



Press Release

Center for Personalized Medicine in Tübingen

Doctors will integrate research fields to develop tailor-made treatments for patients with a variety of diseases

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The University of Tübingen Medical Faculty and the University Hospitals have founded a Center for Personalized Medicine (ZPM), putting Tübingen at the forefront of research into the causes of disease in individuals and the development and testing of individualized treatments. The ZPM brings together 23 departments, research centers, institutes and hospitals. The founding of the Center is part of the Clinical Research platform established by the University's institutional strategy, developed under the German government's Excellence Initiative.

“Cancer’ is a catch-all term for hundreds of different diseases,” says the Dean of Medicine, Professor Ingo Autenrieth. “In fact, researchers are able to make much finer differentiations within a single type of cancer and to record the molecular-biological data of a tumor.” Individual disease characteristics can also be isolated in patients with disorders of the heart, metabolism or autoimmune system. This information may be used to achieve much more effective treatments, researchers say. The ZPM will focus on diseases for which there is little or no effective treatment.

“Personalized medicine works on the conviction that only a precise understanding of the causes of a disease can lead to a treatment which tackles those causes,” says the spokesman for the research platform, Professor Nisar Malek. “Complex analyses are especially important when it comes to conditions with various causes,” he stresses, adding that researchers need to integrate knowledge and experience from widely differing research fields to develop new, individual treatments.

“Individualized diagnostics and treatment cannot be achieved by any one hospital or institute because they require competencies from many different areas, says the Tübingen University Hospitals’ Managing Medical Director, Professor Michael Bamberg. The 23 entities involved in the new Center for Personalized Medicine include Tübingen’s departments of Internal Medicine; General, Visceral and Transplant Surgery; for Neurology; Radiation Oncology; Anaesthesiology and Intensive Care Medicine, the Dermatology Hospital, the Interfaculty Institutes for Cell Biology, Microbiology and Infection Medicine, and Biochemistry; as well as the Quantitative Biology Center (QBiC).

High-throughput screening is used in genetic and molecular analyses which examine each element of a cell or organism – for instance, all the genes, proteins or metabolic products. The process generates enormous amounts of data, which QBiC helps to analyze. The University’s

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outstanding PET and MRI equipment will be used to gather image data, which will be stored in integrated structures, making it available to answer new questions in the future.

One aim for new treatment is the development of peptides and antibodies to create individually-tailored vaccines for use against tumors. Another is drug repositioning – expanding the spectrum of applications for approved medicines. In the clinical-translational field, the focus is on the prompt application of research findings in diagnostics and treatment, allowing patients to benefit from innovative developments as early as possible. Researchers at the ZPM also aim to provide help in matters of data protection and patient information and consent, as well as support for patients in negotiations with insurers as new treatments become standard.

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