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.

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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

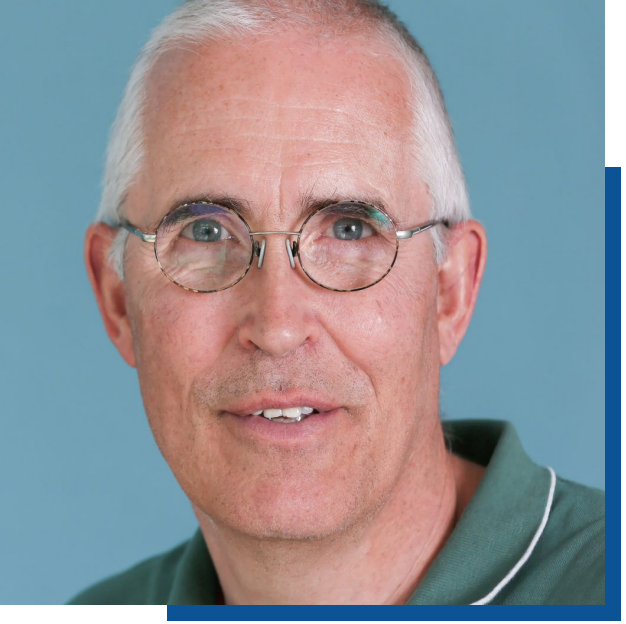
Eavan has wide range of interests which includes Molecular Biology, Biochemistry, Life Science, Project Management, Event Planing, Management, Genetics, Clinical Development, Clinical Trials.

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.

ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

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.

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Klaus Schwab

Position: Founder and Executive Chairman, World Economic Forum
Location: Cologny

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).

WORLD ECONOMIC FORUM

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.

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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.

University of Basel

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

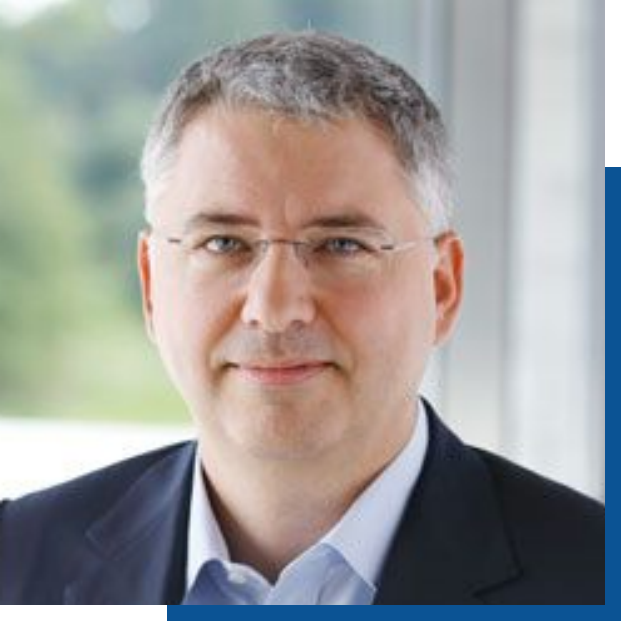
Niko Beerenwinkel

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.



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
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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.

NOVARTIS