaccine development, biosimilar and preclinical lead candidate selection / validation for drug development.

Their customer-oriented approach includes co-designing of experiments with customers to match their needs, diligently and carefully performing the ordered studies and providing comprehensive data analysis and reporting. They are also committed to the 3R principles “reduce, refine and replace” and carefully design the experiments to refine and reduce the use of experimental animals. Located in France, near Geneva, their state-of-the-art animal facilities (BSL 2&3) and scientific programs are ready to serve customers around the world for their faster access to market entrance.

Web site:	<a href="http://transcurebiosciences.com">transcurebiosciences.com</a>
Number of Employees:	1-10
Founded in:	2012
Based in:	Carouge
Sector:	P3
Total Funding Amount:	\$1.07M

# Vivendy Therapeutics



Vivendy Therapeutics Ltd. engages in the development of an enzyme replacement therapy for Morbus Morquio, a rare lysosomal storage disease based on a gene deficiency.

The company was founded in 2006 and is based in Basel, Switzerland.

Web site:	<a href="http://vivendy.ch">vivendy.ch</a>
Number of Employees:	1-10
Founded in:	2006
Based in:	Basel
Sector:	Regenerative Medicine
Total Funding Amount:	Undisclosed

# Xigen



Xigen is a privately-owned biopharmaceutical company founded in 2002 as a spin-off from the University Hospital of Lausanne (CHUV) that specializes in the development of peptides for use against inflammation. Xigen's peptides have high stability and specificity. They are selectively delivered to their intracellular targets through proprietary carrier molecules. The company's lead compound, XG-102, is a D-amino-acids peptide, highly selective, non-competitive, long-acting inhibitor of c-jun N-terminal kinase (JNK). Xigen's second JNK inhibitor lead compound, namely XG-104, is a L/D-amino-acids peptide.

Xigen business model is based on the development and commercialisation of new therapeutic peptides through partnerships with pharma companies.

To achieve this goal, Xigen's approach is to surround itself with dedicated and recognized professionals and international experts in drug development and inflammation in order to reach the demonstration of safety and clinical efficacy of drug candidates in the most expedite way.

Web site:	<a href="http://xigenpharma.com">xigenpharma.com</a>
Number of Employees:	11-50
Founded in:	2002
Based in:	Epalinges
Sector:	P3
Total Funding Amount:	\$41M

# Xsensio



Xsensio develops the unique Lab-on-Skin™ sensing platform to sense in real-time biochemical information at the surface of the skin, providing unprecedented real-time information about their health and wellness, in a simple and non-invasive way.

The Xsensio Lab-on-Skin™ sensing chip relies on a unique, highly-miniaturized sensing platform developed at the Nanolab of the Swiss Federal Institute of Technology. By leveraging semiconductor properties, their sensing platform unleashes a whole new set of possibilities in continuous health monitoring.

Web site:	<a href="https://xsensio.com">xsensio.com</a>
Number of Employees:	1-10
Founded in:	2014
Based in:	Lausanne
Sector:	AgeTech
Total Funding Amount:	\$1.1M

# Youdowell



Youdowell is scientifically supported by the University of Basel. Youdowell benefits from a highly skilled tech team and scientific advisory members (University Basel, St. Petersburg State University).

Youdowell's B2C approach: offering personal, flexible and adaptive health coaching plan to optimize client's overall lifestyle balance. Youdowell's B2B approach: offering a holistic and scalable application for health experts to improve their consulting performance towards their clients. They are collecting anonymous health data for scientific research projects. Youdowell's cloud-based application provides REST API for future integrations. It's micro-service architecture allows building custom application configurations for related projects: e.g. University Basel research project: [www.movingcall.com](http://www.movingcall.com).

Web site:	<a href="http://youdowell.com">youdowell.com</a>
Number of Employees:	1-10
Founded in:	2009
Based in:	Horgen
Sector:	P3
Total Funding Amount:	Undisclosed

# Zeptosens



Zeptosens is an ultra-sensitive microarray platform for quantitative proteomic investigations. It provides microarray platforms for sensitive and quantitative protein profiling, and signaling pathway analysis by reverse protein arrays. Its products include ZeptoREADER, a microarray reader for Zeptosens planar wave-guide technology; ZeptoMARK protein microarray chips and ZeptoCARRIER for various data points, which are split into arrays. The company also offers protein array services, including protein profiling for various samples, such as cell lines, tissues, microdissected cells, and depleted serums; and assay development.

In addition, it provides training services, technical and applications support, and technical service and maintenance. The company's products are used in various applications, including biomarker/target discovery and validation, cell-based screening, mode of action profiling, selectivity profiling, and toxicology investigation. Its customers include pharma research and development companies, biotech companies, and academic institutions.

Zeptosens was founded in 1998 and is headquartered in Wilderswil, Switzerland.

Web site:	<a href="http://zeptosens.com">zeptosens.com</a>
Number of Employees:	1001-5000
Founded in:	1998
Based in:	Wilderswil
Sector:	Regenerative Medicine
Total Funding Amount:	\$14M

# 80 Investors: Longevity in Switzerland



# 3wVentures



3wVentures provides seed money and venture capital to international internet startups. As 3wVentures' clients focus on early stage projects and prototypes, the company's investments and co-investments target a volume of up to USD 250,000. 3wVentures is located in Switzerland and backed by Yves Latour and Arvin Zuberbuehler. 3wVentures has invested early stage venture capital in these startup companies: forAtable.com, Lunchgate, UEPAA! etc.

Web site:	<a href="http://3wventures.com">3wventures.com</a>
Number of Investments:	44
Total Investments:	\$23.3M
Founded in:	2007
Based in:	Herisau, Switzerland
Sector:	P3, AgeTech
Investment in Switzerland companies:	Pregnoia, Abionic
Stages:	Early Stage Venture, Seed

# Aescap Venture



Aescap 2.0 is an open-end fund that invests in publicly listed biotech / life sciences companies. It invests in highly innovative companies that develop and market new medicines and to a lesser extent diagnostics and/or medical devices. Entry into and exit from the fund is possible twice per month. The life sciences market is a large and fast-growing market where breakthrough innovations can be harnessed in a global and profitable manner.

Aescap 2.0 has a focused portfolio, investing in approximately 18 companies. Within this focus it will ensure that the portfolio is diversified over different diseases and company development phases. The Fund's objective is to make an annual net return (after deduction of costs) of 20% over the mid-term (4-5 years).

Web site:	<a href="http://aescap.com">aescap.com</a>
Number of Investments:	26
Total Investments:	\$30.5M
Founded in:	2005
Based in:	Amsterdam, The Netherlands
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Vivendy Therapeutics
Stages:	Early Stage Venture, Late Stage Venture

# Angel Investment Network



Angel Investment Network is a London-based investment company founded in 2004 whose aim is to connect entrepreneurs and investors. Today they have 35+ angel networks worldwide covering over 80 countries. They have over 150,000 investor members and over 600,000 entrepreneurs have signed up to use their services. Angel Investment Network brings together businesses looking for investment and investors with the capital, contacts and knowledge to help them succeed.

Web site:	<a href="http://angelinvestmentnetwork.co">angelinvestmentnetwork.co</a>
Number of Investments:	29
Total Investments:	\$6.3M
Founded in:	2004
Based in:	London, UK
Sector:	P3
Investment in Switzerland companies:	healthbank innovation AG
Stages:	Convertible Note, Crowdfunding, Early Stage Venture, Late Stage Venture, Seed, Venture

# Arthurian Life Sciences



Arthurian Life Sciences Ltd was established by Europe's leading biotech entrepreneur Professor Sir Chris Evans OBE to act as General Partner of the Wales Life Sciences Investment Fund, a £100 million fund and key part of the Welsh Government's Life Sciences initiative. The Fund will invest in Life Sciences and related medical, pharmaceutical and healthcare companies currently based in Wales, and also in companies from across the UK, Europe and the rest of the world, where such investment will bring meaningful developmental and economic benefit to Wales. The Fund will make initial investments of between £500,000 and £5,000,000, and will preserve capital to provide follow-on investments. Arthurian will spread investments by risk, sub-sector, age or funding requirement and will consider companies of all sizes, both start-ups and mature companies, and will do both early & late stage investments.

Web site:	<a href="http://arthurianlifesciences.co">arthurianlifesciences.co</a>
Number of Investments:	8
Total Investments:	\$100M
Founded in:	2012
Based in:	London, UK
Sector:	P3
Investment in Switzerland companies:	CeQur
Stages:	Seed, Series B, Series C

# BioMedPartners



BioMedPartners is one of the leading European venture capital firms providing private equity and mezzanine financing to early- and mid-stage healthcare and human life science companies. Their focus is on Switzerland and surrounding EU countries Germany, Austria, France, Italy and Benelux. BioMedPartners mostly invests in drug development and, to a lesser degree, in diagnostics and medical technology, biotechnology, diagnostics. The amount they aim to invest over the life time of their portfolio companies is up to CHF 10 million. BioMedPartners often plays the lead or co-lead investor role structuring the transaction and syndicating with other venture capital firms.

Web site:	<a href="http://biomedvc.com">biomedvc.com</a>
Number of Investments:	65
Total Investments:	\$61M
Founded in:	2002
Based in:	Basel, Switzerland
Sector:	P3, Regenerative Medicine
Investment in Switzerland companies:	Genkyotex, Amal Therapeutics
Stages:	Early Stage Venture, Late Stage Venture

# BlueOcean Ventures



BlueOcean Ventures invests in early stage medical device and life science companies. Unlike other funds the four General Partners of BlueOcean Ventures, Faris Sabeti, Emmanuel de Watteville, Sacha Haymoz and Thomas Zehnder, have a long-standing track record in building, managing and coaching start-up companies. BlueOcean Ventures supports their portfolio companies with a large network of experts and industry contacts.

Web site:	<a href="http://blueocean-ventures.com">blueocean-ventures.com</a>
Number of Investments:	11
Total Investments:	\$3.8M
Founded in:	Undisclosed
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	Abionic
Stages:	Early Stage Venture

# Boehringer Ingelheim Venture Fund



For more than 130 years, Boehringer Ingelheim has been committed to the research, development, and manufacturing of new medications with high therapeutic value for people and animals. As a family-owned pharmaceutical company, Boehringer Ingelheim is able to take a long-term view and invest heavily in research and development. They are proud of addressing some of the most challenging healthcare issues. Their vision – value through innovation – has always characterized the collaborative work, and is for them simultaneously a fundamental requirement and a driving force. Headquartered in Ingelheim, Germany, Boehringer Ingelheim employs more than 50,000 employees.

Web site:	<a href="http://boehringer-ingelheim-venture.com">boehringer-ingelheim-venture.com</a>
Number of Investments:	35
Total Investments:	\$66M
Founded in:	1973
Based in:	Ingelheim Am Rhein, Germany
Sector:	P3
Investment in Switzerland companies:	Amal Therapeutics, NBE-Therapeutics
Stages:	Early Stage Venture, Seed

# BVGroup



BV Holding AG is a private equity firm specializing in management buy-outs and buy-ins; succession financing; change in shareholder structure; growth, expansion, and acquisition; innovation; growth financing including early and late stage investments; and restructuring. Within growth financing the firm seeks to invest in media technology, life science, Information Technology, telecommunication technology, industry material and process technology.

Web site:	<a href="http://bvgroup.ch">bvgroup.ch</a>
Number of Investments:	3
Total Investments:	Undisclosed
Founded in:	1997
Based in:	Gümligen, Switzerland
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Covalys Biosciences
Stages:	Series C

# CADFEM



CADFEM provides engineering analysis software sales, consultancy, training and technical services to a variety of global and UK customers. These products provide engineers with broad, high end analysis functionality for the development of leading edge products and state of the art manufacturing processes. Cumulatively their group of 18 skilled and motivated staff have more than 100 years experience in providing and supporting simulation led engineering solutions. Their expertise is spread across a wide range of engineering sectors: medical devices, renewable energy, aerospace, automotive, civil engineering, mechanical engineering, power engineering amongst others. They have expertise in linear and nonlinear, static and dynamic, implicit and explicit, stress analyses, steady state and transient heat transfer analysis, computational fluid dynamics analysis, fluid-structure analysis.

Web site:	<a href="http://cadfem-us.com">cadfem-us.com</a>
Number of Investments:	1
Total Investments:	\$3.8M
Founded in:	1985
Based in:	Farmington Hills, MI, United States
Sector:	AgeTech
Investment in Switzerland companies:	Pregnolia
Stages:	Undisclosed

# Capital Initiative



Since its creation in 1998, Capital Initiative has continued to work to financially support French SMEs and overcome their difficulties in accessing financing. Company tested all possible forms of intervention within the framework of the law and financial regulations. This experience has reinforced the Temporary Asset Purchase (TAP) as the optimal device for joining the interests of all stakeholders by combining their goal of safeguarding employment.

The TAP, model validated by the Prudential Control Authority of the Banque de France, consists of the repurchase of an asset (furniture or real estate) of the customer immediately followed by its hiring. At the end of the lease, for less than 5 years, the property is resold at the purchase price.

Web site:	<a href="http://capital-initiative.fr">capital-initiative.fr</a>
Number of Investments:	4
Total Investments:	\$21M
Founded in:	1998
Based in:	Sausheim, France
Sector:	P3
Investment in Switzerland companies:	Xigen
Stages:	Early Stage Venture, Late Stage Venture

# CDC Enterprises



CDC Enterprises was a portfolio management company approved by the AMF (Autorité des Marchés Financiers, the French Financial Markets Authority), and a wholly-owned subsidiary of the French Caisse des Dépôts. CDC Enterprises is in charge of the group's public interest activities in the field of private equity investments dedicated to SMEs. CDC Enterprises was a direct investor and a funds-of-funds investor in SMEs, on a national and regional level, covering all private equity segments from technology seed funding to small-cap buy-outs. The mission of CDC Enterprises is to encourage the emergence of companies experiencing sustainable growth by strengthening their equity. In 2013 Caisse des Dépôts et Consignations and EPIC BPI-Groupe united to create a joint venture - Bpifrance, a French investment bank.

Web site:	<a href="http://bpifrance.fr">bpifrance.fr</a>
Number of Investments:	21
Total Investments:	\$4M
Founded in:	1994
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Early Stage Venture, Late Stage Venture, Private Equity

# Deutsche Venture Capital



Deutsche Venture Capital was acquired by VCG Venture Capital Gesellschaft mbH. It is a venture capital arm of Deutsche Bank AG specializing in seed, start-up, and expansion capital investments. The firm prefers to invest in life sciences and technology companies. Within the life sciences sector it focuses on biotechnology including therapeutic and diagnostic product development and platform technologies and medical devices. The firm prefers to invest in information technology, telecommunication, semiconductor, industrial technologies, information management, application management, infrastructure management, communication applications, communication platforms, network infrastructure, optics, automation, sensors, electronics, and materials within the technology sector.

Web site:	-
Number of Investments:	21
Total Investments:	\$13.6M
Founded in:	1998
Based in:	München, Germany
Sector:	P3
Investment in Switzerland companies:	Roche Glycart
Stages:	Undisclosed

# dievini Hopp Biotech holding



Dievini is an active investor in Life and Health Sciences companies and is dedicated to the coaching and support of the management teams in corporate and business development. Dievini's focus is on innovative therapeutics and diagnostics, which are shown to lead to novel treatment regimens allowing doctors to treat patients with life-threatening diseases better and safer than they can today. Dievini, therefore, is largely invested in companies with unique and first-in-class diagnosis and therapy approaches. The indication focus is in oncology, neurology, infectious diseases, cell therapy and drug delivery systems. In molecular diagnostics, the primary focus is on systems and products in personalized medicine to support and allow individually improved therapy success with reduced adverse events.

Web site:	<a href="http://dievini.de">dievini.de</a>
Number of Investments:	15
Total Investments:	\$20M
Founded in:	2005
Based in:	Walldorf, Germany
Sector:	P3
Investment in Switzerland companies:	AC Immune
Stages:	Late Stage Venture

# EASME



The Executive Agency for Small and Medium-sized Enterprises (EASME) has been set up by the European Commission to manage on its behalf several EU programs.

EASME is in charge of managing SME, environment, energy and maritime projects funded under COSME, Horizon 2020, LIFE, and EMFF. EASME also organizes the European Sustainable Energy Week (EUSEW).

Web site:	<a href="https://ec.europa.eu/easme">ec.europa.eu/easme</a>
Number of Investments:	2601
Total Investments:	Undisclosed
Founded in:	2014
Based in:	Brussels, Belgium
Sector:	P3
Investment in Switzerland companies:	CyanoGuard
Stages:	Grant

# Eclosion Ventures



Eclosion Ventures manages the Eclosion life science investment fund, which focuses on translating cutting edge science into biotechnology companies developing transformational best-in-diseases therapeutics and platform technologies. Eclosion's approach is defined by its unique entrepreneurial mindset leading to a strong operational and investment commitment to start-up enterprises. Eclosion is driven by an experienced management team which brings together scientific, operational and financial expertise and a successful track record of company creation, value generation and development of new therapeutics that will transform human healthcare.

Web site:	<a href="http://eclosionventures.com">eclosionventures.com</a>
Number of Investments:	15
Total Investments:	Undisclosed
Founded in:	2001
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	Geneva Biotech Center
Stages:	Early Stage Venture, Late Stage Venture, Seed

# Edmond de Rothschild Private Equity



EDMOND  
DE ROTHSCHILD

The Edmond de Rothschild Group is a leader in private equity, using its family experience to assist companies. Their teams are not merely financial investors. They are active partners in company growth and work closely with company executives on value creation. Their Group has long understood that taking environmental, social and governance (ESG) issues into consideration is key to both risk management and value creation for all of the companies in its portfolio. Each area of expertise applies considerations from outside the realm of finance to its specific investment strategy and implements the highest ESG standards.

Web site:	<a href="http://edmond-de-rothschild.com">edmond-de-rothschild.com</a>
Number of Investments:	6
Total Investments:	\$18M
Founded in:	1953
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	OncoEthix
Stages:	Private Equity

# Endeavour Vision



Endeavour Vision is a growth investor in exceptional private medtech companies, and an ideal partner for medtech entrepreneurs. Headquartered in Geneva, Switzerland with a presence in the United States, the Endeavour Vision team comprises experienced investors, seasoned entrepreneurs and medtech specialists, all committed to helping entrepreneurs grow and develop thriving businesses. Endeavour's latest \$275 million fund is fully dedicated to investing in European and US medtech companies that seek worldwide growth and aim to improve the quality and cost of care for patients across the globe.

Web site:	<a href="http://endeavourvision.com">endeavourvision.com</a>
Number of Investments:	43
Total Investments:	\$22.2M
Founded in:	2000
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	OncoEthix
Stages:	Early Stage Venture, Late Stage Venture, Venture

# Erfindungs Verwertung



Erfindungs Verwertung AG is a venture capital firm specializing in seed and startup investments. The firm also does incubation, spin-off and investments in small and medium sized companies. It seeks to invest in life sciences industries such as pharmaceutical, biochemistry, biotechnology, biomedicine, diagnostic, R&E platforms, medical technology, drug development, molecular biology, physics and nanotechnology. ErfindungsVerwertung AG was founded in 1996 and is based in Basel, Switzerland. ErfindungsVerwertung AG is subsidiary of Basellandschaftliche Kantonalbank and Basler Kantonalbank.

Web site:	<a href="http://eva-basel.ch">eva-basel.ch</a>
Number of Investments:	1
Total Investments:	\$2.6M
Founded in:	1996
Based in:	Basel, Switzerland
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Covalys Biosciences
Stages:	Early Stage Venture

# ETP Ventures

ETP Ventures is a biomedical venture capital firm that invests as early as the seed stage and as late as post-IPO rounds. ETP is comfortable acting as a lead investor or partner in syndicated rounds where the key elements for success are already in place.

Web site:	-
Number of Investments:	1
Total Investments:	\$20M
Founded in:	Undisclosed
Based in:	San Francisco, CA, USA
Sector:	P3
Investment in Switzerland companies:	Cellestia Biotech
Stages:	Undisclosed

# Eurostars



The Eurostars Programme is a joint programme between EUREKA and the European Commission and the first European funding and support programme to be specifically dedicated to research-performing SMEs. Eurostars stimulates them to lead international collaborative research and innovation projects by easing access to support and funding. The Eurostars Programme is a European Joint Programme dedicated to the R&D performing SMEs, and co-funded by the European Communities and 36 EUREKA member countries.

Web site:	<a href="http://eurostars-eureka.eu">eurostars-eureka.eu</a>
Number of Investments:	22
Total Investments:	\$60.32M
Founded in:	1985
Based in:	Brussels, Belgium
Sector:	P3
Investment in Switzerland companies:	GenomSys
Stages:	Undisclosed

# FONGIT



FONGIT, the “Fondation Genevoise pour l’Innovation Technologique”, is Switzerland’s premier innovation incubator supporting innovative tech ventures in Geneva. Founded in 1991, Fongit has an excellent track record of building successful companies. They are a private, non-profit foundation, whose mission is to transform technology into social & economic value in the Geneva region. FONGIT benefits from the support of the business incubator program of the State of Geneva. Fongit currently hosts 55+ innovative companies representing 350+ employees in 5000+ m2 of professionally-equipped offices & laboratory space. Their entrepreneurs develop innovative Fintech, IT, Engineering, and Medtech companies.

Web site:	<a href="http://fongit.ch">fongit.ch</a>
Number of Investments:	29
Total Investments:	Undisclosed
Founded in:	1991
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	Aptissen
Stages:	Seed

# Forbion Capital Partners



Forbion Capital Partners is a Netherlands-based venture capital firm focused on investing in life sciences companies in drug development as well as MedTech companies addressing high medical needs. Forbion's investment team of nine investment professionals has built an impressive performance track record since the late nineties with successful investments in Rhein Biotech, Crucell, Neutec, Glycart, Borean, Impella, Alantos, Acorda, Fovea and PanGenetics. Current assets under management exceed \$500M, split between three active funds. Finally, Forbion co-manages BioGeneration Ventures, an early stage fund focused on academic spin-outs and seed investments in the Netherlands.

Web site:	<a href="http://forbion.com">forbion.com</a>
Number of Investments:	79
Total Investments:	\$54.7M
Founded in:	2006
Based in:	Naarden, The Netherlands
Sector:	P3
Investment in Switzerland companies:	Prexton Therapeutics, Roche Glycart
Stages:	Early Stage Venture, Late Stage Venture

# Genevest Consulting Group



Genevest Consulting Group is a venture capital firm specializing in seed, start-ups, early-mid-late stage, and expansion investments. Genevest Consulting Group seeks to invest in technology, information technology, communications, material sciences, medical technology, cleantech, and life sciences. It prefers to invest in Europe and Switzerland and also invests selectively in the United States and in Israel.

Web site:	-
Number of Investments:	5
Total Investments:	\$20.5M
Founded in:	1985
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Early Stage Venture

# Gilde Healthcare



Gilde Healthcare is a specialized European healthcare investor managing two business lines: a lower mid-market buy-out fund and a venture & growth capital fund. It has over €800 million (\$900 million) under management and is actively looking to lead new investments in digital health, diagnostics, medical devices, therapeutics and healthcare services. Gilde successfully builds healthcare businesses across Europe and US, investing up to €35 million in a single portfolio company.

Web site:	<a href="http://gildehealthcare.com">gildehealthcare.com</a>
Number of Investments:	67
Total Investments:	\$41.93M
Founded in:	1982
Based in:	Utrecht, The Netherlands
Sector:	P3
Investment in Switzerland companies:	Roche Glycart
Stages:	Early Stage Venture, Late Stage Venture, Private Equity

# Global Life Science Ventures



Global Life Science Ventures (GLSV) was a leading, independent venture capital fund focusing exclusively on the life sciences. GLSV was dedicated to supporting early-stage groups, originating from universities, scientific institutions or industry. The fund also invested in selected later stage companies, including buy-outs. For this purpose, GLSV provided finance, advice and access to expertise and networks. The group advised and managed funds totaling more than € 200 million. With offices in Germany and Switzerland, GLSV acted as one team with a global perspective. The first fund started its activities in 1996 and invested in 18 companies. The second fund GLSV II started in 2001 and invested in 18 companies primarily in Europe and the US.

Web site:	<a href="http://global-life-science-ventures.com">global-life-science-ventures.com</a>
Number of Investments:	30
Total Investments:	\$192.05M
Founded in:	1996
Based in:	München, Germany
Sector:	P3
Investment in Switzerland companies:	Roche Glycart
Stages:	Debt, Early Stage Venture, Late Stage Venture

# GoBeyond



GoBeyond Investing is a FinTech company transforming angel investing into a new scalable asset class for small and large, novice to experienced investors. It offers a unique deal platform, portfolio tools, syndication/pooling, due diligence, investment monitoring services, training and certified deal leaders. Its clients are individuals, family offices, professional groups and corporations. It is active in the EU, Switzerland and the US. GoBeyond also offers educational training modules for angel investors in 11 categories.

Web site:	<a href="http://gobeyondinvesting.com">gobeyondinvesting.com</a>
Number of Investments:	167
Total Investments:	Undisclosed
Founded in:	2013
Based in:	Zurich, Switzerland
Sector:	P3
Investment in Switzerland companies:	Cellestia Biotech, BioVersys
Stages:	Early Stage Venture

# HBM Partners



HBM Partners was founded in 2001 with the goal to invest in private and public emerging biopharma and other healthcare-related companies. HBM Partners has a team of experienced professionals to source, analyse and engage in investments in biopharma, medical devices and diagnostics industries. HBM Partners has a track-record of over 100 investments that resulted so far in significant value creation by more than 60 trade sales and IPOs since inception.

HBM Partners is regulated by FINMA and advises SIX listed HBM Healthcare Investments and further specialised public and private equity investment products.

Web site:	<a href="http://hbmpartners.com">hbmpartners.com</a>
Number of Investments:	24
Total Investments:	Undisclosed
Founded in:	2001
Based in:	Grand Cayman, Cayman Islands
Sector:	P3
Investment in Switzerland companies:	APR Applied Pharma Research
Stages:	Debt, Early Stage Venture, Late Stage Venture, Seed

# HealthCare Royalty Partners



HealthCare Royalty Partners (“HCR”) is a private investment firm that purchases royalties and uses debt-like structures to invest in commercial or near-commercial stage assets. HCR has raised over \$4.7 billion in cumulative capital commitments and has offices in Stamford (CT), Boston, London and San Francisco. The HCR team consists of 32 individuals (including their Senior Advisors), Their investment platform is designed to serve as a long-term capital resource for company’s partners; flexible and directly aligned with their business models and objectives. Team that utilizes multiple investment approaches to help partners achieve their goals including: customized debt, royalty monetization, and revenue participation financings. Since 2003, HCR's senior professionals have completed more than 60 healthcare investments.

Web site:	<a href="http://healthcareroyalty.com">healthcareroyalty.com</a>
Number of Investments:	14
Total Investments:	\$50M
Founded in:	2007
Based in:	Stamford, CT, USA
Sector:	P3
Investment in Switzerland companies:	Cardiorentis
Stages:	Debt, Private Equity

# Helsinn Investment Fund



The Helsinn Investment Fund focuses on privately-owned companies with early stage technologies in Cancer Supportive Care, Cancer Diagnostics and Cancer Therapeutics, among other areas close to Helsinn's interests such as dermatology, metabolism and gastro-intestinal disease. These technologies range from biotech to pharma, medical devices and food supplements.

As well as these investments, Helsinn International Services, Sarl, has signed collaboration agreements with Centre Scientifique de Monaco and Lyfebulb U.S.

Web site:	<a href="https://helsinninvestmentfund.com">helsinninvestmentfund.com</a>
Number of Investments:	12
Total Investments:	\$44.4M
Founded in:	2016
Based in:	Monaco, Principality of Monaco
Sector:	P3
Investment in Switzerland companies:	Amal Therapeutics
Stages:	Early Stage Venture

# Hercules Capital



The firm specializing in providing venture debt, debt, senior secured loans, and growth capital to privately held venture capital-backed companies at all stages of development from startups, to expansion stage including select publicly listed companies and select special opportunity lower middle market companies that require additional capital to fund acquisitions, recapitalizations and refinancing and established-stage companies. The firm provides growth capital financing solutions for capital extension; management buy-out and corporate spin-out financing solutions; company, asset specific, or intellectual property acquisition financing; convertible, subordinated and/or mezzanine loans; domestic and international corporate expansion; vendor financing.

Web site:	<a href="http://htgc.com">htgc.com</a>
Number of Investments:	104
Total Investments:	\$55M
Founded in:	2003
Based in:	Palo Alto, CA, USA
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Axovant Sciences
Stages:	Debt, Early Stage Venture, Late Stage Venture, Post-Ipo, Seed

# High-Tech Gründerfonds



High-Tech Gründerfonds (HTGF) is a seed investor that finances high-potential, tech-driven startups. With EUR 895.5 million in total investment volume across three funds and an international network of partners, HTGF has already helped forge more than 500 startups since 2005. Driven by their expertise, entrepreneurial spirit and passion, its team of experienced investment managers and startup experts help guide the development of young companies. HTGF's focus is on high-tech startups in a range of sectors, including software, media, internet, hardware, automation, health care, chemistry and life sciences. To date, external investors have injected over EUR 2 billion into the HTGF portfolio via about 1,400 follow-on financing rounds.

Web site:	<a href="http://high-tech-gruenderfonds.de">high-tech-gruenderfonds.de</a>
Number of Investments:	546
Total Investments:	\$48M
Founded in:	2005
Based in:	Bonn, Germany
Sector:	P3
Investment in Switzerland companies:	Amal Therapeutics
Stages:	Early Stage Venture, Seed

# Hitachi Chemical Diagnostics



Hitachi Chemical Diagnostics, Inc. manufactures vitro allergy diagnostics. The company offers CLA Allergen-Specific IgE, a serum test assay; CLA-1 Luminometer, an in vitro allergy diagnostic system; AP 720S, a semi-automated in vitro allergy diagnostic system; and AP 1800, an automated in vitro allergy diagnostics system; and CLA-1, a data management software for physicians and laboratories to integrate database functionality into the testing process. It also offers ExoComplete 96-well plate kit and ExoComplete tube kit, an integrated system for exosome collection to mRNA purification used for the research use of molecular biology applications. The company markets its products through laboratories and distributors worldwide. Hitachi Chemical Diagnostics, Inc. was formerly known as MAST Immunosystems, Inc. and changed its name to Hitachi Chemical Diagnostics, Inc. in July 2000.

Web site:	<a href="http://hcdiagnostics.com">hcdiagnostics.com</a>
Number of Investments:	Undisclosed
Total Investments:	Undisclosed
Founded in:	1996
Based in:	Mountain View, CA, USA
Sector:	P3
Investment in Switzerland companies:	Biocartis
Stages:	Undisclosed

# HS LifeSciences



HS LifeSciences was established in 2008 by seasoned biotech entrepreneurs with many years of experience in managing biotech companies. The lessons learned over the years have been distilled into a new business model centered on the foundation and growth of new life sciences companies without the need for conventional multiple rounds of equity-based financing. HS LifeSciences supports new life sciences companies during their foundation and early growth phases by complementing the scientific founders' R&D vision with management, financial and commercial experience. Patient benefit remains the utmost priority for their portfolio companies and company's overriding goal is to bring novel therapies to the market in the fastest possible manner. Their business model enables portfolio companies to pursue their role as innovation powerhouses bringing together their medical innovation with the biopharmaceutical industry.

Web site:	<a href="http://hslifesciences.com">hslifesciences.com</a>
Number of Investments:	2
Total Investments:	\$9M
Founded in:	2008
Based in:	Zurich, Switzerland
Sector:	P3
Investment in Switzerland companies:	CT Atlantic
Stages:	Early Stage Venture

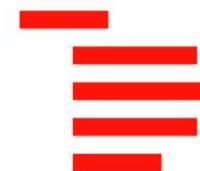
# Idinvest Partners



Idinvest Partners is a pan-European private equity manager focused on the low and middle market segments. With over 6 billion euros under management, the company has developed several complementary areas of expertise, including equity investments in buyout deals focusing on both mid-size as well as young innovative European companies; primary investments in European private equity funds focusing primarily on the middle market segment; secondary investments; mezzanine investments in Europe; and private equity consulting. Idinvest Partners' recent success stories include Criteo, Clear2Pay, Meetic, Prosensa, Convertteam, Kwik Fit, Lastminute.com, Dailymotion, Deezer, Talend, Synthesio, Menlook, Vestiaire Collective, Pretty Simple, Curse.com, Withings, Kantox, Secret Escapes, Happn, Peakon, Dayuse, Botify, Financefox, Azalead and many more.

Web site:	<a href="http://idinvest.com">idinvest.com</a>
Number of Investments:	333
Total Investments:	\$10.1M
Founded in:	1997
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	Auris Medical
Stages:	Early Stage Venture, Late Stage Venture, Seed

# Index Ventures



Index  
Ventures

Index Ventures is a venture capital firm specializing in seed stage, very-early stage, expansion, early stage, mid stage, late stage, and growth stage start-ups, series A, and series B rounds. It makes investments in information technology with a focus on communications, security, applications and services media,, water purification, B2B commerce, SaaS, open source, networking, enabling platform, components and EDA, consumer and internet infrastructure, enterprise software, software, mobile software, bitcoin, gaming, and wireless, and cloud computing; life sciences and healthcare with a focus on healthcare infrastructure, antibodies, molecule drugs, drug discovery, drug development, screening and diagnostics and medical devices; education; commerce; marketplace; financial services, and payment; branded consumer products ; green technology; biotechnology.

Web site:	<a href="http://indexventures.com">indexventures.com</a>
Number of Investments:	731
Total Investments:	\$9M
Founded in:	2008
Based in:	San Francisco, CA, USA
Sector:	P3
Investment in Switzerland companies:	OncoEthix
Stages:	Early Stage Venture, Late Stage Venture, Seed

# Innovation Capital



Innovation Capital is an international venture capital firm based in Paris with a local presence in the Silicon Valley. With over 450 M€ under management, their current focus is on venture and growth investments in the Innovation Healthcare Services space in Europe. Innovation Capital's aim is to create value by providing talented entrepreneurs with the resources, experience, and network necessary to turn innovative technologies into great businesses. This fund is the first sector fund supporting the Silver Economy. This term is used actually to define the Senior market, all products and services that are expected to improve disability-free life expectancy or to help dependent elderly people and their caregivers on a day-to-day basis.

Web site:	<a href="http://innovationcapital.fr">innovationcapital.fr</a>
Number of Investments:	59
Total Investments:	\$12.4M
Founded in:	1996
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Early Stage Venture, Late Stage Venture, Seed

# investiere

# investiere

venture capital

investiere is a digital venture capital platform with offices in Switzerland. Company source deals mainly from Switzerland's leading universities and increasingly from other European countries too. Since its launch in 2010, investiere has participated in over 70 funding rounds, co-investing with reputable VC funds, business angels and corporates. They make investment opportunities available on their online platform for qualified investors around the world (except US). The minimum ticket size is CHF 10'000, allowing private investors to choose what they want to invest in, to diversify easily and rely on in-house expertise to choose the most promising startups. Several institutional investors such as a large Swiss pension fund and numerous corporates rely on the deal sourcing, screening and evaluation for their own venture capital investments.

Web site:	<a href="https://investiere.ch">investiere.ch</a>
Number of Investments:	79
Total Investments:	\$3.3M
Founded in:	2007
Based in:	Zurich, Switzerland
Sector:	P3, AgeTech
Investment in Switzerland companies:	aktiia, Memo Therapeutics
Stages:	Early Stage Venture, Seed

# Johnson & Johnson Development Corporation



DEVELOPMENT CORPORATION

JJDC is comprised of experts and leaders in the health care and technology venture communities who identify early market indicators, health care trends, and strategic investment opportunities. Unlike traditional venture capital firms, JJDC determines the success of an investment's performance not only in financial returns, but also in the viability of providing strategic growth options for Johnson & Johnson. JJDC plays an integral role in the identification of new business opportunities outside of Johnson & Johnson's traditional portfolio and market presence. JJDC identifies new market opportunities and develops new businesses in emergent health care sectors while also creating support venture investments in alignment with the strategic objectives of Johnson & Johnson operating companies.

Web site:	<a href="http://jjdevcorp.com">jjdevcorp.com</a>
Number of Investments:	150
Total Investments:	\$230M
Founded in:	1979
Based in:	New Brunswick, NJ, USA
Sector:	P3
Investment in Switzerland companies:	Biocartis
Stages:	Early Stage Venture, Late Stage Venture, Private Equity, Seed

# Johnson & Johnson Innovation



Johnson & Johnson Innovation is a center to science and business experts to collaborate with innovators to incorporate science into healthcare solutions, including medical device and diagnostic technologies, consumer healthcare products, and pharmaceuticals. It is focused on the advancement of new healthcare solutions in the consumer, pharmaceutical, and medical devices and diagnostics sectors.

The company provides financing tools that include early-stage research funding, seed funding, equity investments, licensing, and collaborations. Additionally, it offers its partners access to international markets, pricing and reimbursement, market testing, company creation services, and more.

Web site:	<a href="http://jnjinnovation.com">jnjinnovation.com</a>
Number of Investments:	50
Total Investments:	\$34.5M
Founded in:	Undisclosed
Based in:	New Brunswick, NJ, USA
Sector:	P3
Investment in Switzerland companies:	Asceneuron
Stages:	Series A

# Life Sciences Partners



LSP is one of Europe's largest and most experienced healthcare investment firms. With a track record going back more than 30 years, company has built up an investment house that is dedicated to only one task: seeking, nurturing and growing healthcare investment opportunities with the potential to have a positive impact on society. They believe such opportunities create the most value for all parties. From their offices in Amsterdam, Munich and Boston, the team aims to back the smartest inventors with the best ideas. While their goal is to develop products and technologies that have a positive impact on society, LSP objective is to help inventors achieve their goals. By definition, success is often accompanied by financial returns. The combination of contributing to society and the prospect of associated financial returns, is why investors entrust LSP to invest their capital alongside LSP's own capital.

Web site:	<a href="http://lspvc.com">lspvc.com</a>
Number of Investments:	102
Total Investments:	\$30M
Founded in:	1998
Based in:	Amsterdam, The Netherlands
Sector:	P3
Investment in Switzerland companies:	GTX medical
Stages:	Undisclosed

# LifeCare Partners



LifeCare Partners GmbH is a principal investment firm specializing in mezzanine investments. The firm seeks to invest in private and public life science and healthcare industry with special focus on medical technology, diagnostics, bio/pharmaceuticals, generics, food/nutrition, industrial biotechnology, biomaterials, e-health, and bioenergy. It invests in private and public companies. LifeCare Partners GmbH was founded in 2014 and is based in Basel, Switzerland. The company has successfully invested in more than 30 life science companies over the last years, of which a large number have already been listed on the stock exchange or have been acquired by leading players in the life science industry.

Web site:	<a href="http://lifecare.partners">lifecare.partners</a>
Number of Investments:	6
Total Investments:	\$15.4M
Founded in:	2014
Based in:	Basel, Switzerland
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Private Equity

# M Ventures



Merck Ventures is the strategic, corporate venture capital arm of Merck. Its mandate is to invest in innovative technologies and products with the potential to significantly impact Merck's core business areas. From the headquarters in Amsterdam and offices in the US and Israel they invest globally in transformational ideas driven by great entrepreneurs. Merck Ventures takes an active role in its portfolio companies and teams up with entrepreneurs and co-investors to translate innovation towards commercial success. Merck Ventures has a significant focus on early-stage investing and company creation including the creation of spin-offs to leverage Merck's science and technology base.

Web site:	<a href="http://m-ventures.com">m-ventures.com</a>
Number of Investments:	49
Total Investments:	\$41M
Founded in:	2009
Based in:	Yavne, Israel
Sector:	P3
Investment in Switzerland companies:	Prexton Therapeutics
Stages:	Early Stage Venture, Late Stage Venture

# MassChallenge



In addition to providing expert mentorship, tailored curriculum, and unrivaled access to corporate partners, MassChallenge awards top startups with portions of several million dollars in cash prizes. With accelerators in Boston, Israel, Mexico, Switzerland, Texas, and the UK, MassChallenge strengthens innovation-driven economic development around the world. MassChallenge also runs Bridge to MassChallenge programs in Australia, Columbia, France, Korea, Mexico, Morocco, Poland, Russia, and Spain to drive the creation of high-quality jobs. In 2016, MassChallenge launched PULSE@MassChallenge to accelerate the impact of digital health innovation and improve patient care through technology. To date, 1,211 MassChallenge alumni have raised over \$2 billion in funding, generated approximately \$900 million in revenue, and created over 65,000 total jobs.

Web site:	<a href="https://masschallenge.org">masschallenge.org</a>
Number of Investments:	1364
Total Investments:	\$100K
Founded in:	2009
Based in:	Boston, MA, USA
Sector:	AgeTech
Investment in Switzerland companies:	Xsensio
Stages:	Grant

# MedHoldings

MedHoldings is a Lausanne based Private Equity and Venture Capital investment company, focusing primarily on development and late stage Medtech ventures in Switzerland, Europe and Emerging Markets. It supports innovative technologies and solutions, that target unmet medical needs, provide efficiency and reduce cost of care.

Web site:	-
Number of Investments:	2
Total Investments:	\$6.2M
Founded in:	Undisclosed
Based in:	Lausanne, Switzerland
Sector:	P3
Investment in Switzerland companies:	Abionic
Stages:	Early Stage Venture, Private Equity

# Michael J. Fox Foundation



The Michael J. Fox Foundation for Parkinson's Research is a non-profit research and development organization. The foundation focuses on developing medicines, research, and raising funds for the cure of Parkinson's disease. In practice, that means identifying and funding projects most vital to patients; spearheading solutions around seemingly intractable field-wide challenges; coordinating and streamlining the efforts of multiple, often disparate, teams; and doing whatever it takes to drive faster knowledge turns for the benefit of every life touched by PD.

Web site:	<a href="http://michaeljfox.org">michaeljfox.org</a>
Number of Investments:	14
Total Investments:	Undisclosed
Founded in:	2000
Based in:	New York, NY, USA
Sector:	P3
Investment in Switzerland companies:	Asceneuron
Stages:	Grant

# MP HealthCare Venture Management

MP Healthcare  
Venture Management, Inc.

MP Healthcare Venture Management, Inc. is a jointly owned venture capital arm of Mitsubishi Tanabe Pharma Corp. and Mitsubishi Chemical Holdings Corporation, specializing in seed to late-stage investments. The firm considers investing in lifesciences companies with a focus on biotechnology, therapeutics, diagnostics and vaccines. It prefers to invest in novel drugs and diagnostics in various disease areas, including nephrology, immunology and inflammation, cardiovascular, neuroscience, strokes, and metabolic diseases. The firm typically invests in North America and Europe. It usually invests as part of an investment syndicate with other leading venture capital firms. MP Healthcare Venture Management, Inc. was founded in 2006 and is based in Boston, Massachusetts.

Web site:	<a href="http://mp-healthcare.com">mp-healthcare.com</a>
Number of Investments:	28
Total Investments:	\$65.3M
Founded in:	2006
Based in:	Boston, MA, USA
Sector:	P3
Investment in Switzerland companies:	Covagen
Stages:	Early Stage Venture, Seed

# Neomed Management



NeoMed Management is an international venture capital investment firm, exclusively focused on the healthcare industry. Founded in 1997, NeoMed has established five funds to date. NeoMed invests in emerging companies with outstanding growth prospects. These companies are developing innovative and proprietary medical products that address substantial market opportunities in the pharmaceutical, medical device and diagnostics industries. NeoMed has a multi-stage investment approach and invests at all stages of development from start-up to later stage growth financings. Since inception, NeoMed has successfully invested in more than 30 companies in Europe, including Scandinavia, Switzerland, Germany and the UK, and in North America.

Web site:	<a href="http://neomed.net">neomed.net</a>
Number of Investments:	45
Total Investments:	\$20M
Founded in:	1997
Based in:	Oslo, Norway
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Genkyotex
Stages:	Early Stage Venture, Late Stage Venture, Private Equity

# Nestle Health Science



As a wholly-owned subsidiary of Nestlé, with global headquarters in Vevey, Switzerland, Nestlé Health Science has a distinct role to play in the Nestlé's transformation into the world's recognised leader in Nutrition, Health and Wellness. At Nestlé Health Science, their specific quest is to become the global leader in science-based personalised nutritional solutions. The company intends to use Nestlé's existing HealthCare Nutrition business to build a leading health science nutrition organisation within two years. It aims to develop a product portfolio and pipeline within five years and establish market leadership, meeting its vision, within a decade from start-up. The company has access to external scientific and technological know-how through Nestlé's innovation network as well as a number of venture capital funds in which the group has interests.

Web site:	<a href="http://nestlehealthscience.com">nestlehealthscience.com</a>
Number of Investments:	8
Total Investments:	Undisclosed
Founded in:	2011
Based in:	Vevey, Switzerland
Sector:	P3
Investment in Switzerland companies:	Amazentis
Stages:	Undisclosed

# Novartis



Novartis AG researches, develops, manufactures, and markets healthcare products worldwide. The company's Innovative Medicines segment offers prescription medicines for patients and healthcare providers. It also provides ophthalmology, neuroscience, immunology, hepatology and dermatology, respiratory, cardio-metabolic, and established medicine products. The company's Sandoz segment provides active ingredients and finished dosage forms of pharmaceuticals in cardiovascular, central nervous system, dermatology, gastrointestinal and hormonal therapy, metabolism, oncology, ophthalmic, pain, and respiratory areas; and finished dosage form anti-infective. It also provides active pharmaceutical ingredients and intermediates primarily antibiotics; protein- or other biotechnology-based products, including biosimilars; and biotechnology manufacturing services.

Web site:	<a href="http://novartis.com">novartis.com</a>
Number of Investments:	36
Total Investments:	\$2.8B
Founded in:	1895
Based in:	Basel, Switzerland
Sector:	P3
Investment in Switzerland companies:	Roche
Stages:	Early Stage Venture, Late Stage Venture, Grant

# Novartis Venture Fund



Their primary focus is on the development of novel therapeutics and platforms. Company balances the therapeutic focus with investments in medical devices, diagnostics or drug delivery systems. In the investments they look for unmet need and clinical impact, novel proprietary science and understanding of mechanism, management and board experience and capital efficiency in the program. They prefer to have initial investment at the early stage to build the company and follow with additional investment in pace with the company's progress. Company continues the approach of larger focused investments and anticipate total investments up to USD 30 to 50 mio per company over its life, but it can be as little as 100'000 USD to get started.

Web site:	<a href="http://nvfund.com">nvfund.com</a>
Number of Investments:	193
Total Investments:	\$13.6M
Founded in:	1997
Based in:	Basel, Switzerland
Sector:	P3
Investment in Switzerland companies:	Roche Glycart
Stages:	Early Stage Venture, Late Stage Venture, Post-Ipo, Secondary Market, Seed

# Novo Holdings



Established in 1999, Novo Holdings is the holding company of the Novo Group and manages the Foundation's investment assets. In addition to being the major shareholder in the Novo Group companies, Novo Holdings invests the wealth of the Foundation in two key categories: 1) Life Science Investments, which includes investing in life science companies at all stages of development; and 2) Financial Investments, which manages a diversified portfolio of equity and fixed income securities. Working out of Copenhagen, San Francisco and Boston, Novo Holdings is a world-leading life science investor with a focus on creating long-term value.

Web site:	<a href="http://novoholdings.dk">novoholdings.dk</a>
Number of Investments:	135
Total Investments:	\$28M
Founded in:	1999
Based in:	Copenhagen, Denmark
Sector:	P3
Investment in Switzerland companies:	NBE-Therapeutics
Stages:	Early Stage Venture, Late Stage Venture, Post-Ipo, Private Equity, Seed

# Omega Funds



Omega Funds invests in biotechnology and medical device companies in North America and Western Europe. They have invested in early-stage, disruptive and scalable platform technologies, as well as therapeutics companies with defined products. Omega Funds invests in both private and public companies via primary investments, PIPEs and direct secondaries. Omega has a strategic relationship with NeoMed Management, a Jersey headquartered investment firm, which broadens their capabilities within key European markets and adds expertise in additional therapeutic areas and in medical devices. NeoMed will continue to manage its existing legacy funds, while assisting and advising on new investments for Omega's current fund. Omega's investments have brought to market 33 products.

Web site:	<a href="http://omegafunds.net">omegafunds.net</a>
Number of Investments:	56
Total Investments:	\$15.4M
Founded in:	2004
Based in:	Boston, MA, USA
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Early Stage Venture, Late Stage Venture, Private Equity

# Palmarium



Palmarium is a private family office and investor with focus on alternative investments including private equity, venture capital and real estate. Palmarium is a private family office and investor with focus on alternative investments including private equity and real estate. They leverage their networks to identify opportunities and structure proprietary transactions around them, with the unique ability to manage complex businesses and situations. The rare combination of their deep sector knowledge and a singular commitment to their principals and partners is reflected in their performance and diverse portfolio of businesses.

Web site:	<a href="http://palmarium.ch">palmarium.ch</a>
Number of Investments:	2
Total Investments:	\$4.7M
Founded in:	Undisclosed
Based in:	Zurich, Switzerland
Sector:	P3
Investment in Switzerland companies:	healthbank innovation AG
Stages:	Family Investment Office

# PMV Tina Fund



PMV Tina Fund is a closed private equity fund managed by PMV.

PMV-TINA specializes in growth capital investments. It seeks to invest in consortium projects in energy, ecology, and the environment (including smart grids); information and communication technology for socio-economic innovation; new materials, nanotechnology, and the processing industry; medical translational research and research into health and nutrition; information and communication technology and services for the healthcare sector; and logistics, transportation and supply chain management.

Web site:	-
Number of Investments:	5
Total Investments:	\$129M
Founded in:	Undisclosed
Based in:	Brussels, Belgium
Sector:	P3
Investment in Switzerland companies:	Biocartis
Stages:	Late Stage Venture

# PPF Group



PPF Group invests into multiple market segments such as banking and financial services, telecommunications, biotechnology, real estate, insurance and agriculture. PPF's reach spans from Europe to Russia, the USA and across Asia. PPF Group owns assets exceeding EUR 24.2 billion (as at 30 June 2016). Their philosophy is to search out business opportunities that others have overlooked or rejected on a risk basis and where they see hidden value. Their aim is to achieve superior investment returns through their values of responsibility, determination and successful execution. The 25-year history of PPF Group is based on the discipline, innovation and professionalism of a team led by the Czech founder and majority shareholder of PPF Group N.V., Petr Kellner.

Web site:	<a href="http://ppfgroup.nl">ppfgroup.nl</a>
Number of Investments:	8
Total Investments:	\$28M
Founded in:	1991
Based in:	Amsterdam, The Netherlands
Sector:	P3
Investment in Switzerland companies:	Cellestia Biotech, NBE-Therapeutics
Stages:	Seed, Series A, Series B

# Preon Capital Partners



Based in Geneva since 2014, Preon Capital Partners is the family office of one of the most successful business angels in Europe and operates as an independent asset manager and financial advisory company. The company invests mainly in equity with a particular focus in technology startups that try to anticipate future global trends. The liquidity is managed via mutual funds that may invest directly in listed equity, listed derivatives and in external hedge fund managers. Their funds have been designed for and are dedicated to the family office beneficiary owner, but they may be opened to external investors at the directors' discretion.

Web site:	<a href="http://preoncapital.com">preoncapital.com</a>
Number of Investments:	1
Total Investments:	\$0.15M
Founded in:	2014
Based in:	Geneva, Switzerland
Sector:	P3
Investment in Switzerland companies:	GenomSys
Stages:	Undisclosed

# Quest Capital Management



Quest Capital Management, Inc. is a wealth management and comprehensive financial planning company. They focus on creating a Plan for Life™ - a unique financial plan designed to help meet clients' changing needs. Their mission at Quest Capital Management, Inc. is to help the client achieve his financial goals and objectives. Whether he is just getting started with an investment strategy or looking for professional advice on how to maximize his wealth, the company's team of professional financial planners can help him make wise decisions now – for himself, the family, and the future.

Web site:	<a href="http://questadvisor.com">questadvisor.com</a>
Number of Investments:	3
Total Investments:	\$13.6M
Founded in:	1987
Based in:	Dallas, TX, USA
Sector:	P3
Investment in Switzerland companies:	Roche Glycart
Stages:	Undisclosed

# Redalpine Venture Partners



Redalpine provides venture capital to highly scalable European start-ups. The firm's mission is to help talented entrepreneurs turn an ambitious vision into reality by providing money, experience, coaching and a network. The firm prefers to invest in disruptive business models with a moderate total capital need in the fields of information technology (ICT) and life sciences in seed and early stage. Redalpine started with its first fund (Redalpine Capital I) in 2007 based on the track-record of some excellent trade-sales and IPOs as serial entrepreneurs and professional angel investors. Redalpine successfully launched Redalpine Capital II in 2012 and Redalpine Capital III in 2016. The funds are registered in Luxemburg and backed by dozens of experienced entrepreneurs and investors representing various countries, and a broad range of industries.

Web site:	<a href="http://redalpine.com">redalpine.com</a>
Number of Investments:	55
Total Investments:	\$11.3M
Founded in:	2007
Based in:	Zurich, Switzerland
Sector:	P3, AgeTech
Investment in Switzerland companies:	aktiia, Memo Therapeutics
Stages:	Early Stage Venture, Seed, Venture

# Seroba Life Sciences



Seroba is a life sciences venture capital firm, focused on investing in breakthrough healthcare technologies that promise to improve lives and make a difference worldwide. Headquartered in Ireland, the firm works with some of the world's best entrepreneurs developing innovative medical devices, diagnostics, and therapeutic drugs. It funds new healthcare opportunities through key value-adding stages, assisting its invested companies from inception through development and clinical evaluation, the generation of intellectual property, regulatory approvals and market launch, and partnering with leading pharmaceutical or medtech companies.

Web site:	<a href="http://seroba-lifesciences.com">seroba-lifesciences.com</a>
Number of Investments:	25
Total Investments:	\$96.2M
Founded in:	2009
Based in:	Dublin, Ireland
Sector:	P3
Investment in Switzerland companies:	Prexton Therapeutics, Covagen
Stages:	Early Stage Venture

# Sofinnova Partners



Sofinnova Partners is an independent venture capital firm based in Paris, France. For over 35 years, the firm has backed nearly 500 companies at different stages of development pure creations, spin-offs, as well as turnaround situations and worked alongside Europe key entrepreneurs in the technology, life sciences and cleantech sectors. With 1.1 billion of funds under management, Sofinnova Partners experienced team and hands-on approach in building portfolio companies through to exit have created market leaders, from landmark historical investments including Genentech, Actelion and Vistaprint to more recent successes such as CoreValve, Novoxel and Fovea. With a global mindset, the firm has a sister organization in San Francisco, California.

Web site:	<a href="http://sofinnova.fr">sofinnova.fr</a>
Number of Investments:	200
Total Investments:	\$48.29M
Founded in:	1972
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	Auris Medical
Stages:	Early Stage Venture, Late Stage Venture, Seed

# SR One



SR One is the corporate venture capital arm of GlaxoSmithKline. The firm invests globally in emerging life science companies that are pursuing innovative science which will significantly impact medical care. They have a team of investment professionals, located in the US and UK. As a Team, their experience spans basic science, industry and the market. They take an active role in their portfolio companies and work with management teams and their fellow venture investors to create significant value. Their current portfolio includes approximately 35 private and public companies. Their expanded remit also focuses on maximizing the value of GSK technological innovation to establish new businesses and revenue opportunities across a range of industries.

Web site:	<a href="http://srone.com">srone.com</a>
Number of Investments:	136
Total Investments:	\$34.5M
Founded in:	1985
Based in:	Cambridge, MA, USA
Sector:	P3
Investment in Switzerland companies:	Asceneuron
Stages:	Series A, Series C

# Sunstone Life Science Ventures



Sunstone Life Science Ventures A/S is a European, early-stage investor based in Copenhagen, investing in therapeutics, medical technology and diagnostics. Initially the investments are made in companies raising Series A/B rounds, but also investments at an earlier stage. Sunstone is passionate about being part of the journey where science is turned into products benefiting patients worldwide, seeking opportunities which improve patient outcome and have the potential of offering solutions that are more efficient for the health care system.

Web site:	<a href="http://sunstone.eu">sunstone.eu</a>
Number of Investments:	56
Total Investments:	\$41M
Founded in:	2007
Based in:	Copenhagen, Denmark
Sector:	P3
Investment in Switzerland companies:	Prexton Therapeutics
Stages:	Early Stage Venture, Seed

# SV Health Investors



SV Health Investors, formerly SV Life Sciences, is a leading healthcare and life sciences venture capital and growth equity firm. Their goal is to transform healthcare – one investment at a time – by supporting the entrepreneurs who create and build breakthrough companies and treatments. With over \$2 billion in capital under management in seven private healthcare funds, a 20-year track record in the US and Europe and offices in Boston, San Francisco and London, SV Health Investors drives game-changing innovation.

Web site:	<a href="http://svhealthinvestors.com">svhealthinvestors.com</a>
Number of Investments:	208
Total Investments:	\$18M
Founded in:	1993
Based in:	Boston, MA, USA
Sector:	P3
Investment in Switzerland companies:	OncoEthix
Stages:	Debt, Early Stage Venture, Late Stage Venture

# Swiss Helvetia Fund



Swiss Helvetia Fund is a non-diversified, closed-end investment company whose objective is to seek long-term capital appreciation through investment in equity and equity-linked securities of Swiss companies. The Fund also may acquire and hold equity and equity-linked securities of non-Swiss companies in limited instances. The Fund is listed on the New York Stock Exchange under the symbol “SWZ”.

Web site:	<a href="https://www.schroders.com">schroders.com</a>
Number of Investments:	4
Total Investments:	\$15.4M
Founded in:	1986
Based in:	New York, NY, USA
Sector:	P3
Investment in Switzerland companies:	Kuros Biosciences
Stages:	Early Stage Venture, Late Stage Venture

# Swiss Life Private Equity Partners



The Swiss Life Group is one of Europe's leading providers of long-term savings and protection and life insurance. The Swiss Life Group offers individuals and companies comprehensive advice and a broad range of products via agents, brokers and banks in its domestic market, Switzerland, where it is market leader, and selected European markets. Multinational companies are serviced with tailor-made solutions by a network of partners in over fifty countries. The Swiss Life Group, registered in Zurich, was founded in 1857 as the Swiss Life Insurance and Pension Company. Shares of Swiss Life Holding are listed on the SWX Swiss Exchange (SLHN). The company employs around 12 000 persons.

Web site:	<a href="http://swisslife.com">swisslife.com</a>
Number of Investments:	5
Total Investments:	\$14M
Founded in:	1857
Based in:	Zürich, Switzerland
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Zeptosens
Stages:	Late Stage Venture

# Swisscom Ventures



Swisscom Ventures is an venture capital arm of Swisscom AG, that specializes in early stage tech investments founded in 2007. Swisscom Ventures invests in growth companies with emerging business models and technologies of strategic relevance to Swisscom's core business. As a value-add investor, Swisscom brings its investees the technical expertise and strategic insights of an incumbent telecom operator.

Web site:	<a href="http://ventures.swisscom.com">ventures.swisscom.com</a>
Number of Investments:	81
Total Investments:	\$2.8M
Founded in:	2007
Based in:	Zurich, Switzerland
Sector:	P3
Investment in Switzerland companies:	Scailyte
Stages:	Convertible Note, Early Stage Venture, Late Stage Venture, Seed

# Tilacor Life Science

Tilacor Life Science provides financial support for the Tilacor Group's newly created companies, acquisitions and investments. Co-founded by Professor Stefan Catsicas, former Vice-President of the Swiss Federal Institute of Technology (Lausanne), Tilacor promotes an entrepreneurial approach adapted to the long-term needs of the life science sector. Its main goal is to launch product-oriented biotechnology companies and to invest in existing promising early stage companies worldwide.

Web site:	-
Number of Investments:	3
Total Investments:	\$41M
Founded in:	2005
Based in:	Luxembourg, Luxembourg
Sector:	P3
Investment in Switzerland companies:	Xigen
Stages:	Early Stage Venture

# TransLink Capital



TransLink Capital is a venture capital firm specializing in investments in seed, start-ups, and early and expansion stage companies. The firm prefers to invest in the information technology, mobile, social and cloud applications, infrastructure and services, fintech, communications, and digital media sectors. It also seeks to invest in consumer facing technology with a focus on artificial intelligence, virtual reality, e-sports, live streaming videos, and robotics.

Web site:	<a href="http://translinkcapital.com">translinkcapital.com</a>
Number of Investments:	111
Total Investments:	\$4M
Founded in:	2007
Based in:	Palo Alto, CA, USA
Sector:	AgeTech
Investment in Switzerland companies:	aktiia
Stages:	Early Stage Venture, Late Stage Venture, Seed

# The Bill & Melinda Gates Foundation



The Bill & Melinda Gates Foundation is a grant-making foundation that supports initiatives in education, world health and population, and community giving in the Pacific Northwest. In its local region, the foundation promotes strategies and programs that help low income families. The Bill & Melinda Gates Foundation has offices in New Delhi, India; Beijing, China; and London, United Kingdom. Its trustees are Bill and Melinda Gates, and Warren Buffett. The Bill & Melinda Gates Foundation`s Program Teams are Global Health, Global Development, Global Policy, Advocacy & Communications, Global Growth and Opportunity, and US Programs. They research and make grant & investment proposals that are aligned with a program strategy. They are responsible for ongoing management of grants and investments.

Web site:	<a href="https://gatesfoundation.org">gatesfoundation.org</a>
Number of Investments:	108
Total Investments:	\$100M
Founded in:	2000
Based in:	Seattle, WA, USA
Sector:	P3
Investment in Switzerland companies:	Novartis
Stages:	Early Stage Venture, Grant, Late Stage Venture

# TVM Capital



TVM Capital GMBH is private equity and venture capital firm specializing in seed, startup, early stage, mid, late stage, emerging growth, growth capital and buyout investments. It seeks to invest in companies that have spun-out from institutes, universities, and the Research and Development departments of pharmaceutical companies. The firm may also invest in family owned businesses and in all stages of the product life cycle from its earliest stages like material and design innovation through late stage opportunities brought about by business model and execution innovation.

Web site:	<a href="http://tvm-capital.com">tvm-capital.com</a>
Number of Investments:	96
Total Investments:	\$45.9M
Founded in:	1983
Based in:	Munich, Germany
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Vivendy Therapeutics
Stages:	Early Stage Venture, Late Stage Venture, Private Equity

# Ventech



Created in 1998, Ventech is a venture capital firm specializing in early-stage investments in startup companies. It has a broad investment scope with the capacity to invest in B2B and in B2C, in software and in hardware, with an industry agnostic approach.

The firm's primary geographical focuses are, for the European fund, France, DACH region and the Nordics, with offices in Paris, Munich and Helsinki. Ventech China invests in Asia with an office in Shanghai.

Web site:	<a href="http://ventechvc.com">ventechvc.com</a>
Number of Investments:	157
Total Investments:	\$99.4M
Founded in:	1998
Based in:	Paris, France
Sector:	P3
Investment in Switzerland companies:	Covagen
Stages:	Early Stage Venture, Late Stage Venture, Seed

# Venture Incubator



Venture Incubator, LLC, a 501c(3) non-profit corporation was formed in April, 2011 as a result of a three year study funded by the Downtown Jackson Partners to evaluate the feasibility of opening a business incubator in the business district of Downtown Jackson, MS. With support from Jeffrey Rupp, Director of the Technology Resource Institute at Mississippi State University, a joint venture between his organization and Venture Incubator was formed. The goal is to leverage existing economic development resources to deliver quality entrepreneur training and assistance directly to the entrepreneurs and emerging businesses around the State of Mississippi. Venture Incubator offers entrepreneurs and business owners an opportunity to limit expenses by delivering access to seasoned professionals and business coaches directly to their local area.

Web site:	-
Number of Investments:	3
Total Investments:	\$7.9M
Founded in:	2011
Based in:	Jackson, MS, USA
Sector:	P3, Regenerative Medicine
Investment in Switzerland companies:	Covalys Biosciences, Kuros Biosciences
Stages:	Undisclosed

# Venture Kick



The philanthropic initiative Venture Kick provides as much as 150,000 Swiss francs seed stage financing to startups. In addition, it offers a well-structured entrepreneurial path towards building a winning business. Startups pitch to expert juries at each stage to obtain funding, gaining direct feedback and access to an international network of successful entrepreneurs and investors. Since its launch in 2007, Venture Kick has supported 600 Swiss startup projects with 24.86 million francs. The program of financial support, training and network, has led to the creation of more than 445 companies and more than 5,000 jobs.

Web site:	<a href="http://venturekick.ch">venturekick.ch</a>
Number of Investments:	389
Total Investments:	\$640M
Founded in:	2007
Based in:	Schlieren, Switzerland
Sector:	P3
Investment in Switzerland companies:	Amal Therapeutics, ABCDx
Stages:	Seed

# Versant Ventures



Versant Ventures is a leading healthcare investment firm committed to helping exceptional entrepreneurs build the next generation of great companies. The firm invests across the healthcare sector and at all stages of company development, with an emphasis on the discovery and development of novel therapeutics. With \$2.3 billion under management and offices in Canada, the U.S. and Europe, Versant has built a team with deep investment, operating, and scientific expertise that enables a hands-on approach to company building. Since the firm's founding in 1999, more than 65 Versant companies have achieved successful acquisitions or IPOs.

Web site:	<a href="http://versantventures.com">versantventures.com</a>
Number of Investments:	289
Total Investments:	\$51M
Founded in:	1999
Based in:	Menlo Park, CA, USA
Sector:	P3
Investment in Switzerland companies:	PIQUR Therapeutics
Stages:	Debt, Early Stage Venture, Late Stage Venture, Private Equity

# Vesalius Biocapital Partners



Vesalius Biocapital Partners manages a mid-size venture capital fund that invests in young, early and mid-stage European life science companies creating innovative drugs, diagnostics and cutting-edge biomedical technologies. With more than €150 million under management in two funds, Vesalius Biocapital Partners plays the role of lead investor in the large majority of its financing rounds. Vesalius Biocapital Partners finance both early stage companies and corporate spin-offs with more mature assets.

Web site:	<a href="http://vesaliusbiocapital.com">vesaliusbiocapital.com</a>
Number of Investments:	30
Total Investments:	\$81.8M
Founded in:	2007
Based in:	Strassen, Luxembourg
Sector:	Regenerative Medicine
Investment in Switzerland companies:	Genkyotex
Stages:	Early Stage Venture, Late Stage Venture

# VI Partners



Healthcare & Technology Venture Capital since 2001. They build bridges between entrepreneurs' dreams and successful companies. They enable savvy investors to partner with the best start-up companies. VI Partners is a Swiss venture capital firm providing university spin-off's as well as other promising start-up companies with capital, coaching and networks. VI Partners is the advisor to Venture Incubator (VI). VI was established by McKinsey & Company and the Swiss Federal Institute of Technology in Zürich (ETHZ) in 2001. VI is an evergreen fund with a paid in capital of CHF 101m. The investors are 10 Swiss blue-chip companies from industry and finance.

Web site:	<a href="http://vipartners.ch">vipartners.ch</a>
Number of Investments:	63
Total Investments:	\$224.6M
Founded in:	2001
Based in:	Altendorf, Switzerland
Sector:	P3, Regenerative Medicine
Investment in Switzerland companies:	Amal Therapeutics, CeQur, Kuros Biosciences, Genkyotex, Covalys Biosciences
Stages:	Early Stage Venture, Late Stage Venture, Seed

# Wellington Partners



Wellington Partners is one of the most successful pan-European venture capital firms. With funds totalling over €800 million, company has invested throughout Europe in companies that have the potential to become real market leaders for more than 15 years. Providing funding is only one part of the business. After funding, the entrepreneurs they back have access to the advice and guidance of complete team and company's entire global network. Investment professionals operate out of four offices, located in London, Munich, Zurich and Palo Alto. The pan-European and transatlantic makeup of the organisation enables them to support portfolio in expanding globally.

Web site:	<a href="http://wellington-partners.com">wellington-partners.com</a>
Number of Investments:	186
Total Investments:	\$30M
Founded in:	1998
Based in:	Munich, Germany
Sector:	P3
Investment in Switzerland companies:	GTX Medical (G-Therapeutics)
Stages:	Debt, Early Stage Venture, Late Stage Venture, Private Equity, Seed

# Woodford Investment Management

The logo for Woodford, featuring the word "woodford" in a lowercase, sans-serif font. The letter "w" is underlined. The logo is enclosed in a dashed blue rectangular border.

Woodford Investment Management is a privately owned investment firm manages equity mutual funds. As investors, they are active, engaged, long-term, disciplined, diligent and focused. That's a lot of things to say about themselves but each word is important in helping you to understand how they manage money – they will explain in more detail as they move along. Their investment approach and process are focused on value discovery, not price discovery. They believe that financial markets are inherently inefficient and that, through disciplined and diligent analysis, they can identify investment opportunities where market prices do not reflect long-term fundamental value. By exploiting this pervasive market characteristic, they believe they can create real long-term value for their investors.

Web site:	<a href="http://woodfordfunds.com">woodfordfunds.com</a>
Number of Investments:	61
Total Investments:	\$100M
Founded in:	2014
Based in:	Oxford, UK
Sector:	P3
Investment in Switzerland companies:	CeQur
Stages:	Early Stage Venture, Private Equity

# Ysios Capital

YSIOS CAPITAL

Founded in 2008, Ysios Capital has over €200 million in assets under management through its two funds: Ysios BioFund I (€65M) and Ysios BioFund II Invierte (€126M). They aim to create value by providing talented entrepreneurs with the resources and tools to achieve success in transforming intellectual capital and scientific knowledge into successful companies. Their team includes experienced professionals with extensive complementary expertise in investing and building healthcare and biotechnology companies.

Web site:	<a href="http://ysioscapital.com">ysioscapital.com</a>
Number of Investments:	40
Total Investments:	\$41M
Founded in:	2008
Based in:	Barcelona, Spain
Sector:	P3
Investment in Switzerland companies:	Prexton Therapeutics
Stages:	Early Stage Venture, Late Stage Venture, Venture

# Zürcher Kantonalbank ZKB



Zürcher  
Kantonalbank

Zurich Cantonal Bank is the largest cantonal bank and fourth largest bank in Switzerland, as well as the leading financial services provider in the Greater Zurich area, with total assets of over CHF 150 billion. Ultimate supervision of ZKB is the responsibility of the Cantonal Council of Zurich, whose duties are laid down in Zurich's Cantonal Bank Act. Under the law, the canton of Zurich bears responsibility for all ZKB's liabilities should the bank's resources prove inadequate. This cantonal guarantee acts as a stabilising force for the financial market as a whole, particularly in times of economic uncertainty. On October 2009, Global Finance magazine rated ZKB at one of the five safest banks in the world, on the basis of it being one of only five financial institutions that enjoyed a triple Standard & Poor's, Fitch and Moody's AAA/Aaa rating globally.

Web site:	<a href="http://zkb.ch">zkb.ch</a>
Number of Investments:	72
Total Investments:	Undisclosed
Founded in:	1870
Based in:	Zurich, Switzerland
Sector:	P3
Investment in Switzerland companies:	Scailyte
Stages:	Undisclosed

# 20 Precision Medicine Clinics: Longevity in Switzerland



# Bern University Hospital



The University Hospital of Bern “Insel Spital”, located in Bern, is one of the five university hospitals of Switzerland. Currently, the hospital employs a staff of over 7,200 and provides care for 250,000 patients each year. It also provides practical training to 600 medical students and over 1,000 other healthcare professionals.

The hospital is operated by a charitable foundation established in 1354 through the will of Anna Seiler, a wealthy Bernese. It acquired its current name in 1531 when it occupied the buildings of the "St. Michaels Insel" convent. From 1841 on, it has participated in the training of medical students.

Main Sector	Personalized Medicine
Web site:	<a href="https://insel.ch">insel.ch</a>
Number of Employees:	7000+
Founded in:	1531
Based in:	Bern, Switzerland
Specifications:	Bioinformatics, Big Data, Blood and Marrow Transplantation, Cell Therapies, Genetic Testing
Advanced Equipment:	CT, PET, MRI, Mammography, Ultrasound, X-Ray, Fluoroscopy, Neuroimaging, Nuclear Medicine

# Cereneo



Cereneo is one of the world's leading clinics in the field of stroke, trauma and brain disease rehabilitation. Their patients receive a personally tailored treatment plan, including the latest therapy methods and innovative technology.

Main Sector	Personalized Medicine
Web site:	<a href="http://cereneo.ch">cereneo.ch</a>
Number of Employees:	51-200
Founded in:	2012
Based in:	Vitznau, Switzerland
Specifications:	Specializes in personalized neurorehabilitation: movement therapy, speech- and language therapy, neuropsychology
Advanced Equipment:	Dynamic Partial Body Weight Support (DBWS), Split-Belt Treadmill, Indego® Exoskeleton by Parker Hannifin

# Clinica Sant'Anna



Known since its foundation thanks to their popular maternity department, where almost 900 babies are born every year, the clinic also offers a wide range of health care disciplines: women's health, oncology, internal medicine, general surgery, plastic surgery, reconstructive and cosmetic surgery, and a Nescens Centre for Preventive Medicine.

Main Sector	Personalized Medicine
Web site:	<a href="http://clnicasantanna.ch">clnicasantanna.ch</a>
Number of Employees:	51-200
Founded in:	1922
Based in:	Sorengo, Switzerland
Specifications:	Preventive check-ups; Personalized and integrative health approach; Personalized plastic, reconstructive and cosmetic surgery approach; Personalized Oncology
Advanced Equipment:	Undisclosed

# Clinique Générale Ste-Anne



The clinic offers high-quality medicine and highly personalized nursing care in the following areas: orthopaedics, neurosurgery, gynaecology, general surgery and ENT, as well as oncology and pain therapy. Experienced and reputed specialists practise at the clinic. With the state-of-the-art technical infrastructure at their disposal, they are able to offer patients diagnostic services, treatment and rehabilitation that are second to none.

Main Sector	Personalized Medicine
Web site:	<a href="http://cliniquegenerale.ch">cliniquegenerale.ch</a>
Number of Employees:	51-200
Founded in:	1905
Based in:	Fribourg, Switzerland
Specifications:	State-of-art clinical infrastructure; Personalized cancer medicine; Personalized and integrative health approach;
Advanced Equipment:	Advanced Microscopy Equipment

# Clinique Montbrillant



Clinique Montbrillant, founded in 1909 in La Chaux-de-Fonds, is mainly specialised in ophthalmology, orthopaedics, gynaecology and general surgery. It also offers a wide range of specialised consultations, including a radiology centre and general medical services. With 60 employees and 35 doctors, the clinic annually realises some 2'500 surgical interventions with 25 beds, of which 75% are ambulatory.

Main Sector	Personalized Medicine
Web site:	<a href="http://clinique-montbrillant.ch">clinique-montbrillant.ch</a>
Number of Employees:	51-100
Founded in:	1909
Based in:	La Chaux-de-Fonds, Switzerland
Specifications:	Eye conditions treatment; Specializes in surgery; Personalized treatment plan
Advanced Equipment:	FLEX Imaging System

# Double Check



Although their unique network has expanded and strengthened over the past 10 years, the core values remain the same as in 2007 when Double Check was founded by leading professors from the world-renowned University Hospital of Zurich. They continue to be world-recognised experts in their respective fields. They remain absolutely dedicated to ensuring that Double Check’s clients receive the absolutely highest levels of healthcare and medical treatment. Double Check provides peace of mind by managing every aspect of your health affairs, allowing you to focus on your other obligations or on recovery from an existing illness. Their services are custom-designed to ensure that your healthcare is the most effective and suitable to your lifestyle. Clinic monitors and organises regular health check-ups to keep you healthy, identifying any health risks you or your family may have.

Main Sector	Precision Medicine
Web site:	<a href="http://doublecheck.ch">doublecheck.ch</a>
Number of Employees:	11-50
Founded in:	2007
Based in:	Zurich, Switzerland
Specifications:	Rebalance & Rejuvenation Programmes
Advanced Equipment:	Undisclosed

# Geneva University Hospitals



HUG was created in 1995, and is part of a tradition of excellence in medicine and science dating back hundreds of years. The group brings together 10 Geneva public hospitals and 40 outpatient units throughout the canton of Geneva, and together they form the leading Swiss University Hospital. HUG leads the way in medical imaging and has also spearheaded the development of robot-assisted and minimally-invasive surgery. HUG is also the national referral paediatric liver Center and pediatric liver transplantation and for influenza and emerging viral infections. HUG has the only high-security diagnostic laboratory (level 4) in Switzerland.

Main Sector	Personalized Medicine
Web site:	<a href="http://hug-ge.ch">hug-ge.ch</a>
Number of Employees:	10001+
Founded in:	1995
Based in:	Geneva, Switzerland
Specifications:	Big Data, Robotic Surgery, Stem Cell Therapies, Genetic Medicine, Elderly Care, Psychiatry, Chronic Pain
Advanced Equipment:	CT, PET, MRI, Mammography, Ultrasound, X-Ray, Fluoroscopy, Neuroimaging, Advanced Microscopes, Nuclear Medicine, Da Vinci Robotics, Cryobank

# Klinik Hirslanden in Zurich



Klinik Hirslanden in Zurich is one of the most exclusive private hospitals in Switzerland. Klinik Hirslanden is part of a collaborative network of expert specialists and centres. This gives patients a wide range of custom tailored treatments as well as the highest professional industry standards of medical and nursing care. The hospital is renowned amongst professional circles for its medical infrastructure and expertise. Comfortable accommodation is sure to make its patients feel at ease and aids in your full rehabilitation. Founded in 1932, Klinik Hirslanden has today 330 beds, 14 operation theaters and 3 delivery rooms. More than 510 accredited doctors and in-house physicians with renowned experience and expertise and around 1800 highly trained employees are dedicated to the well-being of every patient.

Main Sector	Personalized Medicine
Web site:	<a href="http://mypremiumeurope.com">mypremiumeurope.com</a>
Number of Employees:	1 001-5 000
Founded in:	1932
Based in:	Zurich, Switzerland
Specifications:	Aesthetic Surgery, Obstetrics, Cancer, Stem Cells, Pharmacogenetics, Neurology, Heart and Vascular Services
Advanced Equipment:	DaVinci Robotic

# Klinik Im Park



Klinik Im Park has guaranteed medical excellence and high-quality professional care. It covers most medical specialties and shares the expertise and experience from 30 institutes and centres. The clinic's shared collaboration and expertise offer its patients first-class medical care tailored to the individual.

The hospital is equipped with 8 operating theatres, including a state of the art hybrid operating theatre, performing around 7,500 operations every year. Besides, the treatment unit offers 3 cardiac catheterisation laboratories and a fully equipped radiology and neuroradiology centre.

Main Sector	Preventive Medicine
Web site:	<a href="http://www.mypremieurope.com">www.mypremieurope.com</a>
Number of Employees:	501- 1000
Founded in:	1986
Based in:	Zurich, Switzerland
Specifications:	Pharmacogenetics, Personalized Clinical Service, Cancer
Advanced Equipment:	Hybrid Operating Room, Multi-Row CT, Emergency Department Centralised Monitoring System

# Lausanne University Hospital



The Lausanne University Hospital is one of the five university hospitals in Switzerland. It is linked to the Faculty of Biology and Medicine of the University of Lausanne.

The CHUV's medical services benefit over 45,000 patients a year. Almost 3000 babies are born every year in the obstetrics department. More than 10000 employees work at the CHUV.

The university hospital acts as a general university hospital for people living in the Lausanne area, covering all areas of medical treatment. It also serves as a hospital offering acute and specialist care for the whole Canton of Vaud and parts of French-speaking Switzerland.

Main Sector	Personalized Medicine
Web site:	<a href="http://chuv.ch">chuv.ch</a>
Number of Employees:	10001+
Founded in:	1806
Based in:	Lausanne, Switzerland
Specifications:	Big Data, Bioinformatics, AI, Personalized and Predictive Oncology (Tumor Genotyping), Robotic Surgery, Research on Metabolism, Nutrition, Ageing, and Associated Diseases
Advanced Equipment:	CT, MRI, Mammography, Ultrasound, da Vinci Robotics, Cyberknife M6

# Lumen Healthcare Clinic



It is easy to understand that combating illness or aging has one goal: to gain years of life in which people have good health and are free of health problems. Lumen Healthcare Clinic will accompany its clients throughout this battle. Through its preventive and regenerative medicine, their clients health expectancy can be improved by up to 15 years. While life can include periods of frailty, addiction and disease, Lumen aspires to challenge consensus and have a real impact on health. They step in before their clients even have any symptoms: early identification of disease and early intervention can improve their prognosis. Lumen determines which therapeutic strategies will optimize their clients' current and future health. Lumen tells their clients which lifestyle adjustments they need to make to improve their health in the long term. Whether the clients are fighting a health problem or the aging process, Lumen is committed to leading this battle for them and with them.

Main Sector	Preventive Medicine
Web site:	<a href="https://lumen.healthcare">lumen.healthcare</a>
Number of Employees:	11-50
Founded in:	Undisclosed
Based in:	Geneva, Switzerland
Specifications:	Anti-Aging, Cellular Therapies, Longevity Medicine, Regenerative & Aesthetic Medicine, Microbiote Rejuvenation, Checkup & Early Diagnosis, Stem Cells
Advanced Equipment:	3T MRI Machine, Helical MDTC Scans, Advanced Microscopy Equipment

# Medbase Checkup Center



Medbase centers employ over 1100 people and has been working closely with Migros Fitnesspark for more than ten years. The main idea is that medical services and intervention support preventive measures such as fitness training or wellness.

Medbase mission is to maintain and restore a high quality of life by offer its customers and patients a first-class medical care and easy access to its services. In most cases, payment for these services is covered by a basic insurance policy known as the obligatory Grundversicherung in Switzerland (KVG). Medbase centers also offer services that would fall under supplementary insurance policies (Zusatzversicherung, VVG) as well as services that are financed directly by the client.

Main Sector	Preventive Medicine
Web site:	<a href="http://medbase.ch">medbase.ch</a>
Number of Employees:	11-50
Founded in:	2001
Based in:	Zurich, Switzerland
Specifications:	Preventive Health Checkups, Prevention Advice and Coaching, Online Training Plans
Advanced Equipment:	MRI, X-Ray

# Medical Health Centre Bad Ragaz

MEDICAL  
CENTER  
BAD RAGAZ

A well-coordinated team of specialists is on hand to devise individual therapy concepts and provide patients with lasting and comprehensive care – round the clock. The Bad Ragaz thermal water from the nearby Tamina gorge lies at the heart of the treatment programme. With its healing properties – low mineral content and body temperature of 36.5°C – it supports patients along their individual road to recovery.

The innovative and individual therapy concept comprises three to five therapy units per day, based on the respective medical indication. Depending on the progress of the therapy and the individual wishes of the patient, the therapeutic measures can be carried out individually with the therapist or in small groups.

Main Sector	Personalized Medicine
Web site:	<a href="http://healthragaz.ch">healthragaz.ch</a>
Number of Employees:	501-1000
Founded in:	1242
Based in:	Bad Ragaz, Switzerland
Specifications:	Musculoskeletal Rehabilitation, Internal-Oncological Rehabilitation, Anti-Aging Therapies; Detox; Gynaecology & Fertility
Advanced Equipment:	MRI, CT scan, X-Ray, Ultrasound, Mammography, Osteodensitometry

# Nescens Clinique de Genolier

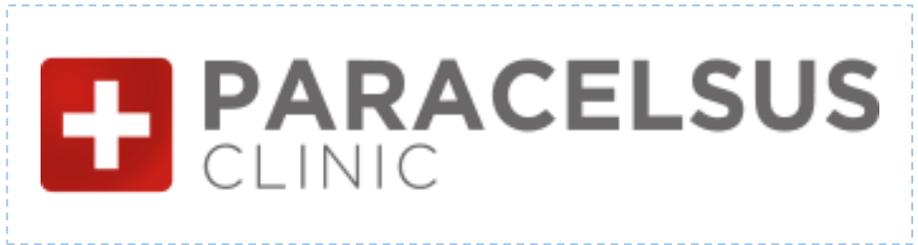


Nescens Clinique de Genolier combines different medical and scientific activities dedicated to the detection, prevention, and treatment of pathologies linked to aging. Located in the immediate vicinity of the Clinique de Genolier, it benefits from state-of-the-art medical technology and renowned specialists. A health stay destination, it offers first-class hotel services in an exclusive setting.

Located near Geneva, this clinic offers medical assessments and specialized consultations, as well as medical stays, aimed at maintaining your state of health and preserving your youth capital. Nescens Clinique de Genolier is a unique concept for discerning individuals of all ages looking for a comfortable and secured nursing and living facility.

Main Sector	Preventive Medicine
Web site:	<a href="http://nescens.com">nescens.com</a>
Number of Employees:	51-200
Founded in:	2011
Based in:	Genolier, Switzerland
Specifications:	Anti-Aging, Stem Cells, Preventive Health Checks
Advanced Equipment:	CT Scan, Ultrasound Devices, MRI Machine, CT Angiography, MRA

# Paracelsus Clinic



Paracelsus Clinic is the leading center for alternative medicine in Europe. Founded over 50 years ago near St. Gallen, Switzerland, it attracts patients from all over the world and teaches the methods of “biological medicine” to physicians everywhere. The Clinic has an international network of affiliated doctors who rely on us, for their most difficult cases.

The Paracelsus Clinic was founded 58 years ago by Dr. Walter Winkelmann, an accomplished and well-known naturopath with a vision to establish Switzerland as the pivotal point of medical care. Dr Winkelmann also formed the Swiss Naturopathic Society and was awarded an honorary M.D. in recognition of his contributions to the Swiss medical community. After his death, Dr Winkelmann’s daughters, both medical doctors, took over the management of the Clinic. They expanded the medical and therapeutic staff and the Clinic continued to grow.

Main Sector	Personalized Medicine
Web site:	<a href="http://paracelsus.com">paracelsus.com</a>
Number of Employees:	40+
Founded in:	1961
Based in:	Teufen, Switzerland
Specifications:	Alternative Medicine, Chronic Diseases, Dentistry
Advanced Equipment:	Undisclosed

# Privatklinik Villa im Park



University Hospital Basel (USB) is one of Switzerland's leading medical centers, setting internationally recognized standards. It works closely with partners from the healthcare system and with the University of Basel with regard to research, teaching and patient care. USB's approximately 6,700 employees from 86 different countries bring their commitment, passion and professional expertise to work in ensuring the welfare of the patients.

Main Sector	Personalized Medicine
Web site:	<a href="http://villaimpark.ch">villaimpark.ch</a>
Number of Employees:	51-200
Founded in:	1842
Based in:	Basel, Switzerland
Specifications:	Personalized clinical service; Cancer treatment (Bone and Marrow Stem Cell Transplantation; Radiotherapy; Surgery; Chemotherapy)
Advanced Equipment:	CT/PET, MRI, Mammography, Ultrasound, X-Ray

# Rehaklinik Zihlschlacht



The Rehaklinik Zihlschlacht specializes in the treatment of brain and nerve injured patients. For 30 years, the clinic and its employees have been focusing exclusively on the treatment and recovery of stroke, brain injuries and diseases such as Parkinson's and Multiple Sclerosis (MS). An interdisciplinary team of experienced neurorehab specialists supports our patients over the entire time of their rehabilitation. As one of the leading speciality clinics for neurological rehabilitation, the Rehabilitation Clinic Zihlschlacht is known for its excellent medical treatment program, professional nursing and therapies, as well as care based on humanness and respect. Patients from around Switzerland and from abroad travel to Rehabilitation Clinic Zihlschlacht to receive the best medical care in idyllic surroundings. We have been successfully treating international patients for more than 10 years.

Main Sector	Personalized Medicine
Web site:	<a href="http://rehaklinik-zihlschlacht.ch">rehaklinik-zihlschlacht.ch</a>
Number of Employees:	480
Founded in:	Undisclosed
Based in:	Zihlschlacht, Switzerland
Specifications:	Rehabilitation, Parkinson's Disease, Multiple Sclerosis Treatment, Preventive Health Checks
Advanced Equipment:	DBS (deep brain stimulator), Transcranial Magnetic Stimulator (TMS), 3D Brain Imaging

# Swiss Prevention Clinic



Their approach is an integrated one, clinic always considers the complete person, physically, psychologically, socially, in the prevention and management of disease. With holistic approach to medicine, there is the belief, that their wellbeing relies not just on what is going on in our body physically in turns of illness or disease, but also on the close interrelation of this with our psychological, emotional, social and environmental state. Clinic treats every patient as a whole person, meticulously, passionately, empathically. Medical services that they provide: individual checkup, cardiovascular checkup, cancer checkup, men's health, performance and sexual well-being, couples' fertility checkup, regenerative checkup.

Main Sector	Preventive Medicine
Web site:	<a href="http://swisspreventionclinic.ch">swisspreventionclinic.ch</a>
Number of Employees:	11-50
Founded in:	2008
Based in:	Zurich, Switzerland
Specifications:	Cancer Prevention, Lifespan Extending
Advanced Equipment:	Undisclosed

# University Hospital Basel



University Hospital Basel (USB) is one of Switzerland's leading medical centers, setting internationally recognized standards. It works closely with partners from the healthcare system and with the University of Basel with regard to research, teaching and patient care. USB's approximately 6,700 employees from 86 different countries bring their commitment, passion and professional expertise to work in ensuring the welfare of the patients.

Main Sector	Personalized Medicine
Web site:	<a href="http://unispital-basel.ch">unispital-basel.ch</a>
Number of Employees:	5001-10000
Founded in:	1842
Based in:	Basel, Switzerland
Specifications:	Bioinformatics, Big Data, AI for Abdominal CT Scans Analysis, Cancer, Hormone-Delivered Radiotherapy, Genomics
Advanced Equipment:	CT/PET, MRI, Mammography, Ultrasound, X-Ray, Nuclear Medicine

# University Hospital Zurich



The University Hospital of Zurich is the university hospital of Zürich, Switzerland. With its 43 divisions and institutes, the hospital is known for its achievements in health care, research, and teaching. It offers state-of-the-art treatment for a broad range of illnesses.

The University Hospital of Zurich has clinical departments for neurology, medical oncology, cardiovascular-thoracic medicine, trauma-derma-rheuma-plastic surgery, abdomen-metabolism, imaging, diagnostics, anesthesiology-intensive care or management, and clinical research.

Main Sector	Personalized Medicine
Web site:	<a href="https://usz-international.com">usz-international.com</a>
Number of Employees:	8000+
Founded in:	1204
Based in:	Zurich, Switzerland
Specifications:	Bioinformatics, Big Data, AI for Oncology Imaging, Preventive Health Checkups, Radiation Oncology, Internal Medicine, Advanced Brain and Vascular Surgery
Advanced Equipment:	CT, PET, MRI, Mammography, Ultrasound, X-Ray, Fluoroscopy, Nuclear Medicine, Whole-Body Motion Analysis

# 35 Research Labs: Longevity in Switzerland



# Aging and Muscle Metabolism Lab, University of Lausanne



Aging and increased life expectancy are associated with the progression of chronic metabolic diseases, such as type 2 diabetes, obesity, hypertension, dyslipidemia and cardiovascular conditions. These multifactorial pathologies are complex, often resulting from a combination of genetic and environmental factors, such as physical inactivity and diet. The steady decline of skeletal muscle mass that comes with aging (sarcopenia) is thought to be involved in these metabolic changes, however little is known on how deranged skeletal muscle metabolism influences the development of metabolic disorders. The Aging and Muscle Metabolism lab performs translational research projects covering multiple metabolic diseases in human and non-human models, to elucidate molecular mechanisms underlying altered muscle metabolism with aging.

The understanding of the effect of aging and exercise on muscle metabolism is the main theme of our lab. To respond to this quest, they progress through three synchronous aims, which taken together allow an integrative vision.

Web Site:	<a href="http://unil.ch">unil.ch</a>
Category:	Regenerative Medicine
Location:	Lausanne
Contact:	Phone: +41 21 692 55 00

# Altmeyer Lab, University of Zurich

ALTMAYER LAB

As part of an active scientific community that studies the DNA damage response (DDR) and its impact on cancer and aging, research in the lab of Matthias Altmeyer is aimed at elucidating cellular mechanisms of genome integrity maintenance and their deregulation in human disease. Their research interest is to understand how human cells deal with genotoxic stress assaults and how they coordinate genome maintenance mechanisms with other vital cellular functions. To this end they combine state-of-the-art molecular biology and biochemistry with powerful advanced cell imaging technologies, in particular employing single cell chromatin perturbations, high resolution live cell imaging, automated quantitative microscopy and software-assisted image analysis. By targeted ablation of specific gene functions and high content analyses of DNA damage and repair markers they aim at identifying concealed regulators of the cellular response network to genotoxic stress and at understanding their role for genome maintenance.

Web Site:	<a href="http://altmeyerlab.org">altmeyerlab.org</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	Email: <a href="mailto:matthias.altmeyer@uzh.ch">matthias.altmeyer@uzh.ch</a> Phone: +41 44 635 54 91

# Barral Group, ETH Zurich



Coordination of cytoskeletal events during mitosis during asymmetric cell division, cells as diverse as stem cells and budding yeast make use of their polarity to segregate cell fate determinants differentially between the two daughter cells. Beyond its medical and developmental importance, this laboratory studies this process as a paradigm to study how cells control their spatio-temporal organization and coordinate complex architectural processes with each other. They follow three main directions. First, they investigate how cells coordinate their division and polarity axes during asymmetric cell division. Second, they investigate how cytokinesis is coordinated with the segregation of chromosomes away from the cleavage plane. Finally they study the mechanisms ensuring the asymmetric segregation of age determinants during the production of phenotypically young daughters out of older yeast mother cells.

Web Site:	<a href="http://bc.biol.ethz.ch">bc.biol.ethz.ch</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	Email: <a href="mailto:yves.barral@bc.biol.ethz.ch">yves.barral@bc.biol.ethz.ch</a> Phone: +41 44 632 06 78

# Bern Center for Precision Medicine



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The Bern Center for Precision Medicine (BCPM) will establish the regulatory, technical, clinical, ethical, and economic framework to create a robust precision medicine approach to treating their patients in health and disease. The BCPM will engage faculty from across the University and the University Hospital of Bern to help to improve the way they care for patients. They anticipate that successful establishment of the BCPM will lead to new approaches to prevent and treat disease, the development of new drugs and technologies to care for their patients, and develop new economic efficiencies for their health care system. Finally, they hope to educate the next generation care takers and scientists to realize the long-term benefits of precision health care. The BCPM will be active in research, education, training and networking, always in the field of precision medicine. It will create value for the university, the university hospital, and ultimately also the patients.

Web Site:	<a href="http://bcpm.unibe.ch">bcpm.unibe.ch</a>
Category:	Precision Medicine
Location:	Bern
Contact:	Email: <a href="mailto:timo.staub@dbmr.unibe.ch">timo.staub@dbmr.unibe.ch</a> Phone: +41 31 632 83 25

# Blanchoud Group, University of Fribourg



Their lab dissects WBR by using an interdisciplinary combination of time-lapse imaging, histological sectioning and image analysis. They have set out to identify the origin and nature of the stem-like cells responsible for this regenerative capacity. In addition, they are progressively analysing the whole 10 days of WBR to construct a virtual atlas of this unique process combining information on cell types, cell fates and cell lineages. This dataset will be particularly valuable for the functional characterization of WBR, as well as for the comparison with the visually similar process of asexual reproduction.

Web Site:	<a href="http://unifr.ch">unifr.ch</a>
Category:	Regenerative Medicine
Location:	Fribourg
Contact:	Email: <a href="mailto:simon.blanchoud@unifr.ch">simon.blanchoud@unifr.ch</a> Phone: +41 26 300 88 03

# Chemical and Biological Systems Engineering Laboratory, ETH Zurich

The logo for ETH Zurich, featuring the letters 'ETH' in a bold, italicized sans-serif font, followed by 'zürich' in a lowercase, italicized sans-serif font. The logo is enclosed in a dashed blue rectangular border.

Research activities in the Gunawan group are driven by the mission to create enabling theoretical framework and computational tools that are necessary for the mathematical modeling and systems analysis of large-scale dynamic biological networks. In close collaboration with experimental groups around the world, they have applied these tools to a multitude of biological networks, from gene regulatory networks to signal transduction and metabolic pathways, with industrial and biomedical significance. Their research spans over five clusters:

1. Metabolism and Aging Network
2. Mitochondria and Aging
3. Network Inference
4. Parameter Estimation and Ensemble Modeling
5. Systems Toxicology and Systems Pharmacology

Web Site:	<a href="http://cabsel.ethz.ch">cabsel.ethz.ch</a>
Category:	Geroscience Research
Location:	Zurich
Contact:	Email: <a href="mailto:rudi.gunawan@chem.ethz.ch">rudi.gunawan@chem.ethz.ch</a>

# Clinique la Colline in Geneva, Medical Oncology



Cancers of the breast, lung, intestine and prostate gland must be the best-known and most common. For a long time now, breast cancer has been the most common cancer to affect women, whilst men suffer most from lung cancer. The symptoms of cancer, as well as the chances of recovery from it, vary widely and depend on the structure, size and location of the tumour. If cancer is suspected, the oncologist will initiate a series of tests. The results of these tests determine the further course of action. The oncologist will decide, for example, which drug should best be used in chemotherapy, or whether it might be better to remove a tumour surgically. In some cases, the oncologist will arrange for radiotherapy, where he will work closely with the radio-oncologist/radiotherapist, a specialist in radiotherapy. He also treats the symptoms that accompany cancer, such as pain. He monitors the patient's recovery and carries out further tests. Exactly these specialists work in the center and are ready to help everybody who needs it.

Web Site:	<a href="http://hirslanden.ch">hirslanden.ch</a>
Category:	Personalized/Precision medicine
Location:	Geneva
Contact:	Email: <a href="mailto:cmis@lacolline.ch">cmis@lacolline.ch</a> Phone: +41 22 552 32 30

# Clinique la Colline in Geneva, Hip and Knee Centre



The La Colline Hip and Knee Surgery Centre is a patient-oriented Centre. Located in the heart of Hirslanden Clinique La Colline, the Centre offers a high level of services in an exclusive setting to help patients find their mobility again. In addition, the Centre offers the latest surgical techniques in the treatment of pathologies of the hip and knee. Within the Centre, patients can receive a complete treatment for prosthetic surgery and all joint pains, fractures, dislocations and other bone diseases.

A team of experienced specialists guarantee on an optimal and personalised care plan from the initial consultation to the monitoring of post-operative rehabilitation. Thus, they support the patient in every step of his operation and treatments to help him regain the full mobility in the best conditions.

Web Site:	<a href="http://hirslanden.ch">hirslanden.ch</a>
Category:	Personalized/Precision medicine
Location:	Geneva
Contact:	Email: <a href="mailto:secretariat.corsat@lacolline.ch">secretariat.corsat@lacolline.ch</a> Phone: +41 22 702 24 27

# Competence Center for Personalized Medicine



The Competence Center Personalized Medicine UZH/ETH (CC-PM) - a platform of biotechnet - coordinates and actively supports interdisciplinary research of the University of Zurich, ETH Zurich and the University Hospitals in Zurich in the field of genome-based healthcare. Cooperation between basic and clinical research will be intensified through the Competence Center. Based on the genetic disposition of a person, methods for genome-guided prevention, diagnosis and therapy will be developed and implemented. The Center will build and provide the framework for generating and integrating multidimensional genomic and (epi)genetic datasets. As such, it will operate at the interface of life science, medicine and technology. The CC-PM's 36 professional members and their research groups bring expertise from many different departments of ETH and different medical faculties of the University Zurich and the University Hospitals of Zurich. The focus of CC-PM is research in genome-based personalized medicine. Associated with CC-PM are technology platforms to support these research activities.

Web Site:	<a href="http://biotechnet.ch">biotechnet.ch</a>
Category:	Personalized Medicine
Location:	Zurich
Contact:	Undisclosed

# De Virgilio Group, University of Fribourg



All living cells are capable of exiting the normal cell cycle (proliferating state) and entering an alternative (resting) state termed quiescence or G0. Despite the fact that most eukaryotic cells - whether they exist as single cells or as part of a multicellular organism - spend most of their life in a quiescent state, relatively little is known about the regulatory mechanisms that control entry into or exit from such a state. The available body of data, nevertheless, indicates that disruption of G0-entry/exit control mechanisms is often associated with either cellular transformation (particularly in multicellular organisms), or dramatically reduced life span (of unicellular organisms). In this context, lab study the mechanisms controlling entry into, survival in, and exit from quiescence in the unicellular, eukaryotic model organism *S. cerevisiae*. So far, several studies (including theirs) have uncovered that the nutrient-regulated hub TORC1 orchestrates both entry into and exit from G0. Their research is therefore specifically focused on the elucidation of both the mechanisms that regulate TORC1 activity and the nature of the effectors that are regulated by TORC1.

Web Site:	<a href="http://unifr.ch">unifr.ch</a>
Category:	Geroscience Research
Location:	Fribourg
Contact:	Email: <a href="mailto:marie-pierre.peli-gulli@unifr.ch">marie-pierre.peli-gulli@unifr.ch</a> Phone: +41 26 300 8657

# Department of Ecology and Evolution, University of Lausanne



Research in the Department of Ecology and Evolution is mainly focused on linking the evolution of animal development to genome evolution. The group develops database for evolutionary biology, and studies genome evolution in vertebrates. The group is also involved in targeted projects in functional genomics. Gene and genome duplication are considered major mechanisms in the creation of new functions in genomes, or in the refinement of networks by the division of function among more genes. The group members are especially interested in the genome duplications which occurred in the Paleozoic, in the ancestor of vertebrates and in the ancestor of teleost fishes. They are also interested in characterizing patterns of positive selection, especially ancient and rare events.

Web Site:	<a href="http://unil.ch">unil.ch</a>
Category:	Personalized/Precision medicine
Location:	Lausanne
Contact:	Email: <a href="mailto:laurent.keller@unil.ch">laurent.keller@unil.ch</a> Phone: +41 21 692 41 73

# Department of Molecular Mechanisms and Disease, University of Zurich



University of Zurich<sup>UZH</sup>

The mission of the DMMD is to elucidate molecular mechanisms leading to diseases, to lay the foundation for novel therapies and to offer a comprehensive and modern teaching program to students at all levels and both faculties. At the DMMD, they strive to be at the forefront of biomedical research and teaching. They envision the DMMD as an internationally recognized center for the study and development of new approaches for the research and medicine of the future.

Goals:

- Create a dynamic and interactive research community by stimulating and supporting collaborations with scientists and clinicians within the University and internationally;
- Function as a platform that encourages the interaction between clinicians and scientists in order to employ novel molecular technologies in the clinical setting.

Web Site:	<a href="http://dmmd.uzh.ch">dmmd.uzh.ch</a>
Category:	Geroscience Research
Location:	Zurich
Contact:	Email: <a href="mailto:sandra.weiss@dmmd.uzh.ch">sandra.weiss@dmmd.uzh.ch</a> Phone: +41 44 635 54 71

# Ehrbar Lab, University of Zurich



By combining materials engineering with cell biology and clinical research, the Ehrbar laboratory is engaged in studying and engineering tissue healing. Towards this end, they have developed materials, which by modular assembly of synthetic and biological building blocks allow creation of specific, cell-instructive, healing microenvironments. These platforms are being used to optimize materials properties and signals that control recruitment, expansion, and differentiation of local progenitor cells. Based on such findings next generation materials and application strategies are being designed, which will be tailored towards clinically relevant treatments.

Web Site:	<a href="http://ehrbarlab.com">ehrbarlab.com</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	Phone: +41 44 255 85 13

# Eggel LAB

**EGGEL LAB**  
IMMUNOLOGY RESEARCH

Eggel Lab is affiliated with the Department for BioMedical Research (DBMR) at the University of Bern and the Department of RIA at the University Hospital Bern in Switzerland. The major research interests of the lab members focus on the biologic mechanisms underlying both beneficial as well as pathogenic type 2 immune responses. On the one hand they are trying to get a better understanding on how allergies evolve and to develop alternative treatment approaches directly interfering with the allergic cascade. On the other hand they are investigating the development of age-related disorders and how they are linked to alterations in type 2 immune responses. In the studies of this research group they integrate molecular, cellular and systemic approaches to identify important biological mechanisms involved in the pathophysiology of a disease.

Web Site:	<a href="http://eggellab.com">eggellab.com</a>
Category:	Regenerative Medicine
Location:	Bern
Contact:	Email: <a href="mailto:alexander.eggel@dbmr.unibe.ch">alexander.eggel@dbmr.unibe.ch</a> Phone: +41 31 632 38 68

# Energy Metabolism Laboratory, ETH Zurich

The logo for ETH Zurich, featuring the letters 'ETH' in a bold, sans-serif font followed by 'zürich' in a lowercase, italicized sans-serif font. The logo is enclosed in a dashed blue rectangular border.

They are interested in genetic pathways and environmental factors that modulate longevity. Besides other topics, they are particularly focused on the role played by mitochondria in lifespan regulation. In the past and contrary to the widely reiterated Free Radical Theory of Aging, they have repeatedly shown that the health-promoting effects associated with low caloric intake, physical exercise, sirtuins, impaired insulin/IGF-1 signaling, and other lifespan-extending interventions may be due to increased formation of Reactive Oxygen Species (ROS) within the mitochondria, causing a vaccination-like adaptive response that culminates in increased stress resistance and extended longevity, a process a. k. a. mitochondrial hormesis or mitohormesis.

Web Site:	<a href="http://energymetab.ethz.ch">energymetab.ethz.ch</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	Phone: +41 44 655 74 76

# Extracellular Matrix Regeneration Laboratory, ETH Zurich

The logo for ETH Zurich, featuring the letters 'ETH' in a bold, sans-serif font followed by 'zürich' in a lowercase, italicized sans-serif font. The logo is enclosed in a dashed blue rectangular border.

By 2030 almost every fourth person will be 65 or older in Switzerland, Europe, and USA. Since old age is the main risk factor for developing cancer, neurodegenerative, cardiovascular, and metabolic diseases, as well as other age-related pathologies, the growing elderly population poses an immense social and financial challenge.

The aim of the Extracellular Matrix Regeneration Laboratory is to determine the molecular mechanism(s) that prolong health during aging, using the nematode *C. elegans*, in order to develop novel strategies to treat age-related pathologies.

Web Site:	<a href="http://ewaldlab.strikingly.com">ewaldlab.strikingly.com</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	E-mail: <a href="mailto:collin-ewald@ethz.ch">collin-ewald@ethz.ch</a> Phone: +41 44 655 74 07

# Ewald Lab, ETH Zurich



The strategic goal is to identify novel strategies to improve human healthspan using *C. elegans* as a pioneering system to model the aging process because of its ease for genetic manipulation, high evolutionary conservation of genes implicated in human diseases, and short lifespan (3 weeks). Using *C. elegans* lifespan assays as a read-out for extension of healthspan is a tractable and fast approach for discovering novel mechanisms that confer healthy aging. Several fundamental mechanisms discovered in *C. elegans* have been shown to delay age-related pathologies in higher organisms, such as mice, and these mechanisms have major implications for humans aging. Hence, by using *C. elegans* to model the aging process group could rapidly identify strategies to improve human healthspan.

Web Site:	<a href="http://ewaldlab.com">ewaldlab.com</a>
Category:	Geroscience Research
Location:	Zurich
Contact:	Email: <a href="mailto:collin-ewald@ethz.ch">collin-ewald@ethz.ch</a> Phone: +41 44 655 74 07

# Group Ocampo, University of Lausanne



UNIL | Université de Lausanne

Their group conducts research in the areas of epigenetics, stem cells, aging and mitochondrial diseases with the goal of elucidating disease mechanisms and develop novel therapeutic approaches to improve the quality of life of patients. Their goal in the lab is to understand the role of epigenetic dysregulation as driver of aging and disease and develop novel strategies based on epigenetic reprogramming to prevent or revert the manifestation of aging and disease phenotypes. Also to use induced pluripotent stem cells derived from mitochondrial disease patients to develop novel therapeutic approaches based on the induction of heteroplasmy shift for the treatment of mitochondrial disease patients.

Web Site:	<a href="http://unil.ch">unil.ch</a>
Category:	Regenerative Medicine
Location:	Lausanne
Contact:	Email: <a href="mailto:Alejandro.Ocampo@unil.ch">Alejandro.Ocampo@unil.ch</a> Phone: +41 21 692 53 54

# Institute of Regenerative Medicine, University of Zurich



University of  
Zurich<sup>UZH</sup>

Mission of the organization is advancing molecular life sciences into next generation bio-inspired therapies at the Interface of degeneration and regeneration with a major focus on the most relevant human diseases, including neuro-degeneration and cardiovascular disease. Research department includes 7 working groups: Group Hoerstrup, Group Nitsch, Group Hock, Group Rajendran, Group Reichenbach, Group Schwab, Group Sendoel. It also has three clinical centers: Center for Therapy Development - GMP; Center for Prevention and Dementia Therapy; Clinic for Psychogeriatric Medicine.

Web Site:	<a href="http://irem.uzh.ch">irem.uzh.ch</a>
Category:	Regenerative Medicine
Location:	Zurich
Contact:	Email: <a href="mailto:info@irem.uzh.ch">info@irem.uzh.ch</a> Phone: +41 44 634 88 67

# Institute of Social and Preventive Medicine, University of Bern

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The Institute of Social and Preventive Medicine (ISPM) at the University of Bern provides undergraduate and postgraduate education and carries out interdisciplinary research in the fields of social and behavioural health, clinical epidemiology and biostatistics, and international and environmental health. Eminent speakers from Switzerland and abroad give presentations at monthly seminars held in the ISPM offices. Researchers from other institutes and members of the public are welcome to attend. Here at ISPM with colleagues from 23 nationalities they are committed to global excellence and innovation through local impact. While many scientists have their labs between buildings surrounded by test tubes, their building, their lab is out there in the streets because their research concerns everyone everywhere.

Web Site:	<a href="http://ispm.unibe.ch">ispm.unibe.ch</a>
Category:	Precision Medicine
Location:	Bern
Contact:	Email: <a href="mailto:info@ispm.unibe.ch">info@ispm.unibe.ch</a> Phone: +41 31 631 35 11

# Klinik Hirslanden in Zurich



The Hirslanden Onco Centre is the competence centre for Oncology (tumour diseases) at the Klinik Hirslanden. Ambulatory and stationary patients with malignant (solid and haematological) tumour diseases are cared for and treated by specialist physicians and skilled personnel at the highest professional level. The discussions with the patients and the somewhat stressful treatments take place in a quiet and private atmosphere. Due to intensive collaboration with other centres at the Klinik Hirslanden, complex diagnostic workups and therapies can be carried out expeditiously under one roof. For a stationary stay the patients continue to receive care from their oncologist so that continuity of medical care is ensured.

Web Site:	<a href="https://hirslanden.ch">hirslanden.ch</a>
Category:	Personalized/Precision medicine
Location:	Zurich
Contact:	Email: <a href="mailto:onkozentrum@hin.ch">onkozentrum@hin.ch</a> Phone: +41 44 387 37 80

# Klinik Im Park



Klinik Im Park is located between Zurich Enge and Zurich Wollishofen, on the left side of the lake of Zurich. The intimate atmosphere of the hospital enhances the quick rehabilitation of the patients. For about 30 years, Klinik Im Park has been delivering high quality professional medical care and excellence to its patients. With its leading medical experts, modern infrastructure, excellent medical expertise and lavish facilities, the clinic focuses on personalized services to ensure their patients get the best of everything for treatments and recovery. Klinik Im Park provides a wide range of specialization from its institutes and centers of excellence. The clinic covers the following expertise: radiology, cardiology, visceral surgery, trauma and sports surgery, orthopedics, gynecology, neuroradiology, neurosurgery, urology, cardiac and thoracic vascular surgery and oncology. The clinic share expertise with the Hirslanden Private Hospital Group and this collaboration offers patients an excellent medical care customized to each of them. The environment provides patients the opportunity to recuperate quickly.

Web Site:	<a href="https://hirslanden.ch">hirslanden.ch</a>
Category:	Personalized/Precision medicine
Location:	Zurich
Contact:	Email: <a href="mailto:linik-impark@hirslanden.ch">linik-impark@hirslanden.ch</a> Phone: +41 44 209 21 11

# Laboratory of Integrative and Systems Physiology, EPFL



Laboratory of Integrative and Systems Physiology (LISP) is using systems approaches to map the signaling networks that govern mitochondrial function and as such regulate organismal metabolism in health, aging and disease. LISP applies a state-of-the-art biological toolkit to study a variety of model systems, ranging from the nematode *Caenorhabditis elegans* and the mouse all the way to humans. Their research has not only allowed the development of new methodologies and scientific approaches applied to population, as exemplified by the development of cross-species multi-layered genetics/omics gene mapping strategies, but also contributed to improved understanding of how signaling pathways control mitochondrial function and metabolism. The translational value of LISP's work is testified by their successful collaboration with the biopharmaceutical industry and by the fact that several drugs targeting processes and pathways which they elucidated are currently used in the clinic.

Web Site:	<a href="http://auwerx-lab.epfl">auwerx-lab.epfl</a>
Category:	Geroscience research
Location:	Lausanne
Contact:	Email: <a href="mailto:admin.auwerx@epfl.ch">admin.auwerx@epfl.ch</a> Phone: +41 21 693 95 22

# Laboratory of Regeneration and Adult Neurogenesis, University of Geneva



UNIVERSITÉ  
DE GENÈVE

The group of Brigitte Galliot is interested in the molecular and cellular basis of regeneration and the regulatory networks that control adult and de novo neurogenesis. To investigate these questions they are using the Hydra model system. Their research focuses on the following questions: what mechanisms maintain a dynamic homeostasis in Hydra, what mechanisms support regeneration, including de novo neurogenesis, what is the function and regulation of stem cells in these contexts, which of these mechanisms have been conserved across evolution.

In the recent years, they have shown that cell death plays a key role in the initiation of head regeneration as dying cells deliver signals that promote the proliferation of their neighbors.

Web Site:	<a href="http://genev.unige.ch">genev.unige.ch</a>
Category:	Regenerative Medicine
Location:	Geneva
Contact:	Email: <a href="mailto:Brigitte.Galliot@unige.ch">Brigitte.Galliot@unige.ch</a> Phone: +41 22 379 67 74

# Lingner Lab, EPFL



The physical ends of chromosomes, known as telomeres, play critical roles in cancer development, age-related disorders and short telomere syndromes. Telomeres protect chromosomes from degradation and rearrangements that are typically seen in cancer. Telomeres also serve as cellular clocks. They shorten in the absence of telomerase limiting cellular lifespan. In most tumors, telomerase is upregulated in order to counteract telomere shortening. Through the expression of telomerase, human cancer cells acquire an immortal phenotype. The Lingner Lab combines telomeric chromatin analysis by mass spectrometry, biochemistry and molecular genetics to study the dynamics of telomere structure, function and replication in human cells under normal and pathological situations. Their work may allow manipulation of telomere functions in tumors and other diseased tissues in the future.

Web Site:	<a href="http://lingner-lab.epfl.ch">lingner-lab.epfl.ch</a>
Category:	Geroscience Research
Location:	Lausanne
Contact:	Email: <a href="mailto:admin.auwerx@epfl.ch">admin.auwerx@epfl.ch</a> Phone: +41 21 693 07 29

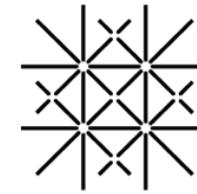
# Prof. Anna Jazwinska Müller Research Group, University of Fribourg



Injuries to human organs, such as the limbs and the heart, result in persistent pathologic conditions. By contrast, zebrafish can completely reconstitute parts of their fins, hearts, retinas and spinal cords. Regeneration in zebrafish predominantly relies on the intrinsic plasticity of mature tissues. This property involves activation of the remaining tissue at the site of injury to promote cell division, cell migration and replacement of the missing structures. Which biological mechanisms guide the mature cells through the regeneration process? How do systemic factors modulate this process? Do regenerative programs of different organs rely on conserved mechanisms? In the research of the Jazwinska Research Group, they address these questions focusing on heart and fin regeneration in zebrafish. Their methods rely on pharmacological approaches and transgenic animals.

Web Site:	<a href="http://unifr.ch">unifr.ch</a>
Category:	Regenerative Medicine
Location:	Fribourg
Contact:	Phone: +41 21 300 88 90

# Prof. Christoph Handschin Research Group, University of Basel

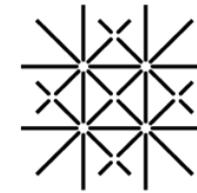


University  
of Basel

Professor Christoph Handschin is in charge of Research Group which studies regulation of skeletal muscle cell plasticity in health and disease. This group is interested in the molecular mechanisms that underlie cell plasticity of skeletal muscle in health and disease, including adaptations to exercise, and the pathological changes in muscle atrophy, muscular dystrophies and aging. They combine state-of-the-art systems biology methods with innovative computational analysis of the transcriptional networks that control muscle cell plasticity. Together with work in muscle stem cells in culture, these approaches shed novel insights into muscle biology.

Web Site:	<a href="http://unibas.ch">unibas.ch</a>
Category:	Regenerative Medicine
Location:	Basel
Contact:	Email: <a href="mailto:christoph.handschin@unibas.ch">christoph.handschin@unibas.ch</a> Phone: +41 61 207 23 78

# Prof. Markus Rüegg Research Group, University of Basel

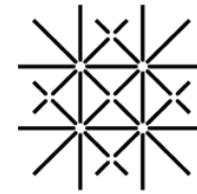


University  
of Basel

The Research Group lead by Professor Markus Rüegg studies synapse development and neuromuscular disorders. Their goal is to understand the signaling pathways that contribute to the formation of synapses and that allow to restore them upon pathological alterations. Group is particularly interested in the signals that trigger synaptic changes during learning processes, and in those important to maintain the neuromuscular synapses. In addition, it provides the basics for the better understanding of the loss of muscle mass and the associated impairment of mobility with age. Neuromuscular disorders are relatively rare genetic diseases that can result in muscle weakness, loss of mobility, and even death. Their work on animal models of such diseases and the information they gain about the signaling pathways form the basis for the development of treatments to combat these rare conditions.

Web Site:	<a href="http://unibas.ch">unibas.ch</a>
Category:	Regenerative Medicine
Location:	Basel
Contact:	Email: <a href="mailto:markus-a.ruegg@unibas.ch">markus-a.ruegg@unibas.ch</a> Phone: +41 61 207 22 23

# Prof. Michael N. Hall Research Group, University of Basel



University  
of Basel

Professor Michael Hall is the head of Research Group which studies TOR signaling and the control of cell growth. The aim of the group`s research is understanding the molecular mechanisms that control growth and metabolism in health and disease may reveal new therapeutic strategies for a wide variety of disorders. They study TOR signaling and growth control in the yeast *Saccharomyces cerevisiae*, in mammalian cells, in mice and in human tumors using biochemical, genetic and cell biological approaches. The work with human tumors is a translational research project that relies on close collaborations with clinicians. Cell division, growth and death are the most fundamental features of life.

Web Site:	<a href="http://unibas.ch">unibas.ch</a>
Category:	Geroscience Research
Location:	Basel
Contact:	Email: <a href="mailto:m.hall@unibas.ch">m.hall@unibas.ch</a> Phone: +41 61 207 21 50

# Prof. Thomas Flatt Research Group, University of Fribourg



The Research Group is interested in the genomics of adaptation, using the fruit fly *Drosophila melanogaster* as an experimentally traceable model. The components of fitness, so-called life-history traits (e.g., growth, size, fecundity, survival, lifespan), are fundamentally important for adaptation because they represent the targets of selection at the phenotypic level. However, still little is known about the genetic basis of variation and evolutionary changes in such fitness-related traits. Similarly, the mechanisms that maintain the large amount of genetic variation in fitness components in natural populations remain incompletely understood. The questions they ask in their research group:

- What are the loci underlying life-history adaptation?
- How does lifespan evolve? What are the costs of longevity?
- How do inversions and supergenes shape adaptation?

Web Site:	<a href="http://unifr.ch">unifr.ch</a>
Category:	Geroscience Research
Location:	Fribourg
Contact:	Phone: +41 26 300 88 33

# Statistical Genetics Group, Lausanne University Hospital



The Statistical Genetics Group is part of the Division of Biostatistics at the Institute of Social and Preventive Medicine of the Lausanne University Hospital and affiliated with the Swiss Institute of Bioinformatics and with the University of Exeter. At the Statistical Genetics Group they are interested in the development of statistical methodologies in order to decipher the genetic architecture of complex human traits. Although their main focus is Genome-Wide Association Studies, they devise integrative analysis tools for different omics data to enhance the understanding of the genetic network of the human genome.

Web Site:	<a href="http://unil.ch">unil.ch</a>
Category:	Geroscience Research
Location:	Lausanne
Contact:	Email: <a href="mailto:zoltan.kutalik@unil.ch">zoltan.kutalik@unil.ch</a> Phone: +41 21 314 67 50

# Swiss Institute for Regenerative Medicine



The Swiss Institute for Regenerative Medicine, is the first Swiss research institute entirely dedicated to regenerative medicine. In cooperation with its growing network of research, clinical and business partners, the institute also works to promote networking between institutions at local, national and international level and to provide services, infrastructures and guidance making sure that innovation and research in the regenerative medicine field is finally brought outside the labs, becoming an effective driver of medical, scientific and economic growth for the Lugano region and the entire Ticino Canton. SIRM unique approach to research, is therefore focused on bringing actual innovation in healthcare and to the patients, a vision that SIRM realizes cooperating both with academic partners and with private, future oriented regenerative medicine companies and start-ups, that are actually hosted under the same roof. Based in Taverne, current SIRM headquarters feature 1600 sqm of labs, hosting 19 specialized research facilities, 52 researchers, 11 research groups and 5 associated institutes.

Web Site:	<a href="http://ticinohealth.ch">ticinohealth.ch</a>
Category:	Regenerative Medicine
Location:	Lugano
Contact:	Email: <a href="mailto:nino.tramonte@sirm-institute.ch">nino.tramonte@sirm-institute.ch</a> Phone: +41 918 053 976

# Swiss Stem Cells Biotech



The Banking department of SSCB – Swiss Stem Cells Biotech separates and preserves Stem Cells from cord blood and cord tissue at birth. Stem Cells will be available for use in the future to treat and maybe save the life of the newborn they were taken from, even when he or she becomes a child or an adult. Swiss Stem Cells Biotech has been the first Swiss facility to offer a private service for umbilical cord stem cell storage.

Web Site:	<a href="http://stembank.ch">stembank.ch</a>
Category:	Regenerative Medicine
Location:	Ticino
Contact:	Phone: +41 91 960 22 20

# The Nestlé Institute of Health Sciences



The Nestlé Institute of Health Sciences does fundamental research for the understanding of health and disease and for developing science-based targeted nutritional solutions for the maintenance of health. The members of the Institute study the molecular, cellular and nutritional mechanisms leading to the dysfunction of skeletal muscle during aging, particularly the condition of sarcopenia, in which muscle mass and muscle function decline due to age. Sarcopenia involves multiple pathophysiological processes such as impaired neuro-muscular transition, altered excitation/contraction coupling, impaired regenerative capacity linked to stem cell exhaustion, defects of mitochondrial and energy metabolism in myofibers, and finally marbling of skeletal muscle with fat and fibrosis. Their recent work has demonstrated that neuromuscular dysfunction is a major driver of sarcopenia and that remodeling of the extracellular matrix (ECM) during muscle regeneration is blunted in the aged muscle stem cell niche and can be targeted therapeutically.

<b>Web Site:</b>	<a href="http://nestleinstitutehealthsciences.com">nestleinstitutehealthsciences.com</a>
<b>Category:</b>	Regenerative Medicine
<b>Location:</b>	Lausanne
<b>Contact:</b>	Phone: +41 21 632 61 00

# Vital-IT Competence Centre



The Vital-IT team is composed of a director and 69 scientists and technical staff with expertise in software development, data management, biological data analysis, web technology and trans-disciplinary research. Vital-IT participates to nation-wide or international training tasks funded either by its research collaborators, by separate grants or by the SIB. These include the organization of professional bioinformatics courses for non-bioinformaticians (learning how to use Vital-IT resources), as well as the maintenance and development of the ExPASy Bioinformatics Resource Portal, which provides access to scientific databases and software tools in different areas of life sciences including proteomics, genomics, phylogeny, systems biology, population genetics, transcriptomics. Vital-IT participates into collaborative R&D projects, in which the involvement of its scientists has been highly customizable (from pure IT service to project leaders).

Web Site:	<a href="http://vital-it.ch">vital-it.ch</a>
Category:	Geroscience Research
Location:	Lausanne
Contact:	Email: <a href="mailto:mark.ibberson@sib.swiss">mark.ibberson@sib.swiss</a> Phone: +41 21 692 40 84

# 15 Scientists: Longevity in Switzerland





# Alejandro Ocampo

**Position:** Assistant Professor, Department of Pharmacology and Toxicology, University of Lausanne

**Research Area:** Cellular Reprogramming, Stem Cells

Alejandro Ocampo obtained his PhD in 2012 from the University of Miami for his work under the supervision of Antoni Barrientos on the role of mitochondria in neurodegenerative proteinopathies and aging. Between 2013 and 2017, he performed a post-doctoral training with Juan Carlos Izpisua-Belmonte at the Salk Institute for Biological Studies in La Jolla, California. During his post-doctoral training at the Salk, he developed a novel technology to prevent the transmission of mitochondrial diseases and demonstrated the amelioration of age-associated hallmarks by partial cellular reprogramming. In August 2018, he joined the Department of Pharmacology and Toxicology as Assistant Professor and will continue his work on aging, cellular reprogramming and mitochondrial diseases.

His group conducts research in the areas of epigenetics, stem cells, aging and mitochondrial diseases with the goal of elucidating disease mechanisms and develop novel therapeutic approaches to improve the quality of life of patients.



UNIL | Université de Lausanne



# Alexander Eggel

**Position:** Dr., Department of Rheumatology, Immunology and Allergology, University of Bern  
**Research Area:** Immunologic Plasticity in Aging

The Eggel Lab is affiliated with the [Department for BioMedical Research \(DBMR\)](#) at the University of Bern and the [Department of RIA](#) at the University Hospital Bern in Switzerland. Their major research interests focus on the biologic mechanisms underlying both beneficial as well as pathogenic type 2 immune responses. On the one hand they are trying to get a better understanding on how allergies evolve and to develop alternative treatment approaches directly interfering with the allergic cascade. On the other hand they are investigating the development of age-related disorders and how they are linked to alterations in type 2 immune responses.

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*b*  
**UNIVERSITÄT  
BERN**



# Anna Jazwinska Müller

**Position:** Professor, [Department](#) of Biology, Université de Fribourg

**Research Area:** Regeneration

Anna Jazwinska Müller currently works at the Université de Fribourg. She reads courses in cell biology and mechanisms of regeneration. Anna also works in a project “Biomechanics and ray patterning during epimorphic fin regeneration”.



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UNIVERSITÄT FREIBURG



# Brigitte Galliot

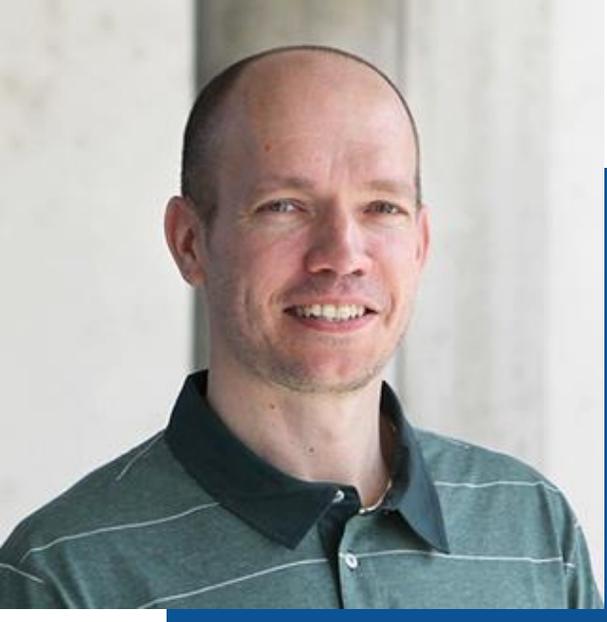
**Position:** Professor, Department of Genetics and Evolution, University of Geneva

**Research Area:** Homeostasis & Regeneration, Cellular Remodelling

After earning her medical doctorate in her native Paris, Brigitte Galliot began her professional career at Strasbourg University Hospital starting in 1982, first as an intern in Pediatrics and later in Biochemistry. At the same time, she undertook studies in Life Sciences that led to a second doctorate, in Molecular Biology, with a thesis on the architect genes involved in embryonic development. Starting in 1989, she worked in Heidelberg, Germany, first as a postdoctoral researcher and then as a project leader. There she became interested in the hydra, a curious organism found in local ponds, whose astonishing capacities for regeneration were discovered in the 18th century by the Geneva mathematician Abraham Trembley.

She joined the University of Geneva in 1993, creating her research group in the Department of Genetics & Evolution at the Faculty of Science thanks to a Marie Heim-Vögtlin grant from the Swiss National Science Foundation (SNSF). Named Associate Professor in 2009, in July 2014 she became the first woman to join the Dean's Office of the Faculty of Science, serving as associate dean for four years. In May 2018 she was named Vice-Rector of the University of Geneva, effective August 1st.





# Christoph Handschin

**Position:** Professor in Pharmacology, Biozentrum, University of Basel

**Research Area:** Exercise, Muscle and PGC-1 $\alpha$

Handschin studied biology at the University of Basel. He completed his doctorate in biochemistry in Urs A. Meyer's group at the Biozentrum. From 2002 to 2006, Handschin carried out research at the Dana-Farber Cancer Institute and the Harvard Medical School, before being appointed as an assistant professor of physiology and an SNSF professor to the University of Zurich in 2006. In 2009 he returned to the Biozentrum, where he works in research and teaching as a professor of pharmacology.

Handschin studies the molecular processes underlying trained or diseased muscles. Central to his research is the protein PGC-1 $\alpha$  that has a significant influence on metabolism and muscle function. Handschin demonstrated that PGC-1 $\alpha$  centrally steers the adaptive mechanisms of the muscle during endurance training. PGC-1 $\alpha$  increases the endurance capacity of the muscle by among other things regulating the formation and degradation of lactate. Furthermore, Handschin discovered that an elevated PGC-1 $\alpha$  production manifests a therapeutic effect on muscle wasting and dystrophies. His findings provide concrete approaches for the treatment of muscle diseases and age-related muscle wasting. Moreover, the insights gained on the regulation of heme biosynthesis were highly relevant for the understanding of porphyria.





# Claudio De Virgilio

**Position:** Professor, Department of Biology, Université de Fribourg

**Research Area:** Quiescence & Lifespan

Claudio De Virgilio currently works at the Department Biology, Université de Fribourg. Claudio does research in Cell Biology. His current project is “Nutrient signaling and control of quiescence in yeast”.

All living cells are capable of exiting the normal cell cycle (proliferating state) and entering an alternative (resting) state termed quiescence or G0. The available body of data, nevertheless, indicates that disruption of G0-entry/exit control mechanisms is often associated with either cellular transformation, or dramatically reduced life span. In this context, Claudio and his team study the mechanisms controlling entry into, survival in, and exit from quiescence in the unicellular, eukaryotic model organism *S. cerevisiae*. So far, several studies (including researches of his group) have uncovered that the nutrient-regulated hub TORC1 orchestrates both entry into and exit from G0. The research of De Virgilio Group is therefore specifically focused on the elucidation of both the mechanisms that regulate TORC1 activity and the nature of the effectors that are regulated by TORC1.



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UNIVERSITÄT FREIBURG



# Collin Ewald

**Position:** Professor, Department of Health Sciences and Technology, ETH Zurich

**Research Area:** Extracellular Matrix Regeneration, Molecular Biology of Aging

Collin Ewald is a Professor at the Department of Health Sciences and Technology, ETH Zurich. He is in charge of Lab which provides basic research and systems-level approaches to develop novel strategies to treat age-related pathologies.

The aim of the Ewaldlab`s project is to determine the molecular mechanism(s) that prolong health during aging, using the nematode *C. elegans*, in order to develop novel strategies to treat age-related pathologies. Aging is the major risk factor for developing diseases such as cancer, diabetes, and neurodegenerative disorders. Their recent work has shown that many health- and longevity-promoting interventions re-activate the expression of extracellular matrix (ECM) genes during aging. This ECM enhancement is required and sufficient for extending the lifespan of *C. elegans*. One fascinating facet they are also currently investigating is the role of the ECM with the accumulation of extracellular protein aggregates associated with Alzheimer`s disease and other neurodegenerative diseases.

**ETH** zürich



# Joachim Lingner

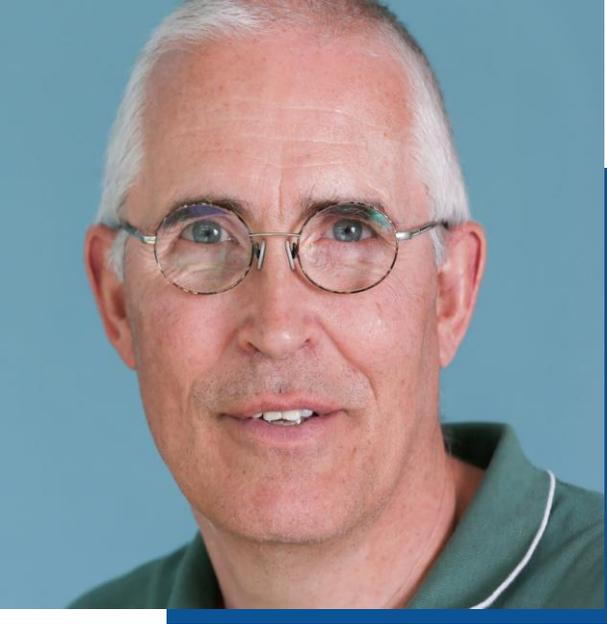
**Position:** Professor, Institute of Biochemistry, École polytechnique fédérale de Lausanne (EPFL)

**Research Area:** Telomeres

Joachim Lingner is a PhD at the Biocenter, University of Basel 1989-1992 (Supervisor: Walter Keller). Postdoc at the Howard Hughes Medical Institute, University of Colorado at Boulder 1993-1997 (Supervisor: Thomas Cech). Junior group leader at ISREC 1997-2001. Senior group leader at ISREC since 2002. Associate Professor at EPFL 2005-2008. Full Professor at EPFL since 2009. Honors: START-fellowship from the Swiss National Science Foundation in 1997; Friedrich Miescher Prize from the Swiss Society of Biochemistry in 2002; EMBO member in 2005; ERC advanced investigator grant in 2008.



ÉCOLE POLYTECHNIQUE  
FÉDÉRALE DE LAUSANNE



# Johan Auwerx

**Position:** Professor, Laboratory for Integrated and Systems Physiology, École polytechnique fédérale de Lausanne (EPFL)

**Research Area:** Mitochondria, Proteostasis, Aging

Johan Auwerx is Professor at the École Polytechnique Fédérale in Lausanne, Switzerland, where he directs the Laboratory for Integrated and Systems Physiology (LISP). Dr. Auwerx has been using molecular physiology and systems genetics to understand metabolism in health, aging and disease. Much of his work focused on understanding how diet, exercise and hormones control metabolism through changing the expression of genes by altering the activity of transcription factors and their associated cofactors.

Johan Auwerx was elected as a member of EMBO in 2003 and is the recipient of a dozen of international scientific prizes, including the Danone International Nutrition Award, the Oskar Minkowski Prize, the Morgagni Gold Medal, and the Marcel Benoist Prize. His work is highly cited by his peers with a h-factor of over 120. He is an editorial board member of several journals, including Cell Metabolism, Molecular Systems Biology, The EMBO Journal, The Journal of Cell Biology, Cell, and Science. Dr. Auwerx co-founded a handful of biotech companies, including Carex, PhytoDia, and most recently Mitobridge, and has served on several scientific advisory boards.





# Matthias Altmeyer

**Position:** Dr., Department of Molecular Mechanisms of Disease, University of Zurich

**Research Area:** Genome Instability in Cancer and Aging

As part of an active scientific community that studies the DNA damage response (DDR) and its impact on cancer and aging, research in the lab of Matthias Altmeyer is aimed at elucidating cellular mechanisms of genome integrity maintenance and their deregulation in human disease.





# Michael Hall

**Position:** Professor, Biozentrum, University of Basel

**Research Area:** TOR Signaling

Michael Hall earned a Bachelor of Science in Zoology from the University of North Carolina at Chapel Hill in 1976, and a PhD in Molecular Genetics from Harvard University in 1981. Hall was a postdoctoral fellow at the Institut Pasteur in Paris and at the University of California, San Francisco. He was appointed an Assistant Professor at the Biozentrum of the University of Basel in 1987, and became a Full Professor in 1992. From 1995 to 1998 and from 2002 to 2009 he was head of the Division of Biochemistry, and from 2002 until 2009 was Deputy Director of the Biozentrum.

Hall is a pioneer in the fields of TOR signaling and cell growth control. In 1991, Michael N. Hall discovered a protein, which regulates cell growth, cell size and cell division in yeast cells. Since the function of this protein is inhibited by the substance rapamycin, Hall gave the growth regulator the name «Target of Rapamycin» or for short «TOR». TOR is a conserved protein kinase activated by growth factors, nutrients, and insulin. It is a central controller of cell growth and metabolism. TOR plays a key role in aging and the development of diseases such as cancer, obesity, Diabetes mellitus, and cardiovascular disease. Insights into TOR signaling pathways have been applied for new therapeutic strategies. Hall received the 2017 Albert Lasker Basic Medical Research Award.





# Michael Ristow

**Position:** Professor, Department of Health Sciences and Technology, ETH Zurich

**Research Area:** Reactive Oxygen Species & Aging

He is interested in the biochemical and molecular basis of longevity – in particular the role played by mitochondria in lifespan regulation and prevention of metabolic diseases. Contrary to the widely re-iterated Free Radical Theory of Aging, he works in the first laboratory that shows that the health-promoting effects associated with low caloric intake, physical exercise and other lifespan-extending interventions like sirtuin signaling are caused by increased formation of Reactive Oxygen Species (ROS) within the mitochondria, causing a vaccination-like adaptive response that culminates in increased stress resistance and extended longevity, a process called mitohormesis.

**ETH** zürich



# Simon Blanchoud

**Position:** Dr., Department of Biology, Université de Fribourg

**Research Area:** Whole-Body Regeneration

Simon Blanchoud currently works at the Unit of Zoology, Université de Fribourg. Simon does research in Algorithms, Computing in Mathematics, Natural Science, Engineering and Medicine and Programming Languages. Their current project is 'WBR in *B. leachii*'.



UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG



# Thomas Flatt

**Position:** Professor, Department of Ecology and Evolution, University of Lausanne

**Research Area:** Evolution, Reproduction and Aging

The Flatt group studies the evolution and mechanisms of life history and aging, using *Drosophila* as a model system. A major focus is on understanding the genomic basis of evolutionary changes in life history traits and lifespan in natural and evolved laboratory populations. Another focus is on the hormonal regulation of life history trade-offs (especially the trade-off between reproduction and lifespan) and the endocrine modulation of aging.



UNIL | Université de Lausanne



# Yves Barral

**Position:** Professor, Institute of Biochemistry, ETH Zurich

**Research Area:** Cell Division and Aging in Yeast

Yves Barral has been Assistant Professor of Biochemistry at the ETH Zurich since August 1999 and Associate Professor since October 2005. Prof. Barral, whose parents are French, was born in Mexico on 7th December 1966. Prof. Barral studied Genetics and Biochemistry at the Ecole Normale Supérieure in Paris, and completed his diploma work in Microbiology at The Pasteur Institute in 1989. Prof. Barral then started his Ph.D. studies on the genetic analysis of cell cycle control which he carried out at both the Commissariat à l'Energie Atomique (Saclay, France) and the Friedrich-Miescher Laboratory of the Max-Planck Institute (Tübingen, Germany). In December 1994 Prof. Barral obtained his Ph.D. from the Pierre and Marie Curie University in Paris. He then went on to work as a postdoctoral fellow and postdoctoral associate in the Department of Biology, Yale University (New Haven, USA) up until July 1999, focussing on the regulation of cellular morphogenesis during cell division.

At the ETH Prof. Barral will continue working on the coordination of the cytoskeleton and the cell cycle in yeast. He will also develop new genetic techniques to address related issues in the multicellular Nematode *C.elegans*.

**ETH** zürich

# 10 Government Organisations: Longevity in Switzerland



# BaselArea.swiss

**BASEL  
AREA.  
SWISS**

BaselArea.swiss is the office for promoting innovation and inward investment for the northwest cantons of Basel-Stadt, Basel-Landschaft and Jura. BaselArea.swiss today employs 20 people and has an annual core budget of 5 million francs, which is borne by the three cantons and the State Secretariat for Economic Affairs (SECO).

The core function of BaselArea.swiss is to promote the strengths of the Basel region as a centre for business and to support both Swiss and foreign entrepreneurs and companies in the implementation of their innovation and business projects in the region. The main focus of the services provided by BaselArea.swiss is on the sustained development and maintenance of a network of qualified decision makers, innovators, experts and disseminators. On the basis of this network, BaselArea.swiss provides clients with targeted access to knowledge and specialist know-how.

Web site:	<a href="http://baselarea.swiss">baselarea.swiss</a>
Location:	Basel
Contacts:	Email: <a href="mailto:info@baselarea.swiss">info@baselarea.swiss</a> Phone: +41 61 295 50 00

# biotechnet



The biotechnet is a partnership of the Swiss Universities of Applied Sciences, Universities as well as Research and Technology Organizations, active in the field of biotechnology. It was formed and supported by the commission for technology and innovation (CTI) in 1998 as a national network of competence in research. Through participation in and competent execution of high-caliber R&D projects, the biotechnet rapidly gained recognition as specialized partner to complement R&D projects with state-of-the art as well as innovative technologies.

Today the biotechnet is a virtual network enabling companies and interested institutions to activate biotechnological expertise according to their specific needs. Besides highly specific services for biotechnological R&D, their portfolio also contains process and development consulting. The biotechnet also gained an excellent reputation as designer, organizer and conductor of first class education programs for continuing education programs.

Web site: [biotechnet.ch](http://biotechnet.ch)

Location: Geneva

Contacts: Undisclosed

# Federal Department of Economic Affairs, Education and Research



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

The Federal Department of Economic Affairs, Education and Research is one of the seven departments of the federal government of Switzerland, headed by a member of the Swiss Federal Council. EAER deals with economic affairs and trade policy, including agricultural policy. It is also responsible for education, research and innovation. Further areas such as housing are also part of its remit. The department was renamed from Federal Department of Economic Affairs (FDEA) effective on 1 January 2013 based on decisions taken by the Federal Council in 2011.

The Department is composed of the following offices: State Secretariat for Economic Affairs SECO, State Secretariat for Education, Research and Innovation SERI, Federal Office for Agriculture FOAG, Federal Office for National Economic Supply FONES.

Web site:	<a href="http://wbf.admin.ch">wbf.admin.ch</a>
Location:	Bern
Contacts:	Email: <a href="mailto:info@gs-wbf.admin.ch">info@gs-wbf.admin.ch</a> Phone: +41584622007 Fax: +41584622194

# St Gallen Elderly Care Bank



St Gallen is the first Swiss city to introduce a novel banking scheme in which retired care volunteers “deposit” hours worked looking after elderly people. In return they can use any time saved up for their own care provision later in life. The St Gallen government hopes the pilot project will lower social service costs and encourage local solidarity as it copes with a steadily aging population.

Although it is a voluntary project, it will not be cost free. The St Gallen authorities have proposed creating a foundation with a SFr150,000 annual budget to finance an internet site to allow volunteers to contact those needing help, as well as to cover administrative and training costs. The money will also serve as a guarantee if the project fails, to compensate volunteers for any hours they have accumulated.

Web site: [swissinfo.ch](http://swissinfo.ch)

Location: St Gallen

Contacts: Email: [info@stadt.sg.ch](mailto:info@stadt.sg.ch)  
Phone: +41 71 224 42 42

# Swiss Biobanking Platform



Swiss Biobanking Platform (SBP) is the national coordination platform for human and non-human biobanks. It aims to respond to the increasing requests from biomedical researchers regarding quality and the interconnectedness of biobanks for research purposes. SBP was initiated by the Swiss National Science Foundation (SNSF), and the association was created on 1st June 2016. SBP should drive substantial progress in life sciences by being the privileged partner of Swiss biomedical researchers.

The SBP vision is to help Switzerland consolidate its position at the forefront of biomedical research by facilitating access and optimal usage of its existing and future biobanked specimens.

Web site: [swissbiobanking.ch](http://swissbiobanking.ch)

Location: Lausanne

Contacts: Email: [info@swissbiobanking.ch](mailto:info@swissbiobanking.ch)  
Phone: +41 21 314 52 84

# Swiss Clinical Trial Organization



The Swiss Clinical Trial Organisation (SCTO) is the central cooperation platform for patient-oriented clinical research in Switzerland. Its primary objective is, in the interests of society, to attractively and competitively position Swiss clinical research in the international competition with respect to innovation and quality.

There are six hospitals in Switzerland with centres for clinical research. These Clinical Trial Units (CTUs) are located at the university hospitals in Basel, Bern, Geneva, Lausanne and Zurich and at the cantonal hospital in St. Gallen. The SCTO coordinates and enhances the cooperation between these centres for clinical research. The SCTO is a joint initiative of the Swiss National Science Foundation (SNSF) and the Swiss Academy of Medical Sciences (SAMS). Since 1 January 2013, the SCTO acts as an independent organisation.

Web site: [scto.ch](http://scto.ch)

Location: Bern

Contacts: Email: [info@scto.ch](mailto:info@scto.ch)  
Phone: +41 31 307 10 40

# Swiss Federal Commission for Innovation and Technology



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

The CTI is the federal innovation promotion agency responsible for encouraging science-based innovation in Switzerland by providing financing, professional advice and networks.

The CTI operates on the principle of subsidiarity, supporting innovation projects which, due to lack of funding, would not otherwise be possible, or whose market potential could not be realised. It is active in cases where initiatives in the private sector can be supported by state measures. By helping to transfer research results into concrete marketable products, the CTI helps to improve the competitiveness of Swiss businesses, particularly SMEs, thereby contributing to a strong, innovative economy in Switzerland.

Web site: [kti.admin.ch](http://kti.admin.ch)

Location: Bern

Contacts: Phone: +41 58 462 21 29

# Swiss Personalized Health Network



The Swiss Personalized Health Network (SPHN) is a national initiative designed to promote the development of personalized medicine and personalized health in Switzerland. The Swiss Academy of Medical Sciences (SAMS) was mandated 2016 by the State Secretariat for Education, Research, and Innovation (SERI) and by the Federal Office of Public Health (FOPH) to develop a Swiss Personalized Health Network (SPHN). The ultimate goal is to promote health and well-being, to prevent, diagnose and treat unfavourable health conditions more precisely, thus reducing the risk of developing such conditions and permitting more effective treatments of disease states with fewer adverse effects.

SPHN will lay the foundations that are needed to facilitate research projects in this area such as a system for a nationwide exchange of health-related data. During the period 2017–2020, priority is given to the development of a nationally coordinated data infrastructure ensuring data interoperability of local and regional information systems with special emphasis on clinical data management systems enabling effective exchange of patient data (e.g. disease phenotypes).

Web site:	<a href="http://sphn.ch">sphn.ch</a>
Location:	Bern
Contacts:	Email: <a href="mailto:info@sphn.ch">info@sphn.ch</a> Phone: +41 31 306 92 95

# SystemsX.ch



SystemsX.ch is a large public research initiative in Switzerland, focusing specifically on systems biology; the aim of the initiative is for Switzerland to become a global frontrunner in this area of research. In systems biology, researchers describe and measure biological processes and develop theories which they then verify with the aid of models. This calls for cooperation with mathematicians, IT experts and engineers. The holistic approach of systems biology even makes it possible to tackle medical questions, which is why medical researchers are increasingly represented in research consortia.

SystemsX.ch supports well over 1000 scientists in approximately 200 projects and 400 research groups. Fifteen partners are responsible for the initiative on an equal footing: ETH Zurich, EPF Lausanne, eight cantonal universities and five other research institutions.

Web site:	<a href="http://systemsx.ch">systemsx.ch</a>
Location:	Zurich
Contacts:	Email: <a href="mailto:admin@systemsx.ch">admin@systemsx.ch</a> Phone: +41 44 633 83 25 Fax: +41 44 632 15 64

# World Health Organization



The World Health Organization (WHO) is a specialized agency of the United Nations that is concerned with international public health. The organization was established on 7 April 1948. The WHO is a member of the United Nations Development Group. Its predecessor, the Health Organisation, was an agency of the League of Nations. WHO is now more than 7000 people working in 150 country offices, in six regional offices and at our headquarters. Their primary role is to direct and coordinate international health within the United Nations system. WHO's main areas of work are health systems; health through the life-course; noncommunicable and communicable diseases; preparedness, surveillance and response; and corporate services.

The World Health Organization supports countries as they coordinate the efforts of governments and partners – including bi- and multilaterals, funds and foundations, civil society organizations and the private sector.

Web site: [who.int](http://who.int)

Location: Geneva

Contacts: Email: [erecruit@who.int](mailto:erecruit@who.int)  
Phone: +41-22-7912111

# 15 Non-Profit Organisations : Longevity in Switzerland



# BioValley



BioValley – The Life Science Network – was founded in 1996. The vision of the founders was to bring together Alsace (France), South Baden (Germany) and Northwestern Switzerland. It was one of the first European initiatives for the promotion and development of life sciences. The three border regions Alsace, northwest Switzerland and South Baden stood out individually in the mid-90s for their outstanding potential in the field of life sciences: Outstanding scientific facilities (four universities, specialised colleges of higher education, research centres, etc.); Headquarters of global players Novartis and Roche as well as CIBA, Clariant, Lonza and Syngenta; Branches of large pharmaceutical companies, such as DSM, Johnson & Johnson, Eli Lilly, Pfizer, Sanofi-Aventis, DuPont, Amersham and Millipore.

Web Site: [biovalley.ch](http://biovalley.ch)

Location: Basel

Contact: Email: [contact@biovalley.ch](mailto:contact@biovalley.ch)  
Phone: +41 58 211 33 00

# Gerontological Economic Research Organization



GERO is a free and independent research endowment foundation set up to promote international scientific research in the fields of gerontology, geriatrics, and related sciences. Among other things, the integration of now common and all over available IT (Internet) is fed into the everyday life of elderly people and from GERO scientifically supported. One research focus is the development of everyday use sensors technology for this population group.

The most recent worldwide research and other scientific data on the causes and effects of aging processes and aging infirmities are analyzed and then realized as GERO research projects by using state-of-the-art communications technologies. For this reason, GERO is cooperating with numerous scientists in the fields of medicine, gerontology, biology, pharmacology, and other related areas and has close ties with leading universities and research institutes in many countries in the world.

Web Site:	<a href="http://gero.org">gero.org</a>
Location:	Kreuzlingen
Contact:	Email: <a href="mailto:office@gero.org">office@gero.org</a> Phone: +41 (0) 71 677 50 77

# Health 2030 Genome Centre



The Health 2030 Genome Center is a multi-institutional hub established to promote genomic medicine in Switzerland. The Genome Center is the genomic medicine arm of the Health 2030 initiative, whose goal is to promote Swiss personalized medicine (initiated by: EPFL, UNIGE, CHUV, HUG, UNIL, InselSpital and UNIBE). The Genome Center is more than simply a large-scale sequencing facility: it aims to integrate and synergize with several groups working on human genetics and genomics in Switzerland.

The Genome Center was conceived as a hub for genetics and genomics research to foster collaboration, to increase communication and to promote the sharing of ideas, allowing for the long-term development of major initiatives. In addition, the Genome Center increases the impact of the sequencing facility itself as new developments and projects are discussed and designed in real time through daily interactions of all stakeholders.

Web Site:	<a href="http://health2030genome.ch">health2030genome.ch</a>
Location:	Geneva
Contact:	Email: <a href="mailto:genome@health2030.ch">genome@health2030.ch</a>

# Life Sciences Switzerland



Life Sciences Switzerland (LS2) is a non-profit organization dedicated to advancing biological sciences within the Swiss Academic Community, and to addressing the social, ethical, and economic issues raised by the rapid progress of the biomedical and life sciences. LS2 sections: Molecular and Cellular Biosciences, Proteomics, Physiology, Autophagy, Cardiovascular Biology, Systems Biology, Microscopy.

LS2 founded around Prof. Eward Weibel as USGEB (Union of Swiss Societies for Experimental Biology) in 1969. In 2012, USGEB changed its name to LS2 (Life Sciences Switzerland) and in 2016, three of the founding societies (Swiss Society for Molecular and Cellular Biosciences, Swiss Proteomics Society, and Swiss Physiological Society) merged, making LS2 the largest Life Sciences Society in Switzerland.

Web Site: [naturalsciences.ch](http://naturalsciences.ch)

Location: Zurich

Contact: Email: [info@ls2.ch](mailto:info@ls2.ch)

# Swiss Coordination Committee for Biotechnology



The Swiss Coordination Committee for Biotechnology (SCCB) serves as an umbrella for leading biotechnology organizations in Switzerland. It encourages the development of a sustainable biotechnology sector in the country. For this purpose the SCCB initiates and coordinates the following activities in research, public relations and networking:

- monitors research and development on a national and international level and provides recommendations to academia, government agencies and industry. By doing so, the SCCB contributes to setting the scientific agenda in biotechnology;
- communicates, on a national and international level, the benefits of biotechnology for society and thereby strengthens the science-based public perception of biotechnology;
- promotes contacts and fosters common interests with partner organisations both nationally and internationally.

Web Site: [sk-biotechnologie.ch](http://sk-biotechnologie.ch)

Location: Zurich

Contact:

Email: [jan.lucht@scienceindustries.ch](mailto:jan.lucht@scienceindustries.ch)  
Phone: +41 44 368 17 63

# Swiss Institute for Regenerative Medicine



The Swiss Institute for Regenerative Medicine (SIRM), is the first swiss research institute entirely dedicated to regenerative medicine. It was established in 2013 in the southern and italian speaking Ticino Canton, and it is fully committed to unleash the enormous potential of human body regeneration and thereby delvelop next-gen therapies and cures that will shape the medicine of the future. In cooperation with its growing network of research, clinical and business partners, the institute also works to promote networking between institutions at local, national and international level and to provide services, infrastructures and guidance making sure that innovation and research in the regenerative medicine field can really become an effective driver of medical, scientific and economic growth for the Lugano region and the entire Ticino Canton.

Web Site:	<a href="http://swissbiotech.org">swissbiotech.org</a>
Location:	Taverne
Contact:	Phone: +41 91 805 39 78

# Swiss National Science Foundation



Based on a government mandate, the Swiss National Science Foundation (SNSF) supports scientific research in all academic disciplines, from history to medicine and the engineering sciences. At the end of 2017, the SNSF was funding 5800 projects involving 16,000 researchers, which makes it the leading Swiss institution for promoting scientific research.

To ensure its independence, the SNSF was established as a private foundation in 1952. Its core task is the evaluation of research proposals. In 2017, it awarded CHF 1037 million to the most promising project proposals. By allocating public research money based on the principle of competition, the SNSF contributes to the high quality of research in Switzerland. In close collaboration with higher education institutions and other partners, the SNSF strives to create optimal conditions for the development and international integration of Swiss research.

Web Site: [snf.ch](http://snf.ch)

Location: Bern

Contact: Email: [com@snf.ch](mailto:com@snf.ch)

# Swiss Society for Aging Research



The Swiss Society for Aging Research is an alliance of scientists of Swiss laboratories in academic and medical institutions as well as in industry, who are interested in aging research and related areas in biology and medicine. Membership is free. The daily business is handled by the president, vice-president, and if necessary, by ad hoc committees. The first two are nominated at annual meetings.

The aim of the Swiss Society for Aging Research is to bridge and promote the scientific exchange:

- Between scientists interested in aging research across academic and medical institutions, as well as industry within Switzerland;
- Between the 'Swiss Society for Aging Research' and other national 'Societies for Aging Research'.

Web Site:	<a href="http://ssfarc.ch">ssfarc.ch</a>
Location:	Zurich
Contact:	Email: <a href="mailto:collin-ewald@ethz.ch">collin-ewald@ethz.ch</a> Phone: +41 44 655 74 07

# Swiss Society of Gerontology



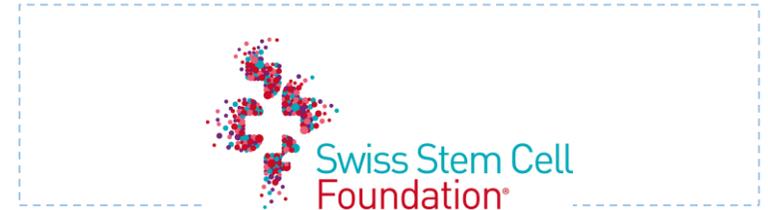
Whether in practice, education or research: the Swiss Society of Gerontology (SGG) connects professionals and institutions from all areas of retirement work to keep creating new ideas for old age and allowing aging people to lead their lives in dignity. Founded in 1953 as one of the first European gerontological societies, today SGG unites around 1,600 members from all sectors of old-age work - from practice, education and research - under its roof. This includes the members of the two sister companies, the Swiss Society of Geriatrics Link Website SFGG and the Swiss Society of Veterinary Psychiatry and Psychotherapy. The SGG is legally an association and receives for its activities contributions from the AHV fund according to Art. 101 AHVG.

Web Site: [gerontologie.ch](http://gerontologie.ch)

Location: Bern

Contact: Email: [info@gerontologie.ch](mailto:info@gerontologie.ch)

# Swiss Stem Cell Foundation



The (SSCF) Swiss Stem Cell Foundation is an independent, non-profit foundation whose goal is to pursue research and development in the domain of stem cells, create new cell therapies for human medical use based on stem cells, as well as to provide training, advice and disseminate knowledge in this field among professional operators and the public at large.

The Foundation's activities, carried out both at a national and international level, include in particular: research and development of technologies in the pre-clinical phase, consultancy through qualified professionals on new products, the study and development of new tools, medical devices, therapies and, in general, applied research projects, the supply of services in the analysis and research domains, the education of researchers and health operators in general, the promotion and organization of courses, conferences and other events, the dissemination among the public of relevant knowledge by any means that may prove useful to this purpose.

Web Site:	<a href="http://sscf.ch">sscf.ch</a>
Location:	Gentilino
Contact:	Email: <a href="mailto:info@gfmer.org">info@gfmer.org</a> Phone: +41 91 960 37 03

# The Geneva Foundation for Medical Education and Research



The Geneva Foundation for Medical Education and Research (GFMER) is a non-profit organization established in 2002. It is supported by the Republic and Canton of Geneva, the Department of Social Affairs of the City of Geneva and other Swiss and international institutions. The Foundation works in close collaboration with the World Health Organization (WHO). The overall objectives of the Foundation are to promote and develop health education and research programs. GFMER provides courses on: Adolescent health; Family planning; Genetics, community genetics; Gynecologic endocrinology, puberty; Gynecologic oncology; Infertility, spontaneous abortion, ectopic pregnancy etc.

Web Site:	<a href="http://gfmer.ch">gfmer.ch</a>
Location:	Geneva
Contact:	Email: <a href="mailto:info@gfmer.org">info@gfmer.org</a>

# The Swiss Biotech Association



Founded in 1998, the Swiss Biotech Association represents the interests of the Swiss biotech industry. To support its members in a competitive market, the Swiss Biotech Association works to secure favorable framework conditions and facilitate access to talents, novel technologies and financial resources. To strengthen and promote the Swiss biotech industry, the Swiss Biotech Association collaborates with numerous partners and life science clusters globally under the brand Swiss Biotech™. Swiss biotech companies are leading the way in developing and commercializing innovative medicines, diagnostics, healthcare treatments, services and enabling technologies.

The core of the organization is objective is to ensure that the value generated by the Swiss biotech industry continues to grow and that the industry contributes to the well-being of the socio-economic ecosystem thereby enabling Switzerland to be a key player at the forefront of bioscience innovation.

Web Site:	<a href="http://swissbiotech.org">swissbiotech.org</a>
Location:	Zurich
Contact:	Email: <a href="mailto:info@swissbiotech.org">info@swissbiotech.org</a> Phone: +41 44 455 56 78

# University of Zurich Institute for Regenerative Medicine

Institute for Regenerative  
Medicine • IREM



The mission of the Institute for Regenerative Medicine is advancing molecular life sciences into next generation bio-inspired therapies at the Interface of degeneration and regeneration with a major focus on the most relevant human diseases, including neuro-degeneration and cardiovascular disease. The Institute for Regenerative Medicine provides a number of researches on: Cell-based Regeneration & Organoid Technologies; Antibody-based Regeneration; Biomarkers / Imaging; Cell- and Systems Biology.

The Institute for Regenerative Medicine`s clinical centers: Center for Therapy Development - GMP; Center for Prevention and Dementia Therapy; Clinic for Psychogeriatric Medicine.

Web Site: [irem.uzh.ch](http://irem.uzh.ch)

Location: Zurich

Contact: Email: [info@irem.uzh.ch](mailto:info@irem.uzh.ch)  
Phone: +41 44 634 88 67

# Velux Stiftung

VELUX  
STIFTUNG

The Velux Stiftung supports research that aims to maintain or increase the functional ability of older people. This includes basic as well as applied research in the fields of biology, medicine, psychology and neurosciences.

Life expectancy has increased dramatically in the industrialized countries. Unfortunately, age also represents one of the greatest risk factors for many diseases. The idea of the Velux Stiftung that people should therefore strive to keep the time period in which they are limited by disease or ailments short. Aging means change in physiological as well as social and behavioural terms. The goal is therefore to enable people to be and do what they value, in a combination of each individual's capacity and the environment. This includes the physical environment such as a person's home as well as the societal environment.

Web Site: [veluxstiftung.ch](http://veluxstiftung.ch)

Location: Zurich

Contact: Email: [info@veluxstiftung.ch](mailto:info@veluxstiftung.ch)  
Phone: +41 44 224 30 10

# Vontobel Foundation



As a globally operating financial expert with Swiss roots, Vontobel Foundation specializes in wealth management, active asset management and investment solutions. The foundation empowers its colleagues to take ownership of their work and bring opportunities to life. Because Vontobel's team members are convinced that successful investing starts with assuming personal responsibility. They relentlessly question the achieved, striving to exceed the goals and expectations of their clients.

Once a year, the Center for Gerontology of the University of Zurich awards the Vontobel Award for Research on Age(ing) endowed by the Vontobel Foundation. The award can be given to one or more persons for completed, publishable or published work of excellent quality in the format of a journal article. The principal goal of the award is to support gerontological research in Switzerland originating from any field of science referring to age(ing).

Web Site: [vontobel.com](http://vontobel.com)

Location: Zurich

Contact:

Email: [vontobel.group@vontobel.ch](mailto:vontobel.group@vontobel.ch)  
Phone: +41 58 283 59 00

# 15 Influencers: Longevity in Switzerland





# André Kudelski

**Position:** CEO, Kudelski SA

**Location:** Lausanne

André Kudelski obtained a degree in physical engineering from the École Polytechnique Fédérale de Lausanne in 1984. He then held the position of R&D Engineer at Kudelski SA and in Silicon Valley, before becoming Pay TV Product Manager and then Director of Nagravision, Kudelski SA's pay TV division. In 1991, André Kudelski succeeded his father Stefan Kudelski to the post of President and Chief Executive Officer of Kudelski SA. He has been a member of Kudelski SA's Board of Directors since 1987. He is also Chairman of the Board's Strategy Committee.

André Kudelski sits on the Board of the Edipresse Group, of Nestlé, of Swiss International Air Lines and of Dassault Systemes (France), among others. In addition, he is a member of the Advisory Board of Credit Suisse Group and of the management committee of economiesuisse. He is a member of the Steering Committee of the Bilderberg Group.

In 1995, the World Economic Forum nominated André Kudelski as a "Global Leader for Tomorrow". He received an Emmy award in New York City from the National Academy of Arts and Sciences for his company's achievements in the area of Pay-TV conditional access and scrambling systems in 1996.

In 2002, André Kudelski was on the Forbes List of the World's Richest People, being a billionaire at the time.





# Claudio De Virgilio

**Position:** Professor, Department of Biology, Université de Fribourg

**Location:** Fribourg

Claudio De Virgilio currently works at the Department Biology, Université de Fribourg. Claudio does research in Cell Biology. His current project is “Nutrient signaling and control of quiescence in yeast”.

All living cells are capable of exiting the normal cell cycle (proliferating state) and entering an alternative (resting) state termed quiescence or G0. The available body of data, nevertheless, indicates that disruption of G0-entry/exit control mechanisms is often associated with either cellular transformation, or dramatically reduced life span. In this context, Claudio and his team study the mechanisms controlling entry into, survival in, and exit from quiescence in the unicellular, eukaryotic model organism *S. cerevisiae*. So far, several studies (including researches of his group) have uncovered that the nutrient-regulated hub TORC1 orchestrates both entry into and exit from G0. The research of De Virgilio Group is therefore specifically focused on the elucidation of both the mechanisms that regulate TORC1 activity and the nature of the effectors that are regulated by TORC1.



UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG



# Collin Ewald

**Position:** Professor, Department of Health Sciences and Technology, ETH Zurich

**Location:** Schwerzenbach

Collin Ewald is a Professor at the Department of Health Sciences and Technology, ETH Zurich. He is in charge of Lab which provides basic research and systems-level approaches to develop novel strategies to treat age-related pathologies.

The aim of the Ewaldlab`s project is to determine the molecular mechanism(s) that prolong health during aging, using the nematode *C. elegans*, in order to develop novel strategies to treat age-related pathologies. Aging is the major risk factor for developing diseases such as cancer, diabetes, and neurodegenerative disorders. Their recent work has shown that many health- and longevity-promoting interventions re-activate the expression of extracellular matrix (ECM) genes during aging. This ECM enhancement is required and sufficient for extending the lifespan of *C. elegans*. One fascinating facet they are also currently investigating is the role of the ECM with the accumulation of extracellular protein aggregates associated with Alzheimer`s disease and other neurodegenerative diseases.

**ETH** zürich



# Dominik Escher

**Position:** President, Swiss BioTech Association

**Location:** Zurich

Dr. Escher has significant experience as a successful biotechnology entrepreneur and a leader in therapeutic development in both the start-up and corporate pharmaceutical environments.

He was a founder and CEO of ESBATech, selling the ophthalmology side of the business to Alcon. Dr. Escher was VP of R&D Alcon and a member of the Group's Global R&D Leadership Team and, on acquisition of Alcon by Novartis, a member of the Novartis Institutes of Biomedical Research (NIBR) Global Ophthalmology Leadership Team. He was a founder of Delenex Therapeutics and served on the board of the company until acquisition by Cell Medica. Dominik co-founded and is Chairman of CDR-Life, a biotechnology company focusing on next generation biologics. Dominik launched and is a Partner of Pureos Bioventures, a VC fund investing in next generation biologics companies. He is a board member of the Swiss Biotech Association, which he has led as President since 2013.

**SWISS**   
**BIOTECH**



# Eavan Dorcey

**Position:** Managing Director, Swiss Initiative in Systems Biology

**Location:** Zurich

Eavan has wide range of interests which includes Molecular Biology, Biochemistry, Life Science, Project Management, Event Planning, Management, Genetics, Clinical Development, Clinical Trials.

A SystemsX.ch Research, Technology and Development (RTD) Project is proposed and led by a principal investigator (PI). His/her institution is responsible for the administration, coordination, and scientific reporting of the project. Nevertheless, several research groups representing complementary fields contribute to reach the main RTD project goals.

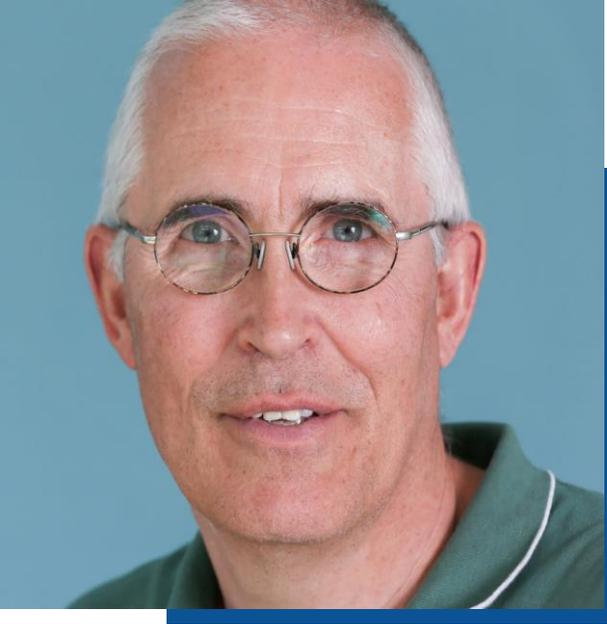
The minimum requirements for an RTD project proposal explicitly prescribe the formation of a consortium of typically three to eight research groups from different disciplines and the involvement of at least two partner institutions.

The second generation of RTD Projects focuses on quantitative biology, taking into account the relevant developments in theory and modeling. Another focus is the potential application of research results in the medical field. Ideally, projects will involve hospitals or private companies, therefore not only taking into account the future of systems biology research in Switzerland, but also allowing for potential collaborations with industry, small to medium-sized enterprises or spin-offs.



**SystemsX.ch**

The Swiss Initiative in Systems Biology



# Johan Auwerx

**Position:** Professor, Laboratory for Integrated and Systems Physiology, École polytechnique fédérale de Lausanne (EPFL)

**Location:** Lausanne

Johan Auwerx is Professor at the École Polytechnique Fédérale in Lausanne, Switzerland, where he directs the Laboratory for Integrated and Systems Physiology (LISP). Dr. Auwerx has been using molecular physiology and systems genetics to understand metabolism in health, aging and disease. Much of his work focused on understanding how diet, exercise and hormones control metabolism through changing the expression of genes by altering the activity of transcription factors and their associated cofactors.

Johan Auwerx was elected as a member of EMBO in 2003 and is the recipient of a dozen of international scientific prizes, including the Danone International Nutrition Award, the Oskar Minkowski Prize, the Morgagni Gold Medal, and the Marcel Benoist Prize. His work is highly cited by his peers with a h-factor of over 120. He is an editorial board member of several journals, including Cell Metabolism, Molecular Systems Biology, The EMBO Journal, The Journal of Cell Biology, Cell, and Science. Dr. Auwerx co-founded a handful of biotech companies, including Carex, PhytoDia, and most recently Mitobridge, and has served on several scientific advisory boards.





# Johann Schneider-Ammann

**Position:** Minister, State Secretariat for Education, Research and Innovation

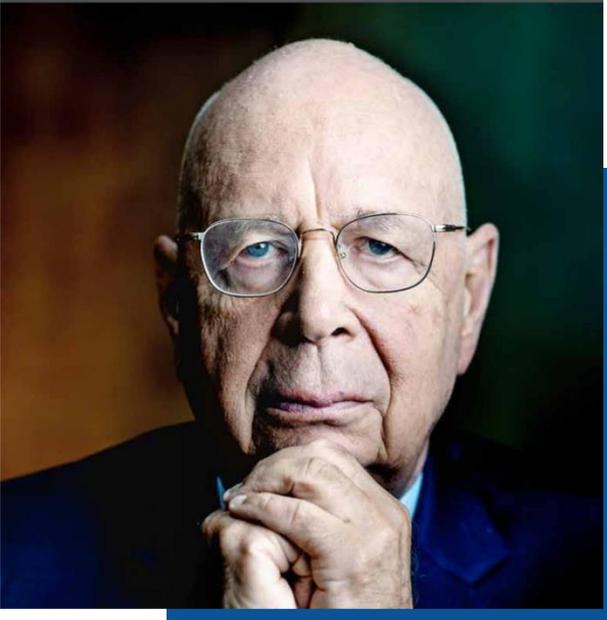
**Location:** Langenthal

In 1999, Schneider-Ammann was elected to the Swiss National Council, and is a member of the Free Democratic Party. From 1999, Schneider-Ammann chaired the corporate union Swissmem. Schneider-Ammann was elected to the National Council in 1999, and re-elected in 2003 and 2007. In the context of the 2008 financial crisis, Schneider-Ammann took a critical stance on bonuses awarded to the finance industry. In 2008, Schneider-Ammann's company moved substantial funds to a tax haven in Jersey.

On 22 September 2010, Schneider-Ammann was elected to the Swiss Federal Council, as the successor to Hans-Rudolf Merz. Schneider-Ammann was the head of the Federal Department of Economic Affairs, Education and Research - the Swiss commerce minister (formerly the Federal Department of Economic Affairs) - taking office on 1 November 2010.



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra



# Klaus Schwab

**Position:** Founder and Executive Chairman, World Economic Forum

**Location:** Cologne

Professor Klaus Schwab was born in Ravensburg, Germany in 1938. He is Founder and Executive Chairman of the World Economic Forum, the International Organization for Public-Private Cooperation. He founded the Forum in 1971, the same year in which he published *Modern Enterprise Management in Mechanical Engineering*. In that book, he argued that the management of a modern enterprise must serve not only shareholders but all stakeholders (die Interessenten), to achieve long-term growth and prosperity. Under his leadership, the Forum has been a driver for reconciliation efforts in different parts of the world, acting as a catalyst of numerous collaborations and international initiatives.

In 1998, with his wife Hilde, he created the Schwab Foundation for Social Entrepreneurship, which seeks to identify, recognize and disseminate initiatives in social entrepreneurship that have significantly improved people's lives and have the potential to be replicated on a global scale. The Foundation supports a network of over 350 social entrepreneurs around the world.

His latest books are *The Fourth Industrial Revolution* (2016), a worldwide bestseller translated into 30 languages, and *Shaping the Fourth Industrial Revolution* (2018).





# Mark A. Rubin

**Position:** Director, Department for Biomedical Research, University of Bern; Head, Bern Center for Precision Medicine

**Location:** Bern

Prof. Mark Rubin is a leader in the fields of prostate cancer biology and precision medicine as it applies to all cancers. Rubin's laboratory led a series of landmark studies defining distinct molecular features of prostate cancer, revealing pathways that are perturbed and drive different types of this cancer. Subsequently, Rubin's laboratory has been instrumental in establishing the mechanistic basis by which defined genomic alterations drive prostate cancers. His group discovered that mutations in the SPOP gene are among the most common in prostate cancer. Rubin's work established that neuroendocrine prostate cancers arise from the aberrant activity of novel drivers, NMYC and AURKA that are distinct from other types of prostate cancers. He is developing novel drugs to target advanced prostate cancer.

Prof. Rubin has translated many of his genomic discoveries into clinical tests that are currently patented and standardly used in the diagnosis and treatment of prostate cancer. As the founding director of the Englander Precision Medicine Institute at Weill Cornell (New York, USA), he developed a cutting-edge genomics clinical lab and received the first New York State approval to use whole exome sequencing in the diagnosis and treatment of a broad variety of cancers. In May 2017, Prof. Rubin joined the University of Bern as Professor and Director of the Department for Biomedical Research and also as Project Leader for Precision Medicine at the University Hospital of Bern.

*u<sup>b</sup>*

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b  
**UNIVERSITÄT  
BERN**



# Michael Hall

**Position:** Professor, Biozentrum, University of Basel

**Location:** Basel

Michael Hall earned a Bachelor of Science in Zoology from the University of North Carolina at Chapel Hill in 1976, and a PhD in Molecular Genetics from Harvard University in 1981. Hall was a postdoctoral fellow at the Institut Pasteur in Paris and at the University of California, San Francisco. He was appointed an Assistant Professor at the Biozentrum of the University of Basel in 1987, and became a Full Professor in 1992. From 1995 to 1998 and from 2002 to 2009 he was head of the Division of Biochemistry, and from 2002 until 2009 was Deputy Director of the Biozentrum.

Hall is a pioneer in the fields of TOR signaling and cell growth control. In 1991, Michael N. Hall discovered a protein, which regulates cell growth, cell size and cell division in yeast cells. Since the function of this protein is inhibited by the substance rapamycin, Hall gave the growth regulator the name «Target of Rapamycin» or for short «TOR». TOR is a conserved protein kinase activated by growth factors, nutrients, and insulin. It is a central controller of cell growth and metabolism. TOR plays a key role in aging and the development of diseases such as cancer, obesity, Diabetes mellitus, and cardiovascular disease. Insights into TOR signaling pathways have been applied for new therapeutic strategies. Hall received the 2017 Albert Lasker Basic Medical Research Award.





# Michael Ristow

**Position:** Professor, Department of Health Sciences and Technology, ETH Zurich

**Location:** Schwerzenbach

He is interested in the biochemical and molecular basis of longevity – in particular the role played by mitochondria in lifespan regulation and prevention of metabolic diseases. Contrary to the widely re-iterated Free Radical Theory of Aging, he works in the first laboratory that shows that the health-promoting effects associated with low caloric intake, physical exercise and other lifespan-extending interventions like sirtuin signaling are caused by increased formation of Reactive Oxygen Species (ROS) within the mitochondria, causing a vaccination-like adaptive response that culminates in increased stress resistance and extended longevity, a process called mitohormesis.

**ETH** zürich



# Niko Beerenwinkel

**Position:** Professor, ETH Zurich; Co-Director, Competence Center for Personalized Medicine

**Location:** Zurich

Niko Beerenwinkel has been Associate Professor of Computational Biology at ETH Zurich since April 2013.

Niko Beerenwinkel studied mathematics, biology, and computer science in Bayreuth, Valladolid, Bonn, and Saarbrücken. He received his diploma degree in mathematics from the University of Bonn in 1999 and his PhD in computer science from Saarland University in 2004. His thesis was honored by the Max Planck Society with the Otto Hahn Medal. Upon graduation, he was awarded the prestigious Emmy Noether fellowship which he used to pursue postdoctoral research at UC Berkeley between 2004 and 2006. He was affiliated with the Program for Evolutionary Dynamics at Harvard University before joining ETH Zurich in 2007.

Niko Beerenwinkel's research is concerned with developing mathematical models of complex biosystems and efficient Algorithms for analyzing high-throuput molecular data. His interests range from mathematical foundations of biostatistical models to clinical applications. Current research topics include graphical models, molecular evolution, HIV drug resistance, somatic evolution of cancer, and ultra-deep sequencing of virus populations.

**ETH** zürich



# Severin Schwan

**Position:** CEO, Roche Group

**Location:** Basel

Severin Schwan has been a difference maker in the business of targeted cancer drugs and understanding the role diagnostics play in matching the right patients with the right treatments. While not all pharma chiefs are willing to pump as much money as Roche into diagnostics and gene sequencing platforms, many of them have been pushing their own companies to follow the lead of targeted drugs such as Roche's Herceptin for breast cancer.

Schwan, of course, pulled the trigger on his Swiss company's landmark acquisition of Genentech in 2009, a megamerger that solidified Roche as the largest provider of cancer drugs in the world. And now the CEO of Roche has his sights set on transforming his company into the world's leader proving DNA sequencers--viewed as essential tools for pinpointing the genetic targets for personalized drugs and diagnostics--via the company's hostile bid to buy Illumina for \$5.7 billion.

Targeted drugs aim to take out the drivers of diseases and reduce side effects on patients, traits that also make the treatments good for business. Schwann has repeated over and over his cause to make the pharma side of Roche laser focused on innovative drugs to deliver big benefits for patients, expecting only those remedies to garner premium prices from cost-conscious health payers and governments.





# Ursula Graf-Hausner

**Position:** Founder Member and Vice President, biotechnet

**Location:** Winterthur

Prof. Dr. Ursula Graf-Hausner has more than 20 years of experience in Tissue Engineering in medicine and pharma industry. She established a research center with several research groups at Zurich University of Applied Sciences ZHAW and led many network projects with industry and research institutions through to successful applications. She showed considerable success in attracting public and private multi-year funding for large and small projects. Publications and Awards prove her success together with her research team.

In 2010 she founded the Competence Centre TEDD (Tissue Engineering for Drug Development and Substance Testing), which meanwhile numbers some 100 members in Switzerland and abroad. As head of the Competence Centre she figured prominently in the leadership of the community and introduced new technologies such as 3D bio-printing. Ursula Graf-Hausner is a scientific board member for 3D cell culture and organization in the German association Dechema. This body convenes an international symposium on 3D cell culture every two years.

In the context of various activities in associations, foundations, advisory and scientific boards she helped shape the strategy of companies and research institutions.

biotechnet  
switzerland



# Vasant Narasimhan

**Position:** CEO, Novartis

**Location:** Winterthur

Vasant (Vas) Narasimhan, M.D., has been Chief Executive Officer of Novartis since February 1, 2018. Since becoming CEO, Dr. Narasimhan has led a strategic and cultural transformation at Novartis to build a leading medicines company globally powered by advanced therapy platforms and data science. Under his leadership, the company has completed over USD 60 billion in strategic transactions.

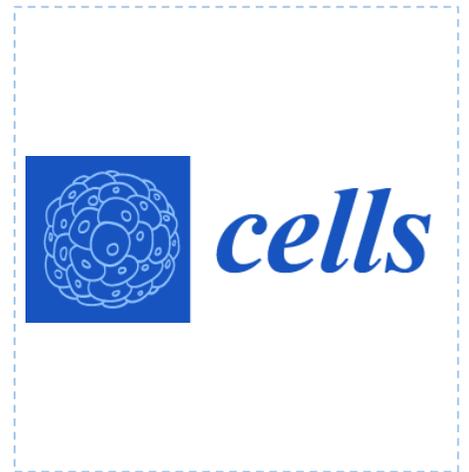
Dr. Narasimhan previously was Global Head of Drug Development and Chief Medical Officer for Novartis. Prior to that, he held a range of leadership roles in product development and general management, such as Global Head of Development for Novartis Pharmaceuticals, Global Head of the Sandoz Biopharmaceuticals and Oncology Injectables business unit, Global Head of Development for Novartis Vaccines, North America Region Head for Novartis Vaccines, and United States Country President for Novartis Vaccines and Diagnostics. During his career at Novartis, Dr. Narasimhan has overseen the licensure of over 20 novel medicines, including advanced cell and gene therapies as well as vaccines. Before joining Novartis in 2005, he briefly worked in management consulting.



# 10 Journals: Longevity in Switzerland



# Cells



Cells is an international peer-reviewed open access journal of cell biology, molecular biology, and biophysics. Cells is published monthly online by MDPI. The journal is indexed by the Science Citation Index Expanded (Web of Science) and BIOSIS Previews. Citations available now in PubMed, full-text archived in PubMed Central The manuscripts of Cells are peer-reviewed and a first decision provided to authors approximately 15 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the second half of 2018). The journal is published in six topical sections: Cell Motility and Adhesion, Cell Signaling and Regulated Cell Death, Cell Nuclei: Function, Transport and Receptors, Autophagy, Organelle Function, and Stem Cells.

Web site:	<a href="https://www.mdpi.com">mdpi.com</a>
Editor-in-Chief:	Alexander E. Kalyuzhny
Publisher:	MDPI AG

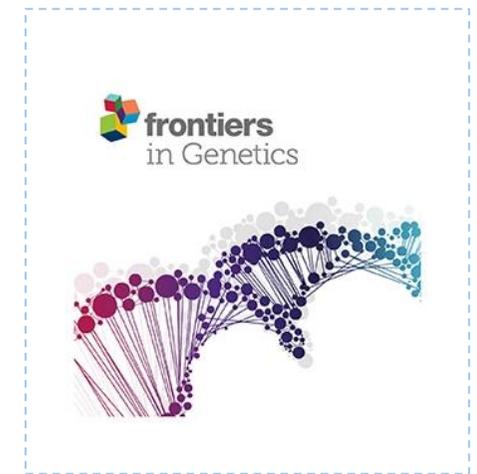
# Frontiers in Aging Neuroscience



Frontiers in Aging Neuroscience is a leading journal in its field, publishing rigorously peer-reviewed research that advances our understanding of the mechanisms of Central Nervous System aging and age-related neural diseases. This multidisciplinary open-access journal is at the forefront of disseminating and communicating scientific knowledge and impactful discoveries to researchers, academics, clinicians and the public worldwide. Frontiers in Aging Neuroscience is a cutting-edge multidisciplinary journal aimed at fostering the understanding of mechanistic processes associated with CNS aging and age-related neuronal diseases. Another central role of the journal is to bring cohesion between disciplines and theories focused on understanding the fundamental processes of senescence. Special emphasis is placed on integrating findings of various sub disciplines in neuroscience to yield translational insight to the aging process and neurological diseases associated with senescence, and developing treatment strategies aimed at the conservation of neuronal function.

Web site:	<a href="http://frontiersin.org">frontiersin.org</a>
Editor-in-Chief:	Thomas Wisniewski
Publisher:	Frontiers

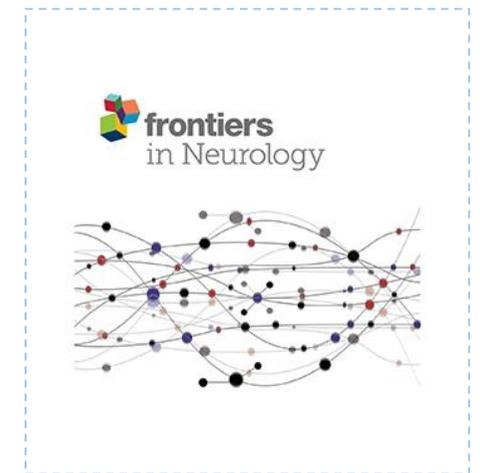
# Frontiers in Genetics



Frontiers in Genetics publishes rigorously peer-reviewed research on genes and genomes relating to all the domains of life, from humans to plants to livestock and other model organisms. Led by an outstanding Editorial Board of the world's leading experts, this multidisciplinary, open-access journal is at the forefront of communicating cutting-edge research to researchers, academics, clinicians, policy makers and the public. The study of inheritance and the impact of the genome on various biological processes is well documented. However, the majority of discoveries are still to come. A new era is seeing major developments in the function and variability of the genome, the use of genetic and genomic tools and the analysis of the genetic basis of various biological phenomena. All specialty sections are open-access and publish original research, reviews, opinions and commentaries.

Web site:	<a href="http://frontiersin.org">frontiersin.org</a>
Editor-in-Chief:	Emmanouil Dermitzakis
Publisher:	Frontiers

# Frontiers in Neurology

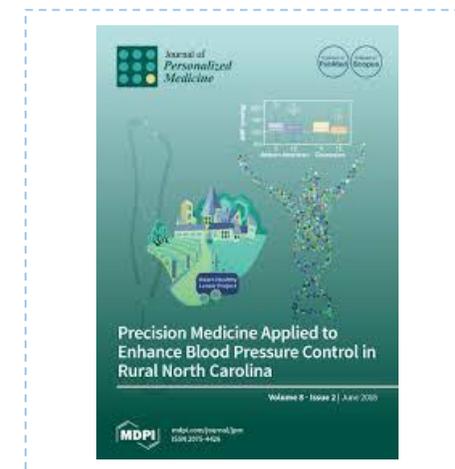


Frontiers in Neurology is a leading journal in its field, publishing rigorously peer-reviewed articles across a wide spectrum of basic, translational, and clinical research that help improve patient care. This multidisciplinary open-access journal is at the forefront of disseminating and communicating scientific knowledge and impactful discoveries to researchers, academics, clinicians and the public worldwide. The journal publishes original articles, editorials and reviews to educate its readers, and to better understand, treat, and prevent neurological disorders. The journal stimulates exploring the diagnosis, nature, causes, treatment, and public health aspects of neurological illnesses.

Dementia is a specialty section of Frontiers in Neurology that aims to publish significant clinical, translational, and basic research findings on all of aspects of dementia due to neurodegenerative disease.

Web site:	<a href="http://frontiersin.org">frontiersin.org</a>
Editor-in-Chief:	Irene Litvan
Publisher:	Frontiers

# Journal of Personalized Medicine



Journal of Personalized Medicine is an international peer-reviewed open access journal on personalized medicine published quarterly online by MDPI. JPM publishes cutting edge, innovative preclinical and translational scientific research and technologies related to personalized medicine (For example precision medicine, pharmacogenomics/proteomics, systems biology, 'omics association analysis). For a comprehensive perspective of primary research, commentaries, and reviews related to personalized medicine, also termed precision medicine, JPM aims to integrate expertise from the molecular and translational sciences, therapeutics and diagnostics, as well as discussions of regulatory, social, ethical and policy aspects. The journal provides a forum to bring together academic and clinical researchers, biotechnology, diagnostic and pharmaceutical companies, health professionals, regulatory and ethical experts, and government and regulatory authorities.

Web site:	<a href="http://mdpi.com">mdpi.com</a>
Editor-in-Chief:	Stephen B. Liggett
Publisher:	MDPI AG

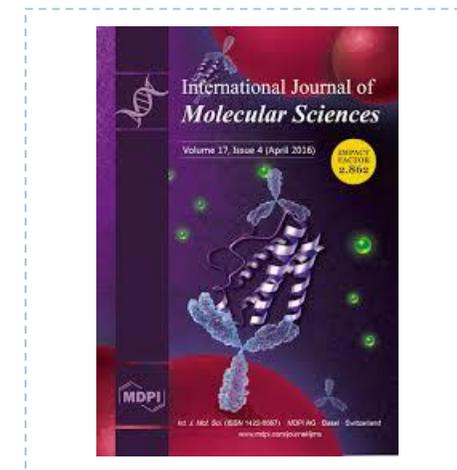
# IN VIVO



The history of medicine and healthcare is one of ever-denser networks and partnerships. Landmark discoveries of important new treatments owe a great deal to the breaking-down of boundaries between previously compartmentalised professions. It is IN VIVO's ambition to offer everyone an insight into the extraordinary richness of Lake Geneva's "Health Valley", where the Lausanne University Hospital plays a prominent role, but also to bring to the attention of a lay audience the advances made by the world-leading universities and research institutions with which the Lausanne University Hospital works. In between publications, all users can visit the journal's website, where they will find all the latest news as well as back issues in electronic format.

Web site:	<a href="http://invivomagazine.com">invivomagazine.com</a>
Editor-in-Chief:	Béatrice Schaad
Publisher:	Lausanne University Hospital

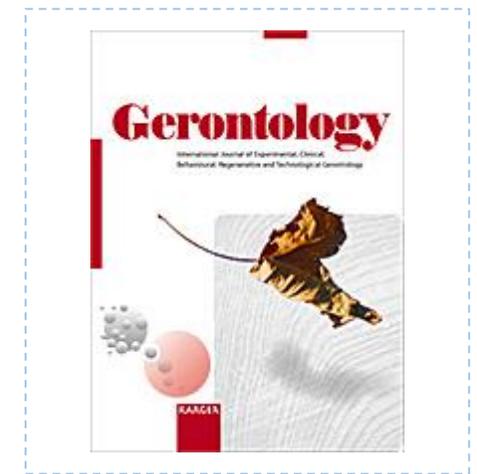
# International Journal of Molecular Sciences



International Journal of Molecular Sciences is an international peer-reviewed open access journal providing an advanced forum for biochemistry, molecular and cell biology, and molecular biophysics, and is published semi-monthly online by MDPI. The aim of the journal is to provide rigorous peer review and enable rapid publication of cutting-edge research to educate and inspire the scientific community worldwide. The team of the International Journal of Molecular Sciences encourage scientists to publish their experimental, theoretical, and computational results in as much detail as possible, in a regular section or in a Special Issue. Therefore, there is no restriction on the length of the papers or the number of electronic multimedia and supplementary files. For all articles, the full experimental details must be provided so that the results can be reproduced.

Web site:	<a href="http://mdpi.com">mdpi.com</a>
Editor-in-Chief:	Maurizio Battino
Publisher:	MDPI AG

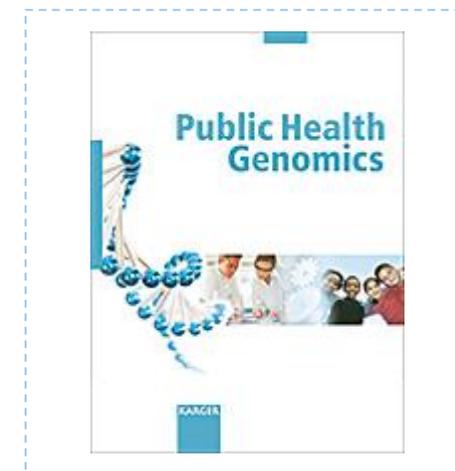
# Gerontology



In view of the ever-increasing fraction of older adults, understanding the mechanisms of aging and age-related diseases has become a matter of urgent necessity. Gerontology, the oldest journal in the field, is also the only journal that responds to this need by drawing topical contributions from multiple disciplines to support the fundamental goals of extending active life and enhancing its quality. The range of papers is classified into five sections. In the Clinical Section, the aetiology, pathogenesis, prevention and treatment of age-related diseases are discussed from a gerontological rather than a geriatric viewpoint. The Experimental Section contains up-to-date contributions from basic gerontological research. Papers dealing with behavioural development and related topics are placed in the Behavioural Science Section. Basic aspects of regeneration in different experimental biological systems as well as in the context of medical applications are dealt with in the Regenerative Section whereas the Technological Section contains important information on major technological advances for older adults.

Web site:	<a href="http://karger.com">karger.com</a>
Editor-in-Chief:	Georg Wick
Publisher:	Karger AG

# Public Health Genomics



Public Health Genomics is the leading international journal focusing on the timely translation of genome-based knowledge and technologies into public health, health policies, and healthcare as a whole. This peer-reviewed journal is a bimonthly forum featuring original papers, reviews, short communications, and policy statements. It is supplemented by topic-specific issues providing a comprehensive, holistic and 'all-inclusive' picture of the chosen subject. Multidisciplinary in scope, it combines theoretical and empirical work from a range of disciplines, notably public health, molecular and medical sciences, the humanities and social sciences. In so doing, it also takes into account rapid scientific advances from fields such as systems biology, microbiomics, epigenomics or information and communication technologies as well as the high potential of 'big data' for public health. With an Impact Factor of 1.5 (2016), Public Health Genomics is one of the leading international journals in the field of Public Health Genomics and provides an ideal publication forum to members of the Genomic Medicine Alliance.

Web site:	<a href="http://genomicmedicinealliance.org">genomicmedicinealliance.org</a>
Editor-in-Chief:	Nicole Probst-Hensch
Publisher:	Karger AG

# Tissue Engineering and Regenerative Medicine



The Tissue Engineering & Regenerative Medicine seeks to provide a platform for the advancement and dissemination of research and technologies related to tissue engineering and regenerative medicine to contribute to science and medicine. The journal is a publication dedicated to helping provide research-based solutions to issues related to human diseases; it is an academic journal covering a wide array of issues in polymer chemistry, natural science, engineering, molecular biology, genomics, cytology, medical science, etc., in relation to tissue engineering and regenerative medicine. This journal features articles tackling a broad range of technologies, techniques, and applications related to the treatment of human diseases such as bio-material, cell therapy, formation of artificial organs, genes, etc., and regeneration of tissues or organs.

Web site:	<a href="http://springer.com">springer.com</a>
Editor-in-Chief:	Chong-Su Cho
Publisher:	Springer Nature Switzerland AG

# 15 Journalists: Longevity in Switzerland





# Alexander Thoele

swissinfo.ch (Swiss Broadcasting Corporation)

Alexander Thoele is a multimedia and multilingual journalist with 25 years' experience in digital, print (magazine and newspaper), TV and radio. He is a team leader employed by the swissinfo.ch, the international service of the Swiss Broadcasting Corporation. Alexander is engaged in motivating a team of journalists to explain Switzerland to the international community and also active in the production of its content. He also has experience as public relations manager for multinational and corporate organizations.





# Avik Roy

Forbes

Avik Roy is a journalist and policy advisor. Originally an investment analyst, he co-founded and is president of the Foundation for Research on Equal Opportunity. While working as an investment research analyst in the late 2000s, Roy began blogging in response to the Patient Protection and Affordable Care Act, from a critical point of view. The blog was republished at National Review Online, and moved to Forbes in 2011. Roy has published two books about the Affordable Care Act, as well as research and proposals through the Manhattan Institute, where he was a senior fellow from 2011 to 2016.

Roy has been a policy advisor to three Republican Party presidential candidates. He was a health care policy advisor to Mitt Romney's 2012 campaign and was the senior advisor to Rick Perry's 2016 campaign. After Rick Perry withdrew from the race, Roy joined the 2016 presidential campaign of Marco Rubio as a policy advisor. At Forbes, National Review, and other venues, Roy writes on other topics related to politics and policy. Roy's financial and medical background, along with his experience on presidential campaigns makes him a frequent guest on cable news networks such as Fox News, Fox Business, MSNBC, CNBC and Bloomberg Television.

## Forbes



# Béatrice Schaad

IN VIVO

Béatrice is a Chief Editor of the IN VIVO Magazine. It is IN VIVO's ambition to offer everyone an insight into the extraordinary richness of Lake Geneva's "Health Valley", where the Lausanne University Hospital (CHUV) plays a prominent role, but also to bring to the attention of a lay audience the advances made by the world-leading universities and research institutions with which the hospital works.

Béatrice Schaad is a head of the Communication Department of the Lausanne University Hospital and was also appointed on August 1, 2019 full professor at the Faculty of Biology and Medicine of the University of Lausanne (UNIL) in charge of the study of the relations between patients and professionals at the hospital.





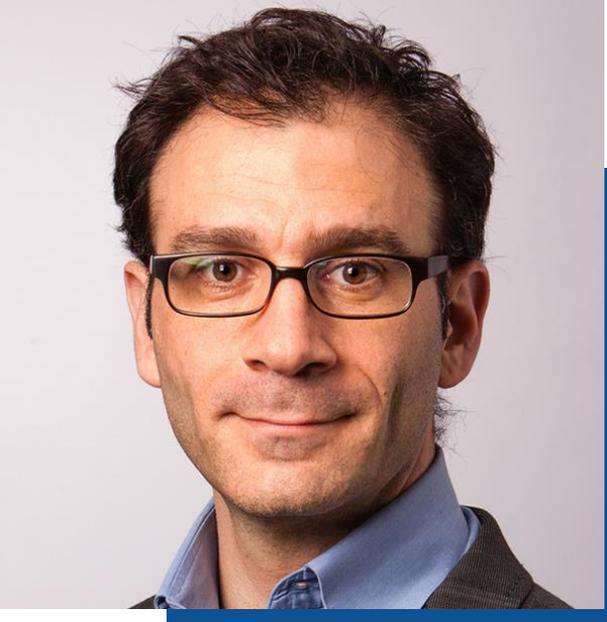
# Celia Luterbacher

Swiss Federal Institute of Technology in Lausanne

Celia Luterbacher is a science writer for the School of Computer and Communication Sciences (IC) and the College of Humanities (CDH) at the Swiss Federal Institute of Technology in Lausanne (EPFL). Previously, she led the science beat as a journalist for the [swissinfo.ch](http://swissinfo.ch), the international service of the Swiss Broadcasting Corporation. Celia studied biology, science communication and policy at college and graduate school in her native USA. She made the move to Switzerland in 2013, where she now enjoys trying to keep up with Swiss research and technology.



ÉCOLE POLYTECHNIQUE  
FÉDÉRALE DE LAUSANNE



# Daniel Saraga

Swiss National Science Foundation

Daniel Saraga is a Head of Science Communication at the Swiss National Science Foundation and editor-in-chief of "Horizons". As a science journalist, he was previously in charge of the European science magazine "Technologist". Daniel Saraga studied physics at EPFL and obtained his PhD from University College London. He also worked as a researcher at the Swiss Nanoscience Institute and founded the Café Scientifique Basel.



SWISS NATIONAL SCIENCE FOUNDATION



# Duc-Quang Nguyen

swissinfo.ch (Swiss Broadcasting Corporation)

Duc-Quang Nguyen is a data journalist at swissinfo.ch, the international service of the Swiss Broadcasting Corporation. Currently he performs a full suite of responsibilities associated with setting-up and leading the data-driven journalism for a newsroom: data analysis, open-source framework development, data visualisation, project management, data-led stories.

Duc-Quang Nguyen was born and raised by lake Geneva in Switzerland. He is PhD in genetics from Oxford University. Previously, Duc-Quang was a quantitative analyst for a hedge fund in Chicago and in Zug.





# Florian Fisch

Swiss National Science Foundation

Florian Fisch is a science editor for biology and medicine at the Swiss National Science Foundation. He studied biology at the universities of Lausanne and Neuchâtel, did research work at the Botanical Institute in Basel and obtained his PhD in biochemistry at the University of York (UK). As a freelance journalist, he has contributed articles to the Neue Zürcher Zeitung (NZZ), NZZ am Sonntag, Laborjournal and other media outlets.



# Jeannie Wurz

swissinfo.ch (Swiss Broadcasting Corporation)

Jeannie Wurz provides editing of medical texts for peer-reviewed journals, proofreading of conference materials, editing and production of newsletters. Since 1983, she has worked as a copy editor, production editor, and proofreader, in a range of full-time and free-lance positions. Her employers/clients have included a weekly news magazine, publishing companies, a graphic design firm, hospitals, universities, students, and non-profit organizations. From 2009 to 2012 Jeannie produced a quarterly newsletter for the London-based Committee on Publication Ethics. Jeannie Wurz has also published articles in a field of ageing on the swissinfo website.





# Jérôme Cosandey

Avenir Suisse

Dr. Jérôme Cosandey, Director for French-speaking Switzerland and Head of Research “Sustainable Welfare State” of Avenir Suisse, focuses on old-age provision, health care and the intergenerational agreement. After his graduation at the ETH he worked a few years as a strategic advisor at the Boston Consulting Group and later at the UBS. Furthermore, he holds a Master’s Degree in International Economic History from the University of Geneva.

**avenir suisse**

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# Hannah Wise

CNNMoney Switzerland

Hannah Wise is a television News Anchor at the CNNMoney Switzerland with experience in presentation and production at leading news channels around the world. She has a first class writing skills, solid interview techniques, video editing. CNNMoney Switzerland represents the first international extension of the CNNMoney brand and resulted from more than a year's collaboration across CNNI television, commercial, digital, and CNNMoney.

**avenir suisse**

*think tank for economic and social issues*



# Kevin D. Williamson

Foundation for Economic Education

Kevin D. Williamson is National Review's roving correspondent and director of the National Review Institute's William F. Buckley Jr Fellowship Program in Political Journalism.

He is the author of *The End Is Near and It's Going To Be Awesome: How Going Broke Will Leave America Richer, Happier, and More Secure*, *The Dependency Agenda*, and *The Politically Incorrect Guide to Socialism*. He contributed chapters to *The New Leviathan: The State Vs. the Individual in the 21st Century* and *Future Tense: Lessons of Culture in an Age of Upheaval*. When he is not sounding the alarm about Fiscal Armageddon, he is the theater critic at *The New Criterion*.

Williamson began his journalism career at the Bombay-based Indian Express Newspaper Group and spent 15 years in the newspaper business in Texas, Pennsylvania, and Colorado. He served as editor-in-chief of three newspapers and was the founding editor of Philadelphia's *Bulletin*. He is a regular commentator on Fox News, CNBC, MSNBC, and NPR. His work has appeared in the *New York Post*, the *New York Daily News*, *Commentary*, *Academic Questions*, and other publications. He is a native of Lubbock, Texas.

**FEE**

— FEE.org —



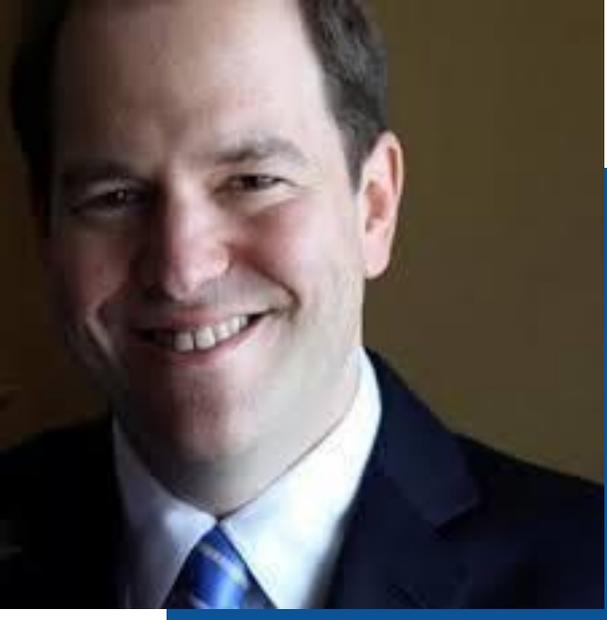
# Natasha Leeson

The Pharmaceutical Journal

Natasha Leeson is a journalist at the Pharmaceutical Journal, the official monthly journal of the Royal Pharmaceutical Society, provides information and analysis on the latest advances in any branch of pharmacy practice and pharmaceutical science throughout the world.

Natasha oversees journal's peer review process and is responsible for the CPD, learning, review and research articles.

*the*  
PHARMACEUTICAL JOURNAL  
A Royal Pharmaceutical Society publication



# Nelson D. Schwartz

The New York Times

Mr. Schwartz is a graduate of the University of Chicago, and worked for 10 years at Fortune Magazine before joining the Times. Nelson D. Schwartz has worked at The New York Times for a decade and has covered economics since 2012. Before that, he wrote about Wall Street and banking for The Times, and also served as European economic correspondent in Paris from 2008 to 2010. He joined the paper in 2007 as a feature writer for the Sunday Business section.

In 2014, Mr. Schwartz was the recipient of the Nathaniel Nash Award, given annually by The Times to the reporter who “best excels in business and economic news.”

**The  
New York  
Times**



# Pierre-François Leyvraz

IN VIVO

Pierre-François is a Chief Editor of the IN VIVO Magazine. He is a Director-General of the Hospices-CHUV in Lausanne. The Hospices-CHUV is the entire CHUV hospital system, comprising 11 clinical, medico-technical and academic departments, 2 psychiatric centers and the Gimel psychogeriatric home.

A specialist in reconstructive surgery, Professor Leyvraz is currently serving as medical director of the Orthopedic Hospital de Suisse Romande and head of the Orthopedics and Traumatology service of the CHUV. He founded a research group at EPFL in Orthopedics in 1987, and has held a position as external adjunct professor in EPFL's School of Engineering since 2005, where he is a member of EPFL's Institute of translational biomechanics.





# Sina Steininger

Switzerland Global Enterprise

Sina Steininger is a Head of Information at Switzerland Global Enterprise, a non-profit association which promotes exports and investments by helping its clients to realize new potential for their international businesses and thus to strengthen Switzerland as an economic hub.

Sina is a communications specialist with a focus on media relations, online communications and Social Media, experience in PR and marketing. Proficient with new technologies, creative and innovative, she used to take initiative and responsibility. Her main qualities include reliability and project management skills.



# 15 Conferences: Longevity in Switzerland



# 11th International Francophone Congress of Gerontology and Geriatrics



11th International Francophone Congress of Gerontology and Geriatrics (CIFGG) is organized by Swiss Society for Geriatrics and Swiss Society of Gerontology. Conference Topics include: News in geriatric medicine; Current and future treatments for common pathologies in old age (cardiovascular diseases, cognitive disorders and dementia, diabetes, cancer, osteoporosis, osteoarthritis, infections, depression, delirium, falls, incontinence, fragility, malnutrition, mobility disorders, loss of functionality, sarcopenia); Organization and practice of care; Gerontechnology; The biology of aging; Aging and society.

Date:	13 - 15 June 2018
Location:	Montreux, Switzerland
Organizers:	Swiss Society for Geriatrics, Swiss Society of Gerontology
Web Site:	<a href="http://swiss-conferences.com">swiss-conferences.com</a>

# 69th World Health Assembly



The World Health Assembly is the decision-making body of WHO. It is attended by delegations from all WHO Member States and focuses on a specific health agenda prepared by the Executive Board. The main functions of the World Health Assembly are to determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget.

On the event the Health Assembly is requested to consider the draft global strategy and plan of action on aging and health and to endorse it.

Date:	23 - 28 May 2016
Location:	Geneva, Switzerland
Organizers:	WHO
Web Site:	<a href="http://who.int">who.int</a>

# Aging & Cognition 2019



This Aging & Cognition conference series aims to stimulate research in the domain of cognitive aging and related research fields in Europe by bringing together European and non-European scientists. Cognition is defined in the broadest sense, including sensory, cognitive, motor and emotional aspects, as well as human and animal studies. Whereas cognition and cognitive neuroscience for healthy aging are the main focus of the conference series, an additional focus targets interventions aimed at influencing age-related cognitive deficits.

Date:	23 - 28 May 2016
Location:	Zurich, Switzerland
Organizers:	University of Zurich
Web Site:	<a href="http://eucas.org">eucas.org</a>

# Alzheimer's and Dementia Care



The theme of the conference is “Global Voice and Awareness on Alzheimer's Disease and Dementia Care”. The conference covers the translational nature of Neurological research, with emphasis on both the basic science as well as its applications in Industry and Academia. Presentations include major research advances in Alzheimer’s disease, dementia, brain injury, aging awareness, Parkinson’s diseases, dementia nursing, stroke, neurodegenerative diseases, prevention and therapy of the disease, and other related neurological disorders. The groundbreaking series of Alzheimer's, Dementia and Aging Awareness Conferences attract international medical and scientific professionals from worldwide.

Date:	17 - 18 June 2019
Location:	Zurich, Switzerland
Organizers:	LexisConferences
Web Site:	<a href="http://swiss-conferences.com">swiss-conferences.com</a>

# Annual Aging and Drug Discovery Forum



In this symposium, leaders in the aging and longevity field will describe the latest progress in the molecular, cellular and organismal basis of aging and our search for interventions. A panel of thought-leaders will give us their cutting edge reports on the latest progress in our quest to extend the healthy lifespan of everyone on the planet. Participants will hear from both academic and industry players on the future of aging and longevity research. Everyone should join the conference - this merger of driven scientists and global visionaries in an event that may shape the field in years to come.

Date:	10 - 11 September 2019
Location:	Basel, Switzerland
Organizers:	BASEL LIFE
Web Site:	<a href="http://nature.com">nature.com</a>

# Biology of Aging - Gordon Research Seminar



The Gordon Research Seminar on Biology of Aging is a unique forum for graduate students, post-docs, and other scientists with comparable levels of experience and education to present and exchange new data and cutting edge ideas.

The focus of this meeting is the fundamental processes and pathways of aging emerging from studies of model organisms, how these concepts advance the understanding of human aging and age associated diseases, and how this knowledge can be translated into successful interventions to ameliorate the functional decline of age. The GRS promote interactions and constructive networking with successful established scientists as well as with their peers, and engage in workshops with role models from academia, industry and government on career development.

Date:	8 - 9 July 2017
Location:	Les Diablerets, Switzerland
Organizers:	Gordon Research Conferences
Web Site:	<a href="http://grc.org">grc.org</a>

# Credit Suisse Global Supertrends Conference 2019



Credit Suisse Global Supertrends Conference, formerly titled Megatrends Conference, is designed to provide in-depth discussions from internationally recognized opinion leaders, sector specialists and industry leaders on the fundamental social, economic, environmental and demographic trends that are expected to impact global markets in the future. Demographics, transformational socioeconomic and political developments as well as technological and scientific progress are at the core of supertrends as the conference provides our client investors with the multi-year investment themes to capture opportunities in major societal shifts.

Date:	23 April 2019
Location:	Singapore, the Republic of Singapore
Organizers:	Credit Suisse
Web Site:	<a href="http://credit-suisse.com">credit-suisse.com</a>

# Integrative Biology of Aging: New Insights from Molecules to Systems



Recent studies from diverse model organisms, such as worms, flies, and mice, have demonstrated that systemic interplay between multiple tissues and organs regulates aging and longevity. Additionally, subcellular systems such as organelles and stress pathways can often communicate intra- and intercellular. To dissect such complex systemic regulation of aging and longevity, significant progress has been made in identifying control networks and basic architectures, but how communication is achieved at different levels of organization and assembled into larger architectures is only beginning to be explored. The major objective of the GRC is to explore these themes in a supportive setting that particularly focuses on the needs of graduate students and postdoctoral trainees, and prepare them for a full and productive participation in the GRC to follow.

Date:	9 - 14 July 2019
Location:	Les Diablerets, Switzerland
Organizers:	Gordon Research Conferences
Web Site:	<a href="http://grc.org">grc.org</a>

# Gerontology Symposium



The mission of the Gerontology Symposium is to focus on expert opinion on current trends and tendencies in gerontology targeted to inhibit too fast processes of aging and bring them within physiological limits estimated as such in modern gerontology and anti-aging medicine. Evidence-based data, safety and scientific argumentation are given priority.

World renowned experts have been invited to draw up recommendations for application of carefully argued means and methods in medical practice.

Date:	27 May 2017
Location:	Geneva, Switzerland
Organizers:	Swiss National Science Foundation
Web Site:	<a href="http://swiss-conferences.com">swiss-conferences.com</a>

# Next Generation Summit - Investing in Longevity Forum



Next Generation Summit explores the topic of 'First Movers'. First Movers are very important for society as they look beyond the short-term challenges and focus instead on developing innovative ideas. While some of these ideas will never come to fruition, others will make it on to the market and may even become the new norm one day. Next Generation conference provides an audience of interested investors with first-hand insights from Julius Baer's leading experts and renowned guest speakers on the topic of 'First Movers' – people who look beyond short-term challenges and instead try and test innovative ideas.

Date:	20 October 2015
Location:	Zurich, Switzerland
Organizers:	Julius Baer
Web Site:	<a href="http://juliusbaer.com">juliusbaer.com</a>

# Personalized Oncology 2019

The logo for "Personalized Oncology 2019" is a black rectangular box with a white border, containing the text "Personalized Oncology 2019" in white. The background of the box is filled with a pattern of small, colorful dots in shades of green, yellow, and red.

At “Personalized Oncology 2019”, the world’s experts on translational oncology research will highlight the current developments and future perspectives of patient-centric, personalized prevention, diagnosis, treatment, and outcome of cancer patients. Organizers invite everyone to join their international audience of scientists, clinicians, translational researchers, computational biologists and contributors from the pharmaceutical and technology industry at this great event and shape together the future of personalized oncology. Accordingly, the invited speakers are world-renowned researchers and clinicians. The conference is organized in the context of the Personalized Health Alliance Basel-Zurich, including the University and University Hospital Basel, ETH Zurich, and the University and University Hospital Zurich.

Date:	23 - 25 June 2019
Location:	Basel, Switzerland
Organizers:	Personalized Health Alliance Basel-Zurich
Web Site:	<a href="http://unibas.ch">unibas.ch</a>

# Precision Medicine and Personalized Health



The one-day Conference 2018 on Precision Medicine and Personalized Health of the Federation of European Academies of Medicine (FEAM), hosted by the Swiss Academy of Medical Sciences (SAMS), focused on recent developments in precision medicine and personalised health, and attracted senior representatives of the biomedical community from Switzerland and from across Europe. The key message coming out of the FEAM conference on personalised health was that the patient should always be at the heart of new biomedical research. Personalised medicine is a relatively new field of medicine that's managed to capture the minds and imagination of the general public.

Date:	28 September 2018
Location:	Geneva, Switzerland
Organizers:	FEAM
Web Site:	<a href="http://feam.eu">feam.eu</a>

# Swiss Genomics Forum



The Swiss Genomics Forum (SGF) organized by the Health 2030 Genome Center, will bring together researchers, clinicians, patient communities, and other stakeholder groups to meet and discuss about the future of genomics. The following themes will be explored at the SGF2019: Genomics: opportunities and challenges; Diseases: latest genomics based diagnostic and therapeutic approaches; Personalized Health: relevance and impact of genomic medicine; Data: legal and ethical issues around sharing patient data; Collaboration: strategic partnerships.

Date:	27 September 2019
Location:	Geneva, Switzerland
Organizers:	Health 2030 Genome Center
Web Site:	<a href="http://health2030genome.ch">health2030genome.ch</a>

# The World's Leading AI in Medicine Summit



The World's Leading AI in Medicine Summit is the only large-scale, global summit focused purely on AI in healthcare. Intelligent Health gathers the world's brightest AI health brains from pharmaceutical, biotech, medtech, health provisions, clinicians, tech companies, startups, investment and science every September in Switzerland. They work in line with the UN Sustainable Development Goals and have a big focus on making sure the benefits of AI are distributed globally. The mission of the conference is to progress discussions about how AI can be used to prevent and solve some of the world's greatest healthcare problems, improve the health of the human race and set the global AI agenda in healthcare for 2020 and beyond.

Date:	11 - 12 September 2019
Location:	Basel, Switzerland
Organizers:	Intelligent Health AI
Web Site:	<a href="https://intelligenthealth.ai">intelligenthealth.ai</a>

# UBS's 2018 Healthcare Summit



Key themes like transformative trends and enabling innovations in the healthcare industry take center stage in the UBS's, a Swiss multinational investment bank, Healthcare Summit 2018.

By providing an exceptional platform to deepen networks in the industry, the summit brings together forward-thinking leaders, captains of industry and renowned speakers who are at the forefront of the transformative trends in healthcare, life science and technologies. Thematic topics include: The future of healthcare; Singapore's biotech inflexion; Living to 150; Big data and artificial intelligence; Disruptive healthcare business models; Investment opportunities in healthcare

Date:	19 October 2018
Location:	Singapore, the Republic of Singapore
Organizers:	UBS
Web Site:	<a href="http://ubs.com">ubs.com</a>



## AGING ANALYTICS AGENCY

### Aging Analytics Agency

**Aging Analytics Agency** is the world's premier provider of industry analytics on the topics of Longevity, Precision Preventive Medicine and Economics of Ageing, and the convergence of technologies such as AI, Blockchain, Digital Health and their impact on the healthcare industry. The company provides strategic consulting services in fields relating to Longevity, and currently serves as the primary source of analytics and data for the UK All-Party Parliamentary Group for Longevity.



## LONGEVITY VISION FUND

### Longevity Vision Fund

Longevity Vision Fund is a \$100M life extension-focused investment fund dedicated to making longevity affordable and accessible to all. The fund accelerates breakthroughs in longevity by investing in startups and companies that develop technologies, products, and services that extend human lifespans and overcome the negative effects of aging. Founded by Sergey Young, XRPRIZE Innovation Board Member and Longevity XPRIZE Development Sponsor.



## LONGEVITY.CAPITAL

### Longevity.Capital

**Longevity.Capital** is a specialised Longevity Industry Index Hedge Fund with enhanced liquidity that uses hybrid investment technologies to combine the profitability of venture funds with the liquidity of hedge funds, thus significantly de-risking the interests of LPs and providing the best and most promising Longevity companies with adequate amounts of investment.



### Longevity Swiss Foundation

**Swiss Longevity Foundation** is primarily interested in strategic collaboration with Swiss Governmental, Non-Governmental and International organizations, as well as BioTech, BioPharma and Financial Corporations (including investment banks, VC firms, insurance companies, pension funds and asset management firms) on projects and initiatives related to Longevity.



## LONGEVITY INTERNATIONAL

### Longevity.International

**Longevity International UK** is the Secretariat for the UK All-Party Parliamentary Group for Longevity, structured as a social enterprise bringing together start-ups, industry, academic and governmental stakeholders under one umbrella to provide a unified voice and coordinating vehicle for positive discourse and change to ensure the 'longevity dividend' is accessible to everyone.



## Biogerontology Research Foundation

Prevent. Restore. Preserve.

### Biogerontology Research Foundation

**The Biogerontology Research Foundation (BGRF)** is the UK's oldest longevity nonprofit organization founded by leading geroscientists.

**The BGRF** funds and conducts research that aims to develop biotechnological interventions to remediate the molecular and cellular deficits that accumulate with age and underlie age-related illnesses.



# AGING ANALYTICS AGENCY

**Link to the Report:** <https://www.aginganalytics.com/longevity-in-switzerland>

**E-mail:** [info@aginganalytics.com](mailto:info@aginganalytics.com)

**Website:** [www.aginganalytics.com](http://www.aginganalytics.com)

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