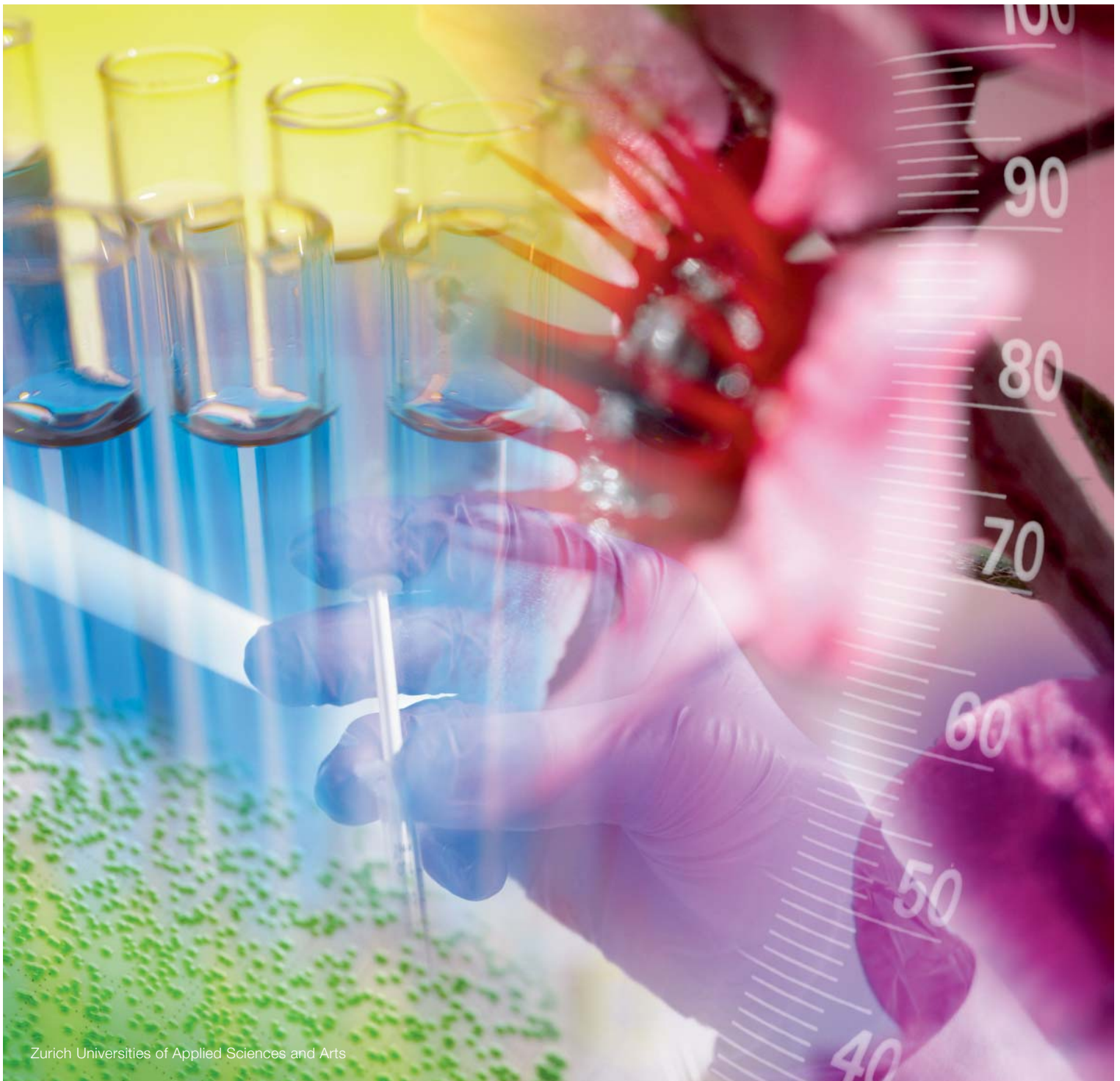




**Life Sciences and
Facility Management**

Research & Services

- Biotechnology
- Chemistry
- Food and Beverages
- Natural Resource Sciences
- Facility Management
- Simulation



The School of Life Sciences and Facility Management at the ZHAW in Wädenswil has proven expertise in the fields of the environment, food and nutrition, health and society. The School's Institutes (Biotechnology, Chemistry, Food and Beverage Innovation, Natural Resource Sciences, Facility Management, and Applied Simulation) think and act in interdisciplinary ways and cross-link life, product and production cycles. In this way new knowledge and experience are channelled into education, research and services.



Environment | Food | Health | Society
Unsere Kompetenzen in Life Sciences
und Facility Management.

Competences

Research

Application-oriented research is at the heart of the mandate of the Institutes at the School of Life Sciences and Facility Management. As specialists from the Institutes are engaged in both national and international projects, research at the ZHAW in Wädenswil contributes to promoting and profiling not only Zurich's but also Switzerland's economic activities.

Services

With proven expertise, interdisciplinary focus and customer-specific options, the ZHAW in Wädenswil offers a broad range of services, from analysis to evaluation.

Infrastructure

The ZHAW's equipment and apparatus are state-of-the-art and allow professional processing of application-oriented research and development projects. Modern laboratories as well as testing and production facilities provide a solid basis for this.

Cooperation

Cooperation with other universities of applied sciences, traditional universities and public authorities is systematically promoted. This mainly involves collaboration with institutions in Europe, but key focal points are also being developed with partners outside the EU/EFTA area. Thanks to extensive specialised knowledge and many years of experience, the School is an expert network partner in national and international projects.

Employees

Depending on the particular challenges of a project, researchers, research assistants and students from various disciplines work together in interdisciplinary teams.

Confidentiality

Discretion and integrity are everyday priorities in research. When required, projects and service contracts are handled in the strictest confidence.

Support

Research and development projects are supported by national and European programmes (CTI*, EU projects). The economy profits from innovative projects within these programmes, and this in turn strengthens Switzerland's competitiveness. Established companies and start-ups alike gain added value by working together with the ZHAW, whose track record of success is documented by a broad variety of projects.

*CTI, Commission for Technology and Innovation

“Research and development are among the core competences of a university. I'm committed to seeing them flourish at the ZHAW in Wädenswil!”



Prof. Dr. Urs Hilber
Dean

IBT Institute of Biotechnology

Biotechnology is the interdisciplinary connection between biological, medicinal and technical sciences. The goal of the IBT is to produce and analyse useful substances using micro-organisms, animal and plant cells, or their components. The focus of the projects is the development of biotechnological methods that can be applied in pharmaceuticals, medicine, food and the environment.



Focal points

- Biological process technology
- Micro-, molecular and cell biology
- Pharmaceutical technology

www.ibt.zhaw.ch



Contact

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Director of IBT

ICBC Institute of Chemistry and Biological Chemistry

A modern concept of applied chemistry is put into practice on a daily basis at the ICBC. In addition to activities in the area of analytical, industrial and preparative chemistry, tasks include those from biological chemistry. Research also focuses on biological chemistry, such as diagnostics, protein purification, bioanalytics and biomaterials. Considerable importance is attached to working on interdisciplinary issues from chemical and biochemical perspectives, for example on materials and nano- or surface technology. In the area of process development, on-going process control and online analytics are central topics.



Focal points

- Syntheses, processes and new materials
- Analytics and analytical technology
- Protein technology, bio- and tissue engineering
- Promotion of chemistry education

www.icbc.zhaw.ch



Contact

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Director of ICBC

ILGI Institute of Food and Beverage Innovation

Almost 90 percent of all food and beverages consumed today are either partially or fully industrially processed. Innovative product and process development is essential to meet the demand for tasty, safe and healthy food. The aim of the ILGI is to study the entire value creation chain in the development and optimisation of foods, from raw material to consumers. Nutritional-physiological, hygienic and technological demands are considered together with quality standards, ecology and logistics.



Focal points

- Process and product optimisation
- Aroma analysis and sensory evaluation
- Food safety and durability
- Quality management
- Packaging and logistics
- Nutrition and consumer science

www.ilgi.zhaw.ch



Contact

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Director of ILGI

IUNR Institute of Natural Resource Sciences

Global demands for sustainable development are generating new tasks which require a combination of knowledge and experience from the disciplines of engineering, social sciences and economics. The application-oriented research and development of the IUNR concentrates on sustainable use of natural resources, for both urban and rural spaces. This involves harmonising economic, social and ecological goals, and producing holistic results which are beneficial to both humans and nature.



Focal points

- Greening and health
- Protection of natural resources
- Nature and leisure time

www.iunr.zhaw.ch



Contact

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Director of IUNR

IFM Institute of Facility Management

Economic challenges dominate our times. The IFM promotes innovation and the development of the processes, methods and concepts of Facility Management (FM). Research carried out at the IFM aims to promote more effective linking of services at the operational level of FM with strategic business decisions. The core business of an organisation is thus optimally supported from economic, ecological and social points of view, FM adding both qualitative and quantitative value.



Focal points

- Life cycle management
- Energy management
- Workplace management
- FM in healthcare

www.ifm.zhaw.ch



Contact

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Director of IFM

IAS Institute of Applied Simulation

Problems in the life sciences and facility management are becoming increasingly complex, and call for new investigation and decision-making methods. The IAS analyses complex issues and develops workable solutions using modelling and simulation. At the centre of its work are new methods of data analysis and computer simulation. To communicate its findings in user-friendly ways, the IAS develops web-based visualisation tools. The IAS has many years of project experience in the areas of data analysis and statistics, neuroinformatics, logistics simulation and web technology.



Focal points

- Data analysis and statistics
- Applied neuroinformatics
- Logistics and simulation
- Web-based information transfer

www.ias.zhaw.ch



Contact

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Director of IAS

Networking between the Institutes at Waedenswil, together with the numerous interfaces between disciplines, leads to a variety of synergies. This means that questions related to life sciences and facility management can be resolved under the same roof. Below is a selection of interdisciplinary research and service projects. For details, see www.lsfm.zhaw.ch/kurzberichte.

Example projects

■ IBT together with ■ ICBC and ■ IAS

National culture collection for biological material

The Culture Collection of Switzerland (CCOS) is the national culture collection. It compiles biological materials such as bacteria and yeast strains, and makes them publicly available by means of a catalogue of microbial life. It has taken on the demanding task of preserving the diversity of strains isolated from nature and gaining an overview of their functions. The CCOS focuses on collecting bacterial isolates with a Swiss background. The aim is to collect the largest possible number of biotechnologically relevant and well-characterised strains of micro-organisms, and make them available for research and application. They are used for diagnostics, biocatalysis and the manufacture of drugs. The CCOS is a spin-off of the ZHAW and is making a name for itself as a platform for professional storage and for the global distribution of biological material.

■ IFM and ■ ILGI together with ACW (Agroscope Changins-Waedenswil) and Pro Senectute

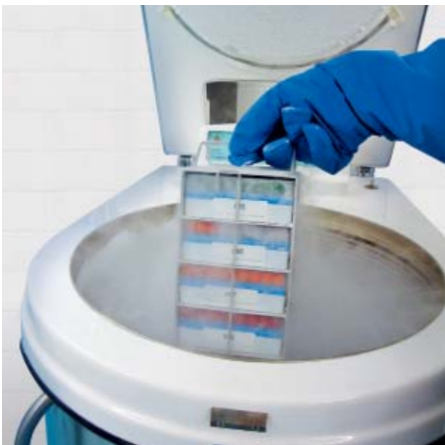
Study of the everyday eating habits and daily routines of senior citizens

Diet plays a significant role in individual health and well-being, and contributes to subjective satisfaction in old age. The Swiss-Agile study is a qualitative case study focussing on the nutritional situation of elderly people in German-speaking Switzerland. The aim was firstly to study the most usual methods of consumption and obtaining nutrients, and secondly to investigate the activities and routines of everyday eating in various life situations. The ZHAW studied dietary habits and sensory perception changes, as well as the situation in retirement homes regarding maintenance of independence and the provision of corresponding services.

■ IUNR together with the ZHAW School of Social Work and the HSR (University of Applied Sciences Rapperswil)

Therapy and theme garden at the RehaClinic Zurzach

Gardens influence people's physical and psychological states in positive ways. The main goal of this project was to develop and implement standardised garden therapy programmes for pain and stroke patients in rehabilitation, and to demonstrate the effectiveness of these programmes. An interdisciplinary team from different universities and the RehaClinic Zurzach created the therapy and theme garden, which became a successful pilot project. Specially trained physio- and occupational therapists work with the patients in a specially designed garden and greenhouse.



The School of Life Sciences and Facility Management at the ZHAW Zurich University of Applied Sciences has the infrastructure and human resources to expertly carry out application-oriented research and development, and provide high-quality services. At the interface between theory and practice, the Institutes work closely with industry and business. Expertise and infrastructure are made available in accordance with clients' needs.

Research, development and services at the ZHAW in Waedenswil

Cooperation

Opportunities for cooperation arise in the context of research and development projects, service assignments or students' work (project reports, Bachelor's and Master's theses).

Start-ups/grow

An increasing number of new companies are being founded at the interface between industry and academia. For this reason, the ZHAW in Waedenswil is actively engaged in the Waedenswil founder organisation "grow", together with the Agroscope Changins-Waedenswil research institute (ACW), the town of Waedenswil, TUWAG Immobilien AG and other partners. Business ideas in the life sciences, facility management and computer science are promoted. Start-ups are professionally supported with advice, infrastructure, expertise and networking. For further information, see www.grow-waedenswil.ch

grow [grəʊ]

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Clients

Clients include industry and business, health and social services organisations, and public authorities.

Projects

The large number of successfully completed projects is proof of the achievement potential of the specialists at the School. Current projects are listed in the Transfer newsletter, published three times a year, or on the Internet at www.lsfm.zhaw.ch/kurzberichte.



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