35 Research Labs: Longevity in Switzerland

Aging and Muscle Metabolism Lab, University of Lausanne

UNIL | Université de 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:	unil.ch
Category:	Regenerative Medicine
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Altmeyer Lab, University of Zurich

ALTMEYER 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:	altmeyerlab.org
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Barral Group, ETH Zurich

Coordination of cytoskeletal events during mitosis during asymmetric cell division, cells as diverse as stem cells and budding yeast make usage of their polarity to segregate cell fate determinants differentially between the two daughter cells. Beyond its medical and developmental importance, this laboratory study 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.

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Bern Center for Precision Medicine

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:	bcpm.unibe.ch
Category:	Precision Medicine
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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:	unifr.ch
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Chemical and Biological Systems Engineering Laboratory, ETH Zurich

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:	cabsel.ethz.ch
Category:	Geroscience Research
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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:	hirslanden.ch
Category:	Personalized/Precision medicine
Location:	Geneva
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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:	hirslanden.ch
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Competence Center for Personalized Medicine

The Competence Center Personalized Medicine UZH/ETH (CC-PM) - a plattform 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:	biotechnet.ch
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.

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Department of Ecology and Evolution, University of Lausanne

UNIL | Université de 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.

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Department of Molecular Mechanisms and Disease, University of Zurich

University of Zurich[UZH]

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:	dmmd.uzh.ch
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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:	ehrbarlab.com
Category:	Regenerative Medicine
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Eggel LAB

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:	eggellab.com
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Energy Metabolism Laboratory, ETH Zurich

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:	energymetab.ethz.ch
Category:	Regenerative Medicine
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Extracellular Matrix Regeneration Laboratory, ETH Zurich

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:	ewaldlab.strikingly.com
Category:	Regenerative Medicine
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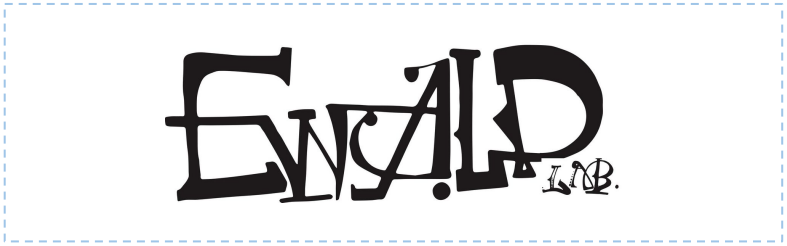
Ewald Lab, ETH Zurich



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:	ewaldlab.com
Category:	Geroscience Research
Location:	Zurich
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Group Ocampo, University of 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.

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Institute of Regenerative Medicine, University of Zurich

University of Zurich[UZH]

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:	irem.uzh.ch
Category:	Regenerative Medicine
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Institute of Social and Preventive Medicine, University of Bern

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:	ispm.unibe.ch
Category:	Precision Medicine
Location:	Bern
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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:	hirslanden.ch
Category:	Personalized/Precision medicine
Location:	Zurich
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Klinik Im Park

Klinik Im Park is located 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:	hirslanden.ch
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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:	auwerx-lab.epfl
Category:	Geroscience research
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Laboratory of Regeneration and Adult Neurogenesis, University of Geneve

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:	genev.unige.ch
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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:	lingner-lab.epfl.ch
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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:	unifr.ch
Category:	Regenerative Medicine
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Prof. Christoph Handschin Research Group, 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.

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Prof. Markus Rüegg Research Group, 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.

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Prof. Michael N. Hall Research Group, 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.

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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:	unifr.ch
Category:	Geroscience Research
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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.

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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:	ticinohealth.ch
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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:	stembank.ch
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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.

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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:	vital-it.ch
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