

Γκιλιόμ Μεντάρ

Dr. Guillaume Médard **teaches chemical biology and leads a chemical proteomics research group** at the TUM School of Life Sciences, Technical University of Munich, Germany.

He obtained his chemistry “diplôme d’ingénieur” in 2002 from the Ecole Nationale Supérieure de Chimie de Montpellier (ENSCM), France. In 2003, he completed an organic chemistry research masters on triazene chemistry at the University of Strasbourg, France. He then worked on different strategies for the synthesis of 9,10-secosteroids for his doctoral thesis at University College London, University of London, UK. In 2007, he joined the contract research organisation Argenta Discovery (now Charles River), Harlow Town, UK. As a medicinal chemistry research scientist there, he contributed to kinase inhibitors drug discovery programmes for Genentech. Since 2011, he has worked as a group leader for chemical proteomics at the Technical University of Munich, within the chair of proteomics directed by Prof. Bernhard Küster.

The key aspect of his research is the **coupling of medicinal chemistry and bottom-up proteomics** to help expand the addressable proteome, which he considers to be a key requirement for the development of personalised medicine. The main focus is on affinity-based chemoproteomics using on-bead immobilised small molecules. These so-called affinity matrices can specifically enrich their targets, which can be identified and quantified using the multiplexing capacity of mass-spectrometry readout. From this realisation, affinity-based proteome profiling has matured into a powerful target deconvolution technology. The group pushes the boundaries of this approach to propose a **target-agnostic, proteomics-aided, drug discovery** paradigm. Feasibility and added-value are demonstrated for key modules of this molecule-centered strategy: 1) proteome-wide screening of small molecules, 2) proteome-wide SAR study of pharmacophores and 3) selectivity profiling against defined native subproteome (e.g. HDACs, kinome, chemotype-oriented).

ORCID profile: <https://orcid.org/0000-0002-4782-4029>

Lab page: <https://www1.ls.tum.de/proteomics/research/medard-group/>