



UniversitätsSpital Zürich



University of Zürich(UZH)

University Hospital of Zürich(USZ)

International Joint Research Projects and Grants Opportunities

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✓ University of Zurich (UZH, German: Universität Zürich), located in the city of Zürich.

 \checkmark largest university in Switzerland, with over 30,000 students.

 \checkmark It was founded in 1833.

✓ Faculties: Philosophy, Human Medicine, Economic Sciences, Law, Mathematics and Natural Sciences, Engineering, Computer Sciences, and Robotics, Theology and Veterinary Medicine.





(from left to right)



Scholarship thrives in Zurich's open-minded environment. And it has a long history of doing so. Since its foundation, the University of Zurich has attracted pioneers from the world of research – from Switzerland and abroad. To date, no less than twelve Nobel Prize laureates have taught and conducted research at UZH.



Wilhelm C. Röntgen, Physics Theodor Mommsen, Literature Alfred Werner, Chemistry Max von Laue, Physics Erwin Schrödinger, Physics Peter Debye, Chemistry Paul Karrer, Chemistry Leopold Ruzicka, Chemistry Walter Rudolf Hess, Medicine K. Alex Müller, Physics Rolf Zinkernagel, Medicine



Albert Einstein was here

In 1905, Albert Einstein submitted his PhD thesis at UZH. From 1909 to 1911, he was associate professor of theoretical physics at the University of Zurich.



Chemistry

1913

Alfred Werner



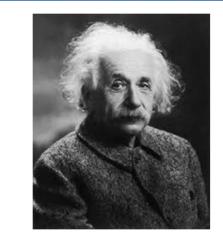
1914

Physics

Max von Laue



Albert Einstein Erwin Schrödinger



1921

Physics



1933

Physics

1936	1937	1939	1949
Chemistry	Chemistry	Chemistry	Medicine
Peter Debye	Paul Karrer	Lavoslav Ružička	Walter Rudolf Hess
	1987 Physics <u>Karl Alex Müller</u>	1996 Medicine <u>Rolf M. Zinkernagel</u>	







OS World University Rankings: 61st globally & 14th in the Europe

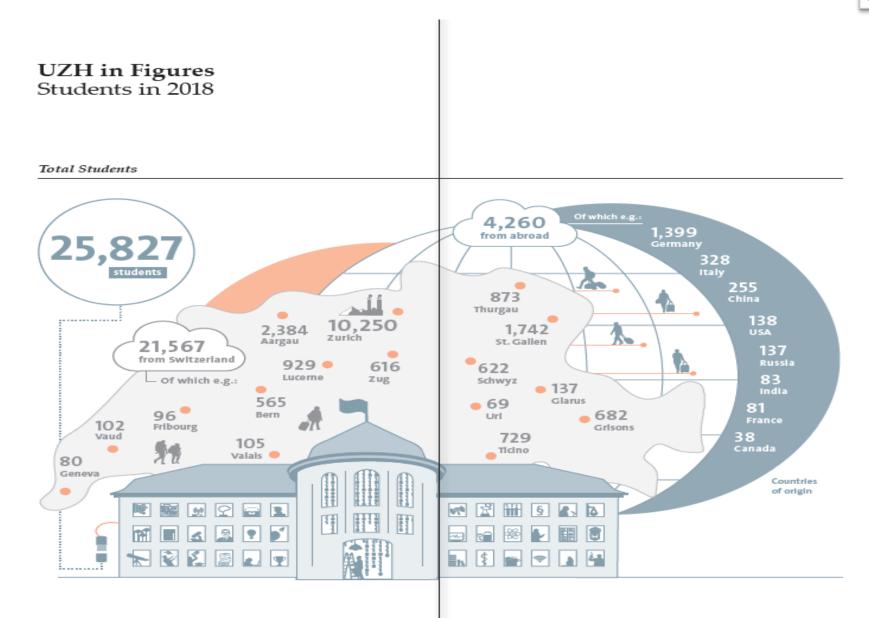
University Ranking by Academic Performance (URAP): 52nd globally and 1st in Switzerland



Shanghai Jiao Tong University Ranking (heavy emphasis on research output – citations, Nobel prizes etc.): 54th globally and 15th in Europe.

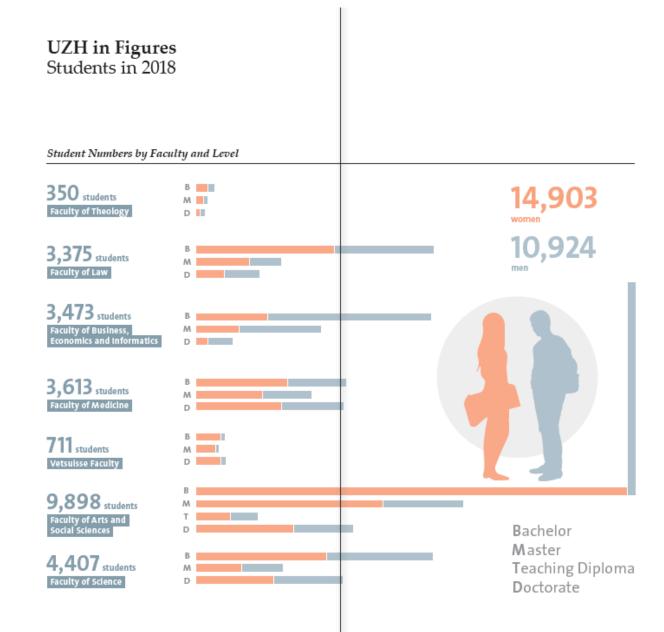
Professional Ranking of World Universities : 32nd globally and 10th in Europe.

UZH in figures Student in 2018



UZH in figures Student in 2018

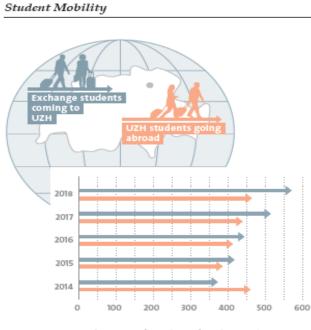




UZH in figures / International UZH



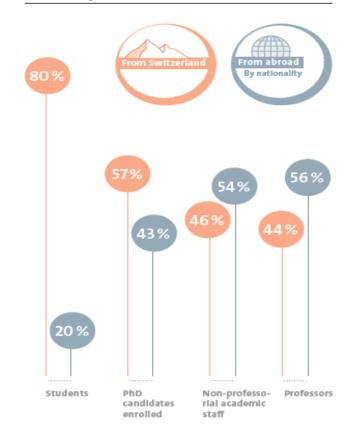
UZH in Figures International UZH



Exchange Students (In and Out) FS 2018

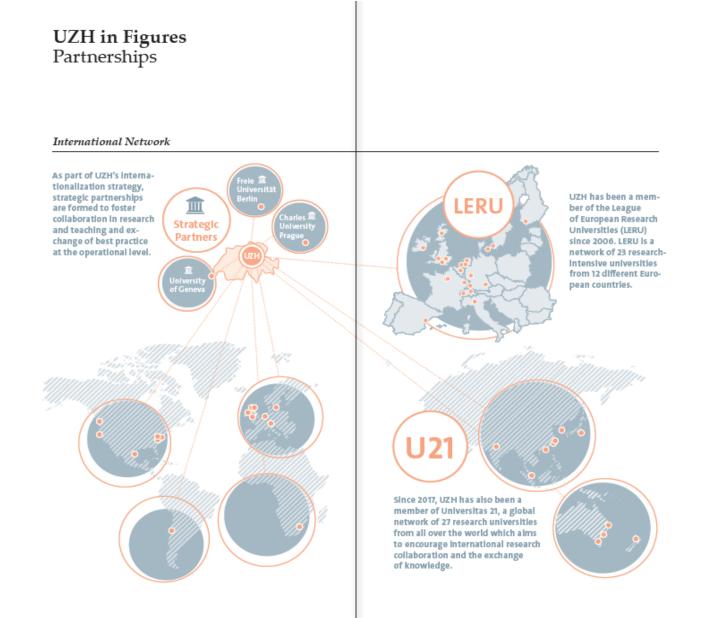
Exchange program outside of Europe	23%
Exchange program within Europe	54%
Swiss Government Excellence Scholarships	5%
CH-Unimobil	12%
Double doctorate	3%
Visiting study program	3%

Nationality



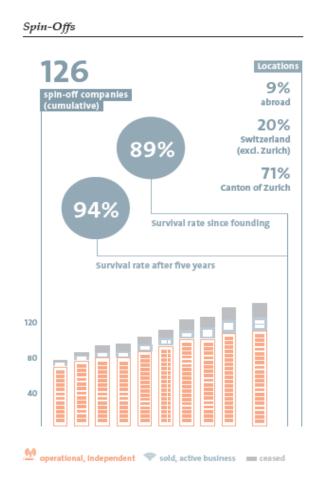
UZH in figures / Partnerships





UZH in figures / Innovations in 2018

UZH in Figures Innovation in 2018



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ERC Funding in 2018

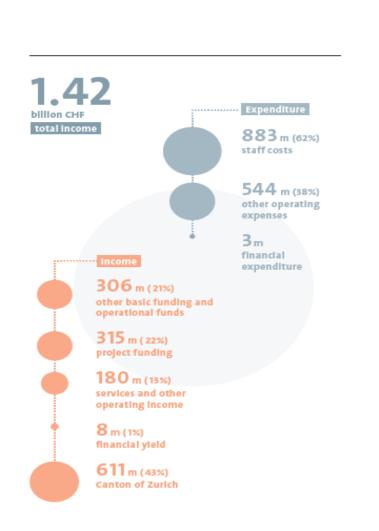
20.9 million Total In Euros 2.5 m Advanced Grants 9.4 m Consolidator Grants 0.2 m Proof of Concept 4.0 m Starting Grants 4.8 m ERC Synergy Grants

Swiss National Science Foundation (SNSF) Funding 2013–2018

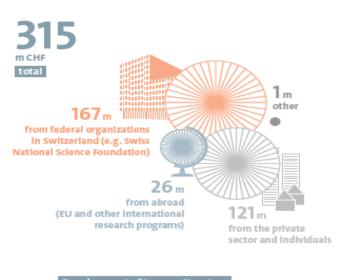
	Number of grants	Total amount granted
Arts and social sciences	947	212.0 m CHF
Mathematics, natural sciences and engineering	280	125.8 m CHF
Biology and medicine	694	376.6
	1,921 grants	714.4

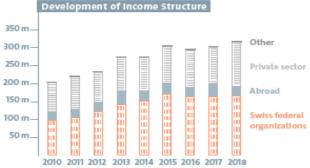
UZH in figures / Income Statement 2018 / Third-Party Funding





UZH in Figures Income Statement 2018 UZH in Figures Third-Party Funding







University Hospital of Zürich



✓The University Hospital of Zürich(UHZ) (German: Universitätsspital Zürich, USZ) is one of five university hospitals in Switzerland.

✓ The first hospital in Zürich, as early as 1204.

✓Åke Senning transplants a heart for the first time in Switzerland, 1969

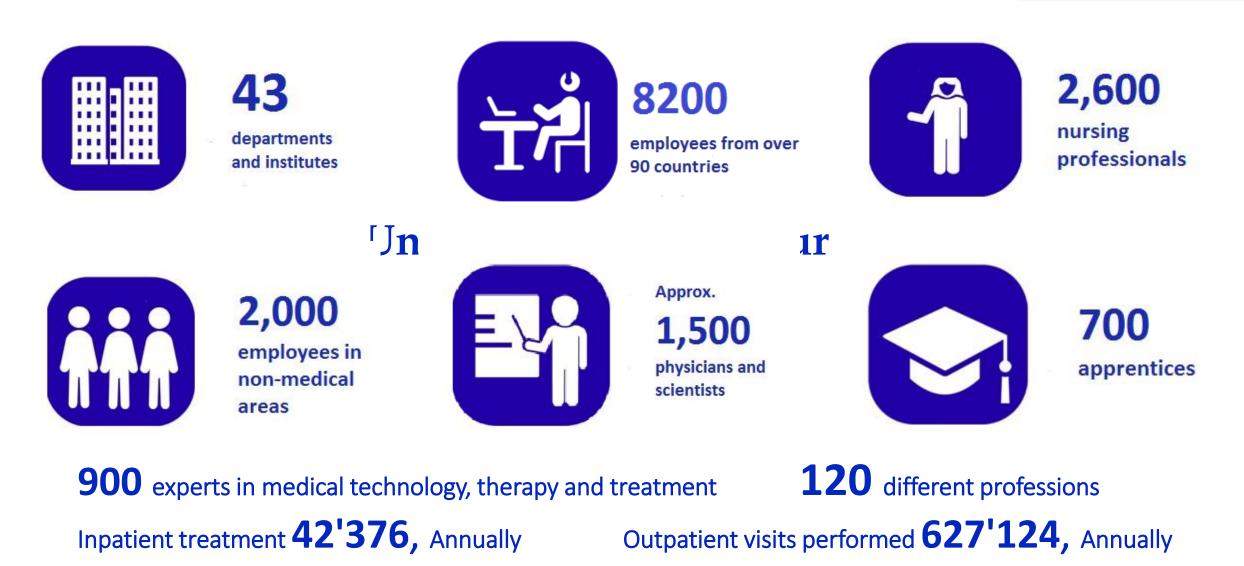
✓ Mahmut Gazi Yaşargil founds the field of microneurosurgery, 1973

✓ Andreas Grüntzig invents the balloon catheter, 1978.

✓The Nobel Prize for Medicine goes to Rolf Zinkernagel, 1996, discovered how the immune system identifies body cells infected by viruses.

✓ 20 years of lung transplants in Switzerland, 2012.





Departments and Institutes

- 1. Center on Aging and Mobility
- 2. Institute of Anesthesiology
- 3. Department of Angiology
- 4. Breast Center
- 5. Comprehensive Cancer Center Zurich
- 6. Department of Cardiology
- 7. Department of Cardiovascular Surgery
- 8. Institute of Clinical Chemistry
- 9. Institute for Complementary and Integrative Medicine
- 10. Department of Consultation-Liaison-Psychiatry and Psychosomatic Medicine
- 11. Department of Cranio-Maxillo-Facial and Oral Surgery
- 12. Department of Dermatology
- 13. Department of Endocrinology, Diabetology and Clinical Nutrition
- 14. Department of Gastroenterology and Hepatology
- 15. Department of Geriatric Medicine
- 16. Department of Gynecology
- 17. University Heart Center
- 18. Department of Hematology
- 19. Department of Immunology
- 20. Department of Infectious Diseases and Hospital Hygiene
- 21. Institute of Intensive Care
- 22. Department of Internal Medicine
- 23. Department of Neonatology
- 24. Department of Nephrology
- 25. Department of Neurosurgery
- 26. Department of Neurology

- 27. Institute of Neuropathology
- 28. Department of Neuroradiology
- 29. Department of Nuclear Medicine
- 30. Obesity Center Zurich
- 31. Department of Obstetrics
- 32. Department of Oncology
- 33. Department of Ophthalmology
- 34. Department of Otorhinolaryngology, Head and Neck Surgery
- 35. Institute of Pathology and Molecular Pathology
- 36. Department of Clinical Pharmacology and Toxicology
- 37. Department of Plastic Surgery and Hand Surgery
- 38. Institute of Primary Care
- 39. Department of Pulmonology
- 40. Institute of Diagnostic and Interventional Radiology
- 41. Department of Radiation Oncology
- 42. Department of Reproductive Endocrinology
- 43. Department of Rheumatology
- 44. Simulation Center
- 45. Stroke Center
- 46. Department of Thoracic Surgery
- 47. Transplantion Center
- 48. Clinical Trials Center
- 49. Department of Trauma Surgery
- 50. Department of Urology
- 51. Department of Surgery and Transplantation



Clinic of clinical pharmacology & Toxicology



Units:

- ✓ Drug information service
- ✓ Pharmacogenetics Screening and Personalized Medicine
- ✓Cholestatic liver disease
- ✓ Pharmacokinetic studies
- ✓ Pharmacovigilance
- ✓ Pharmacoepidemiology and Drug Safety
- ✓ Therapeutic Drug Monitoring (TDM)
- ✓ Drug-Induced Liver Injury (DILI)

Drug Information Service



Assists University Hospital doctors and external healthcare professionals with:

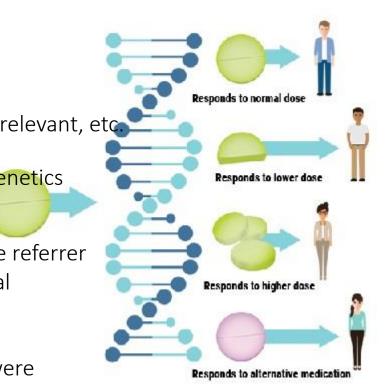
- ✓ drug-related issues
- ✓ drug-drug issues
- ✓ drug-drug interactions
- ✓ drug pharmacokinetics
- ✓ dose adjustments (eg, hemodialysis).



Pharmacogenetics Screening & Personalized Medicine

Pharmacogenetics studies may provide useful information for patients suspected of having a specificity in drug metabolism or transport, for example:

- \checkmark Unwanted effects at normal dosages
- ✓ Ineffectiveness with assured intake at normal dosages
- ✓ Need for significantly increased doses to achieve the desired effect
- ✓ Initiation of a therapy in which Pharmacogenetics influences are clinically relevant, etc
- ✓ After informing and accepting the patient, clinic carry out the Pharmacogenetics examination in cooperation with partner laboratories.
- Clinic interpret the results of the examination, discuss the findings with the referrer and the patient as desired, and make recommendations for further medical treatment.
- ✓ Pharmacogenetics tests can be remunerated by health insurance, if they were prescribed by a specialist in clinical pharmacology and toxicology.





Cholestatic Liver Disease



Genetic studies on cholestatic and medicinal liver damage:

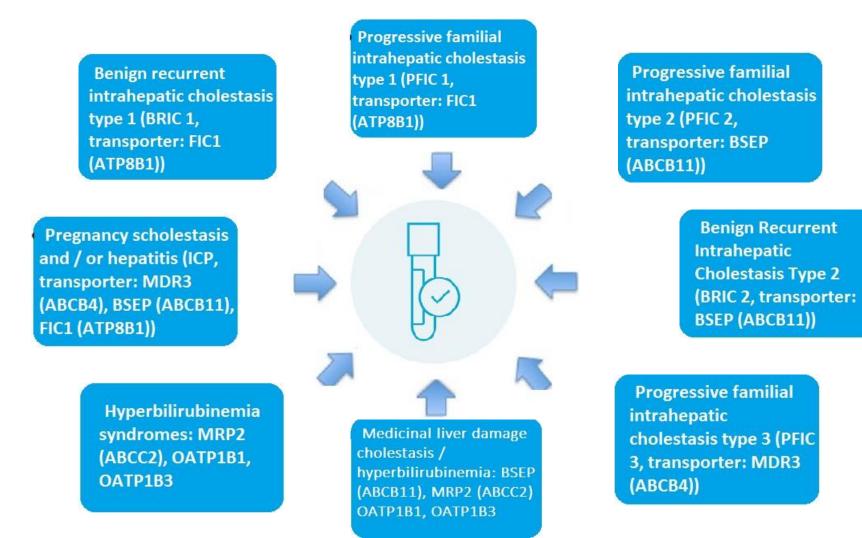
✓ offers the genetic analysis of three important transport proteins for the development of genetically caused cholestatic liver diseases

✓The diagnosis of these rare, autosomal recessive hereditary diseases in Switzerland is provided only by this clinic.

Cholestatic Liver Disease

UniversitätsSpital Zürich

✓ If a patient suspects that one of the following conditions is diagnosed, the diagnosis can be confirmed by means of the genetic examination offered in clinic. In detail, these are:



Pharmacovigilance

✓The Clinic for Clinical Pharmacology and Toxicology is the regional pharmacovigilance center of Swissmedic in Zurich.

✓The Center records reportable adverse drug reactions (Medicinal Products Act) and forwards them to the responsible office in the Swiss Agency for Therapeutic Products (Swissmedic).

ElViS (Electronic Vigilance System from Swissmedic)

✓ Healthcare professionals who have previously reported adverse drug reactions via a reporting form to our regional Pharmacovigilance Center can now create and send their notifications online.

Pharmacoepidemiology & Drug Safety

✓ Pharmacoepidemiology analyzes the post-marketing safety of drugs using statistical approaches in appropriate databases.

✓ This allows quantitative evaluation of the severity of a safety signal that emerges from routine patient care, pharmacovigilance, health authority communications or the published literature.

✓The aim of pharmacoepidemiology in the setting of an academic hospital is to identify drug-related safety issues, assess the true risk and thereby improve patient safety.



Therapeutic Drug Monitoring (TDM)

Clinic can advise you on the interpretation of plasma drug levels and, if patient-doctor wish, clinic can perform plasma level measurements and interpret any optimization of pharmacotherapy during our consultation



Drug-Induced Liver Injury (DILI)

Team are studying new diagnostic markers in patients with drug-induced liver injury (DILI).

These studies are conducted in collaboration with the following consortia: (i) IDILIC (International Drug Induced Liver Injury Consortium), for the analysis of genetic risk factors by genome-wide association studies; (ii) TransBioLine Consortium, supported by the Innovative Medicines Initiative of the European Union.

DILI Cohort Study. Liver injury is defined by any one of the following parameters:

ALT or AST> 3x upper limit of normal (ULN)

OR bilirubin> 2x ULN

OR Alk. Phosphatase> 2x ULN

=> with documentation of normal values before beginning the drug that is suspected to have caused injury

International Joint Research Projects and Grants Opportunities

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Behavioral Economics

Illuminating Scholarship: Highlights

- The University of Zurich has made its mark in global competition. UZH attracts the brightest minds, and its outstanding research priority programs and centers of competence enhance the University's visibility. Overall, UZH occupies a leading position among European
- research institutions and, in several disciplines, it numbers among the world's best. Examples of fields where UZH shines:

Genetics

Financial Market Research

Linguistics

Medicine

Structural Biology

Veterinary • Medicine

Digital Sciences

what do national and international regulations in the financial markets achieve?

Research Focus **Financial Market** Regulation

How is communication influenced by physical and social spaces?

Research Focus Dynamics of Healthy Aging

Research Focus Language and Space

How can quality of life be maintained in old age?

University Research **Priority Programs** creating opportunity for junior academics

Finding answers to the future's big questions - this is the aim of the University Research Priority Programs (a selection presented below). These programs unite top researchers from various disciplines, while offering PhD candidates and postdocs an ideal environment to build networks and to establish themselves in their field.

> what are the comsequences of the worldwide loss of biodiversity?

Research Focus Global Change and Biodiversity

Research Focus

How do new pathogens emerge?

Evolution in Action: From Genomes to Ecosystems

> Why do tumor cells begin to grow uncontrollably?

Research Focus Translational Cancer Research

can artificial photosynthesis contribute to solving the world's energy problems?

Research Focus Solar Light to Chemical Energy Conversion

Research Focus Social Networks

> what impact do social networks have on company value and consumer behavior?

Research-Based with Real-World Applications: Studying Medicine at UZH



The University's Hospitals University Hospital Zurich

Forty clinics and departments, highly specialized and at the cutting edge of medical research

University Children's Hospital Zurich

The largest children's hospital in Switzerland and a leader in Europe

University Hospital of Psychiatry Zurich

Tradition and international renown since 1870

Balgrist University Hospital

Leading center of competence for the treatment of musculoskeletal and spinal damage

Good Neighbors Generating Unique Opportunities

The close vicinity and the excellent partnership between UZH, ETH Zurich, and the University's Hospitals create unique opportunities – especially as close collaboration between basic biomedical research, engineering sciences, and clinical application is increasingly important in developing new therapies.

UZH International Funding Instruments



✓ Research, Innovation and Academic Career Development Center.

✓Travel Grants for young researchers (PhD students and Postdocs), UZH Graduate Campus.

✓ Funding Opportunities within the Regional Programs of UZH.

 \checkmark Bilateral Programmes of the Swiss Confederation.

✓ SNSF Funding Schemes with an International Scope.

✓ Other Funding Sources, Points of Contact and Funding Databases



Funding Opportunities within the Regional Programs of UZH

UZH Strategic Partnerships Freie Universität Berlin, Charles University in Prague or the University of Geneva.

UZH collaboration with Sub-Saharan Africa: North-South Cooperation.

UZH collaboration with scientific institutions in Iran.





SNSF (Swiss National Science Foundation) Funding Schemes with an International Scope

SPIRIT - Swiss Programme for International Research by Scientific Investigation Teams

✓ Swiss researchers and researchers in selected countries that are receiving development assistance.

 \checkmark 50,000 and 500,000 francs in project funds for two to four years.

✓ At least 30% of each approved grant must be allocated to Switzerland and at least 30% to the relevant partner country/countries.

Scientific Exchanges

✓ Scientific Exchanges are aimed at researchers who want to host their own scientific event in Switzerland, invite colleagues from abroad for a research visit to Switzerland, or visit their colleagues in another country.

✓ Duration: 2 - 5 days for scientific events

✓1 - 6 months for research visits

Mobility Fellowships: Doc.Mobility, Early Postdoc. Mobility, Postdoc. Mobility

- ✓ young researchers who wish to enhance their scientific profile by working at a research institution abroad.
- ✓ Duration: 6 24 months.
- ✓The grants can be used to study one or two semesters at UZH during the academic year 2020-21.
- ✓ Grants are only awarded if a professor at UZH guarantees supervision and has a strong interest in working with the mobility student's home university.

Exchange Programs



Exchange Programs

Students from our partner universities can spend one or two semesters at UZH with one of the following programs:

Swiss-European Mobility Programme

Worldwide Agreements

Traineeships

Within the Swiss-European Mobility Programme, students who are coming to the University of Zurich for a traineeship can apply for a grant to cover part of their travel and living expenses.

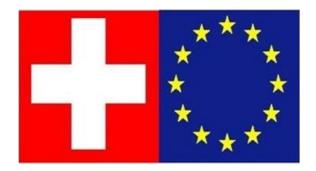
Visiting Students

Regular Visiting Students

Invited Visiting Students

Exchange Programs





Europe: SEMP and Erasmus+

Swiss-European Mobility Programme (SEMP)

✓460 exchange agreements in 50 subjects with over 200 partner universities throughout Europe.

✓ SEMP is a Switzerland's interim solution to replace the currently suspended participation in the European education program Erasmus+.

Switzerland and the Erasmus+ Program

✓The European Union's education and training programme Erasmus was set up in 1987, with the aim of promoting cooperation and mobility between European institutions of higher education.

✓In March 2014 the Swiss government decided to develop an interim solution of indirect participation. The interim solution is called Swiss-European Mobility Programme and follows the precepts of Erasmus+.



Visiting Students



✓ Regular Visiting Students✓ Invited Visiting Students

Regular Visiting Students

Regular visiting students follow course work during the set semester dates while invited visiting students pursue a project (e.g. research, writing a thesis).

eligible as a visiting student if you are enrolled at a recognized foreign higher education institution and only study or pursue a project at UZH for a certain duration.

In order to be admitted as a visiting student you need to be enrolled at your home university during the whole duration of your stay at UZH and cannot acquire a UZH degree.





Regular Visiting Students

✓ students enrolled at a recognized foreign higher education institution (Bachelor/undergraduate, Master/graduate, PhD/postgraduate) that want to take courses for credit at UZH for one or at most two semesters.

✓ You are enrolled at your home university as a regular student during the whole duration of your stay at UZH (e.g. no leave of absence).

✓ You have studied the subject you plan to take courses in at UZH for at least two semesters at your home university.

 \checkmark Your home university has no exchange agreement with UZH in your field of study.

✓ Your home university must recognise and credit your stay at the University of Zurich.

✓A language level of at least B2 in the language of instruction (depends on your chosen courses) is recommended.





Invited Visiting Students

✓ Students who are enrolled at a recognized foreign higher education institution (Bachelor/undergraduate, Master/graduate, PhD/postgraduate) that want pursue a project (research, write a thesis etc.) at an institute at UZH and can provide a letter of invitation from a researcher employed by UZH.

✓ If you are enrolled at a university participating in the Erasmus+ Programme and want to pursue a project as mentioned above, you should apply through the SEMP Programme.

✓You are enrolled at your home university as a regular student during the whole duration of your stay at UZH (e.g. no leave of absence).

✓ An institute at UZH has agreed that one of their researchers will supervise you for a clearly defined duration in the framework of a certain project.

 \checkmark For the duration of your stay, you are not employed by the UZH.

✓A language level of B2 in the language of instruction as agreed upon with your supervisor is recommended.

✓ As an invited visiting student, you will be enrolled at UZH. Taking regular courses is not usually intended or required, unless it is recommended by your supervisor and in connection with the project.

✓You cannot earn a UZH degree

Other Funding Sources, Points of Contact and Funding Databases

✓ For researchers at UZH, EU Grants Access is the first point of contact for all funding opportunities within Europe (e.g. Horizon 2020).

 \checkmark KFPE is the information hub for "North-South" research in Switzerland, both for researchers and for the target audience of research. It promotes the increased. effective and equitable research cooperation with low and middle income countries. By doing so, KFPE contributes to sustainable development and to solving global problems. Their website offers an overview on funding possibilities with developing countries



✓The SNIS promotes academic research in the interdisciplinary area of international studies with an interest in phenomena that transcend traditional nation-state boundaries. Once a year, SNIS offers project grants for pluridisciplinary research teams

✓The Swiss-African Research Cooperation (SARECO) is a program of the State Secretariat for Education, Research and Innovation (SERI), implemented by the Leading House Basel.

✓ SARECO does not offer own funding but runs a helpful <u>database</u> for funding <u>opportunities</u> for collaborative research between Switzerland and African countries. Swiss Government Excellence Scholarships for Foreign Scholars and Artists for the 2021-2022 Academic Year

Types of scholarship

The research scholarship:

➢post-graduate researchers (who hold a master's degree as a minimum)

➤ Research or further studies at doctoral or post-doctoral level.

➢ Research scholarships are awarded for research or study at all Swiss cantonal universities, universities of applied sciences and the two federal institutes of technology.

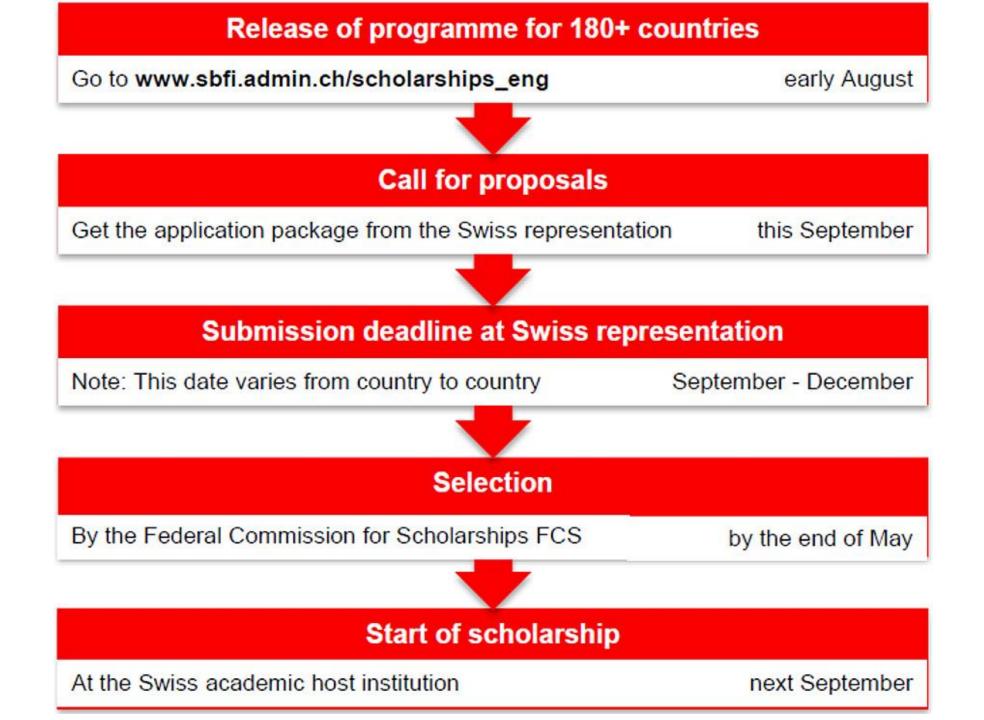
➢Only candidates nominated by an academic mentor at one of these higher education institutions will be considered.

Selection criteria

The FCS assesses scholarship applications according to three criteria: a) Candidate profile

b) Quality of the research project

c) Synergies and potential for future research cooperation



Swiss Government Excellence Scholarships

Countries A - L / Countries M - Z

✤Applications are subject to preliminary selection by the relevant national authorities and/or the Swiss diplomatic representation.

The short-listed applications are then assessed by the Federal Commission for Scholarships for Foreign Students (FCS), which takes the final decision.

Research Fellowship<u>077 research en 2021-22.pdf</u>

PhD Scholarships<u>077_PhD_en_2021-22.pdf</u>

Postdoctoral Scholarships 077 Postdoc en 2021-22.pdf

Doc.Mobility

Doc.Mobility fellowships are designed for doctoral students who wish to enhance their scientific profile by working at a research institution abroad.

The fellowships include a grant towards living costs, a flat-rate for travel expenses and, if justified, a contribution towards research and conference costs as well as matriculation fees.

These fellowships are awarded for a minimum of 6 months up to a maximum of 18 months.

Submission deadlines

1 March and 1 September 17.00h Swiss local time

Last submission deadline: 1 September 2020

Pharmaceutical Company-University Grant

b NOVARTIS Novartis Foundation for Medical-Biological Research



Novartis Foundation for Medical-Biological Research

A) Research Projects

B) A limited number of Research Fellowships

C) Your application should include the following:

1. Application Form, Microsoft Excel format

2. Summary / Abstract summarizing the research project to be funded (max. 1 page)

2 Background (max. 2 n

- 3. Background (max. 2 pages)
- 4. Hypothesis and specific aims (max. 2 pages)
- 5. Experiments to be performed, protocols, methods
- 6. Signifiance
- 7. Budget



Novartis

Age-Related Macular Degeneration Ankylosing Spondylitis Asthma **Chronic Urticaria** Glaucoma Heart Failure Juvenile Idiopathic Arthritis **Multiple Sclerosis Psoriasis Psoriatic Arthritis** Transplant Vascular Inflammation in CVD Acute Myeloid Leukemia **Breast Cancer** Chronic Myeloid Leukemia (CML) **Neuroendocrine Tumors** Sickle Cell Disease Melanoma Immune Thrombocytopenia/Severe Aplastic Anemia **T-Cell Therapies in B-Cell Malignancies**



Immunology

Figure 1

Neuroscience

Oncology

Cardiovascular & metabolism

Haemophilia

Infectious disease

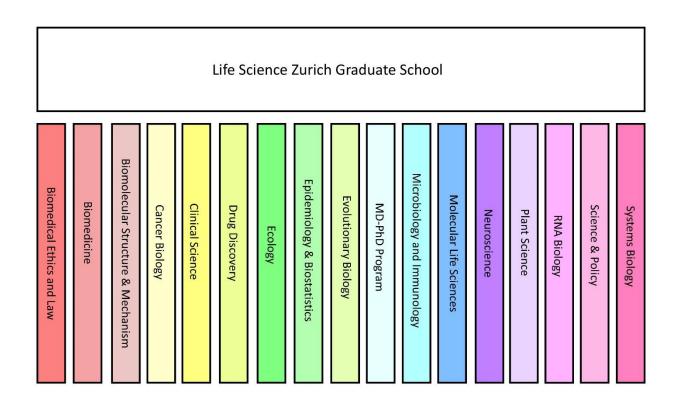
Roche

Ophthalmology

Respiratory

Life Science Zurich Graduate School

consists of 17 highly competitive Ph.D. programs, run jointly by the ETH Zurich and the University of Zurich.









PhD Programs

16 PhD Programs, 1 MD-PhD Program

• 530 Principal Investigators • 1600 students



✓ ETH Zurich is working with University Hospital Zurich, the University of Zurich, and the canton and city of Zurich to develop the Zurich City university district (HGZZ).

✓ By 2030, a collaboration with the University of Zurich and ETH Zurich will see the creation of a center for university medicine in the heart of Zurich.



Green Light for New USZ Airport Location

Green light for new USZ Airport location Health Centre in "The Circle"

✓ USZ makes the decision to rent premises in The Circle at Zurich airport and to provide outpatient medical services there from 2020.

✓ The new USZ Airport location will help alleviate space problems at the USZ campus in central Zurich.

✓ The University Hospital Zurich will operate a health centre on an area of 10'000 square meters in "The Circle".

✓ 24 hours emergency station and different further ambulant or short-term in-patient services.



