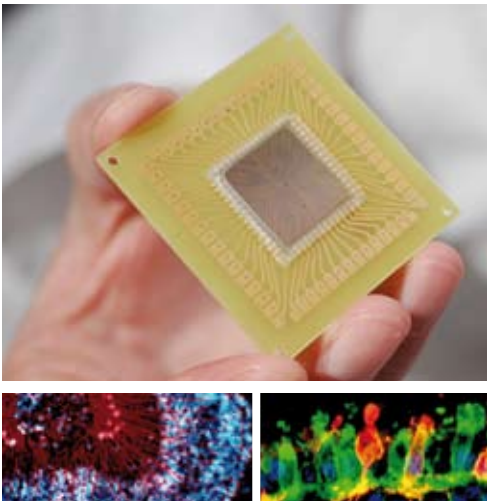


KEYWORDS

- » Biohybrid Technology
- » Biosensors
- » 3D *In Vitro* Retina
- » Microimplants
- » Tissue Microarrays



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REAL-TIME IMPEDANCE SPECTROSCOPY FOR FUNCTIONAL SCREENING OF ORGANOTYPIC CULTURES (RISP)

The aim of the project is the designing, testing and in parts the development of an innovative, microelectrode-based multiwell-array for a non-invasive high-content and high-throughput screening of organotypic cell culture models. This is to provide evidence of tau pathologies on a cellular and structural level via impedimetric screening.

The main focus will be the designing and testing of a novel microelectrode array. Another main topic is the establishment of a transgenic, tauopathy cell culture model suitable for impedance spectroscopy, as well as the choosing and testing of suitable membrane inserts and multiwell frames for tissue positioning and impedance measurement.

At the same time the research group plans on developing a microelectrode holder and assemble the single components developed by our partners. The development and adaptation of the software will be followed by the testing and validating of the complete system.

The developed components and technologies will find application in and have an impact on various sectors of the value added chain, mainly the semiconductor and pharmaceutical industry as well as manufacturers of multiwell microtiter plates.

The screening platform can be connected to a laser microdissection platform "NanoElectricBeam".

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