



Cell Biology
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Institute presentation

The NMI, founded in 1985 is a non-profit organization for Applied Research & Development at the interface between the life sciences and material science. An interdisciplinary team of scientists (biologists, biochemists, biophysicists, physicists, chemists, engineers) is developing new technologies for companies and public research sponsors in the areas of pharma- and biotechnology, biomedical technology, as well as surface and interface technology.

With about 200 employees and 5800 m² of lab and office space, we are located in the Science & Technology Park Tübingen/Reutlingen in close vicinity to academic institutes and biotech companies. State-of-the-art labs for molecular biology, cell biology, biochemistry, electrophysiology, surface and interface technology including clean rooms for chip production, tribology and bonding technologies. Lab automation technologies in electrophysiology, biochemistry and molecular biology are available as well as accredited areas and GLP/GMP facilities. We manage projects from start to finish, from the planning stage, through to evaluation if required. Our portfolio also includes individual services such as consulting, technology assessment, and conceptual planning and coordination of projects.

The NMI is involved in about 60 research projects per year on the national and international level. Funding comes mostly from the EU, German Ministry for Science and Education, German Research Council, State Ministry of Finances and private foundations. NMI is involved in EU training programmes such as MC ITN, and national or local research training programmes for graduate students and Post Docs.

The Department of Cell Biology is equipped with state of the art electrophysiological tools, including automated approaches to investigate physiological and pathophysiological mechanisms in cells, cellular networks and organ systems. Our fields of expertise are: heart and CNS physiology, pain, and diabetes. In addition, we have developed electrophysiological assays that can be used in preclinical drug discovery and safety pharmacology to assess on and off drug effects and mode of actions. In the present project, our proprietary microelectrode array (MEA) technology as well as automated patch clamp is used to test for the quality, homogeneity and electrophysiological phenotype of stem-cell derived cells, and for the pharmacological validation of patient-derived cell lines.