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Great success for Bern as a center of medicine

The Swiss Personalized Health Network (SPHN) supports nine research projects with Bernese investment, which aim to build up a nationally coordinated infrastructure of health data. Two of the projects are managed by the University of Bern and Bern University Hospital. They are funded with a total of 5.3 million francs.

The Swiss Personalized Health Network (SPHN) is a national initiative which was built up by the Swiss Academy of Medical Sciences (SAMS) on behalf of the Federal Office of Public Health (FOPH) and the Swiss State Secretariat for Education, Research and Innovation (SER). The overarching goal is to prevent diseases more precisely and efficiently, diagnose and treat with less side effects, through the exchange of health-related data.

For the first time, a total of 15 research projects which will contribute to achieving this goal are being funded. This includes two projects which are managed by researchers of the University of Bern and the Bern University Hospital, and seven others with Bernese investment. Therefore, Bern makes an important contribution to the national exchange of data within the national network.

Understanding therapy-resistant tumors

The project “Swiss Oncology and Cancer Immunology Breakthrough Platform (SOCIBP) under the leadership of Mark Rubin from the Department for BioMedical Research at the University of Bern is supported by the SPHN and the focal topic of “Personalized Health and Related Technologies” (PHRT) of the ETH sector with a total of 4.9 million francs, over a period of 36 months. The aim of the SOCIBP platform is to build up a nationwide genome database of immunotherapy resistant tumors. The resistance of cancer cells to immunotherapy is a great challenge for cancer research and treatment. The platform, which allows nationwide data exchange, helps researchers and doctors to decipher the complexity of therapy resistances. As a first step, the nationwide platform should be built up. Then it will be tested in a pilot project: in Bern, at the ETH Zurich and at the EPFL, it will be tested under real conditions in practice. This pilot will be separately supported by the ETH domain PHRT. There is also another collaboration in the scope of the platform, with the University Hospitals of Lausanne, Geneva and Zurich.

Overall, the platform SOCIBP should on the one hand promote research in the area of immunotherapy resistances in Switzerland, and on the other hand, improve clinical treatment of patients. Mark Rubin is an ordinary professor for biomedical research and director of the Department for BioMedical Research (DBMR) at the University of Bern.

Harmonisation of child health data

The project “Harmonising the collection of health-related data and biospecimens in paediatric hospitals throughout Switzerland” under the leadership of Claudia Kühni will be funded with 400,000 francs over a period of 12 months. In this project, the aim is to harmonise all future health data collected on hospitalised and outpatient treated children in the 8 biggest children's hospitals in Switzerland for the first time. In paediatrics, there have been few clinical studies until now, and the number of participants is often very low. With the harmonisation of the data collected on the cause of diseases, disease patterns, diagnosis and treatment, the data basis will be significantly improved. The uniform collection of health data in children's hospitals therefore increases national comparability and availability of data, and will place Switzerland on the forefront of personalised paediatric health research. Claudia Kühni is an associate professor for paediatric epidemiology at the Institute for Social and Preventative Medicine (ISPM).

Apart from the two projects under Bernese leadership, Bernese researchers are involved in seven other network projects:

“Swiss Personalized Oncology Driver Project”

The project led by the Lausanne University Hospital has the objective of achieving the best possible cancer treatment for all patients in Switzerland with the help of data comparison. Prof. Dr. med. Adrian Ochsenbein, from the Department of Medical Oncology at Bern University Hospital, is involved, and the funding amount is a total of 3 million francs.

Project "Development of a governance and quality management system for exchange of patient related data for research purposes"

The project led by the University of Basel and Basel University Hospital aims to standardise the management of patient data for research purposes. Dr. Verena Pfeiffer from the Institute of Social and Preventative Medicine (ISPM) of the University of Bern is involved, the funding amount is a total of 290,000 francs.

Project “PRECISE: Identification of biomarkers and therapeutic targets in inflammatory disease immunotherapy by high-dimensional single cell analysis and cluster proteomics”

The project led by the Institute of Molecular Systems Biology of the ETH Zurich wants to find new approaches for immunotherapy of chronic inflammatory skin diseases. Prof. Dr. med. Christoph Schlapbach, from the Department of Dermatology at Bern University Hospital, is involved, and the funding amount is a total of 1,283,000 francs.

Project “Swiss Frailty Network and Repository”

The project led by the UniversitätsSpital Zürich has the objective of creating common standards for clinical recording of frailty. Prof. Dr. med. Andreas Stuck, from the Department of Geriatric Medicine at Bern University Hospital, is involved, and the funding amount is a total of 1,785,000 francs.

Project “Personalized Swiss Sepsis Study (PSSS)”

The project led by the University of Basel and Basel University Hospital has the objective of personalised diagnosis and treatment in the case of life threatening blood poisoning (Sepsis). Prof. Dr. med. Stephan Jakob from the Department of Intensive Care Medicine, Prof. Dr. med. Hansjakob Furrer from the Department of Infectious Diseases at the University Hospital of Bern and Prof. Dr. Stephen Leib from the Institute of Infectious Diseases at the University of Bern, were involved, and the funding amount is a total of 2,3 million francs.

Project “e-consent”

The project led by the University of Basel has the objective of simplifying general consent. This describes the consent of patients to use their health data for research purposes. PD Dr. med. Alexander Leichtle in his function at the Directorate of Teaching and Research of Insel Gruppe AG, and the funding amount is a total of 400,000 francs.

Project “L4CHLAB”

The project led by the Hôpitaux Universitaires Genève (HUG) has the objective of standardising the presentation of routine laboratory data. PD Dr. med. Alexander Leichtle in his function at the University department for clinical chemistry at the Bern University Hospital, and the funding amount is a total of 200,000 francs.

Swiss Personalized Health Network (SPHN)

The Swiss Personalized Health Network (SPHN) is a national initiative which aims to promote development in personalised medicine and personalised health in Switzerland. The Swiss State Secretariat for Education, Research and Innovation (SER), and the Federal Office of Public Health (FOPH) commissioned SAMS (Swiss Academy of Medical Sciences) with building up the “Swiss Personalized Health Network” (SPHN) in 2016. From 2017–2020, the focus is on building up a nationally coordinated data infrastructure. This means that local and regional information systems can be harmonised, and data interoperability can be guaranteed.

On the one hand, the funding amounts are directed at so called “Driver projects”, which drive forward the development of clinical data management systems in a specific area of research in several university hospitals. On the other hand, “Infrastructure implementation Projects” and “Infrastructure development projects” are also supported. These deal with building up jointly usable data systems, or the development of new technologies and methods in the area of personalised health. The “Matching Fund” principle applies to all financial contributions. All

institutions involved in the SPHN contribute an equal amount to the funds provided to the SPHN, using their own means.

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