More precise diagnoses and tailored therapies

Sai Reddy is an Associate Professor of Systems and Synthetic Immunology at ETH Zurich in the Department of Biosystems Science & Engineering. His research results present unprecedented possibilities for the development of personalised vaccines and immunotherapies.
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The way we get sick and recover again varies from person to person. The natural sciences and technology offer exciting opportunities to fill these gaps: researchers at ETH Zurich are working on technologies, treatment options and medicines that are better tailored to the individual. Progress in this field is also being funded by donors.

Professorships

Biomedical Data Science

Catherine Jutzeler analyses data from individuals with spinal cord injuries and compares it to the clinical course of their recovery. The goal is to identify patterns that enable more effective treatments.

Funded by: Wilhelm Schulthess Foundation

Computational Systems Biology

Pedro Beltrao focuses on the cellular consequences of genetic variation and its impact on health and disease.

Systems and Synthetic Immunology

Sai Reddy studies the molecular and genetic basis of the immune system. His research results present unprecedented possibilities for the development of personalised and precise vaccines and immunotherapies.

Genome Biology

Jacob Corn is researching how genetic diseases can be cured using genome-editing technologies.

Funded by: NOMIS Foundation and the Lotte und Adolf Hotz-Sprenger Stiftung

Medical Immunology

Federica Sallusto's work has greatly enhanced our current understanding of human immunology: with investigations of human T cells for vaccination studies or their role in autoimmune diseases, for example.

Molecular Systems Biology

The technologies developed by protein researcher Paola Picotti expand our understanding of fundamental processes in human health, such as biochemical processes that lead to diseases like cancer or Alzheimer's.

AI Fellows

At the ETH AI Center, highly talented doctoral and post-doctoral students conduct research through a scholarship programme funded by philanthropically engaged private individuals, the Heidi Ras Stiftung, the Asuera Stiftung and Google.

Alizée Pace

Her doctorate is dedicated to methods that predict the chances of success of a treatment and thereby assist clinicians in decision-making.

Alice Bizeul

Her doctorate is dedicated to better understanding clinical data and thereby improving medical diagnostics as well as addressing privacy related concerns often raised in the field of artificial intelligence.

Pioneer Fellows

The Pioneer Fellowships are funded by numerous foundations, companies and over 200 private individuals. The programme supports talented ETH researchers with entrepreneurial ambitions on their journey towards creating a market-ready product.

Spectroplast

The award-winning ETH spin-off set up by Pioneer Fellows Manuel Schaffner and Petar Stefanov offers customised, high-precision 3D-printed silicone parts that can be used as implants, for example.

CustomSurg

Operations after complex bone fractures are challenging. The team led by ETH Pioneer Fellow Thomas Zumbrunn focusses on personalised surgery. 3D simulations and augmented reality provide optimal support to surgeons in planning and performing operations, and in rehabilitation.
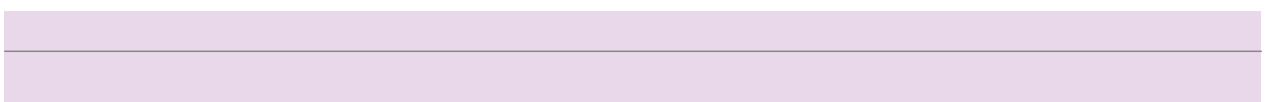
The LOOP Zurich

The research centre combines the basic biomedical research and bioinformatics of ETH Zurich and the University of Zurich with the clinical research of four university hospitals – allowing patients to obtain maximum benefit from progress in precision medicine.

Tumor Profiler Center

The globally unique project aims to ensure that cancer patients will be recommended therapies optimally adapted to their individual case.

// Already funded by philanthropically engaged private individuals