

Joint press release from 3Brain AG and SuSoS AG

3Brain announces the use of AziGrip4™ CELL+ technology of SuSoS to improve their microchip-based solutions for cell culture assays

Zürich, July 01, 2021 - 3Brain AG, the world's first company to have placed sophisticated microchips in direct contact with cells to study them, and SuSoS AG, a high-tech company specialized in functional thin film coatings, have entered a commercialization agreement and are working together to ensure that the 3Brain's pioneering high-resolution microelectrode arrays (HD-MEA) and CorePlate™ technologies can be adopted quickly by as many users as possible thanks to the advantages brought by SuSoS' AziGrip4™ CELL+ surface functionalization.

The surface coated microchip is the result of more than a year of joint efforts by the two companies. 3Brain's cell plates with AziGrip4™ CELL+ carry a specially designed surface treatment that homogeneously improve the cell adhesion to the microchips resulting in simplified and standardized procedures to test cells and compounds in laboratories and preclinical studies.

'At 3Brain, we are working on a new way of studying cells based on microchips' says Alessandro Maccione, CSO of 3Brain. 'Microchip technology is very sensitive, but it's only half of the ingredients needed to improve this kind of assay, which in turn is crucial, for example, in finding potential new treatments for diseases. The other half is, of course, the cells, which are a dynamic and complex system that, in some cases, can be difficult to reproduce reliably. Due to various factors, such as human intervention and the characteristics of the substrate where the cells are seeded, there can be too much variability between one cell preparation and the next. This obviously has a negative impact on the tests. Thanks to SuSoS' expertise and knowledge, it was possible to deposit a homogenous, nanometer-thick cell-adhesive layer to the microchips providing a uniform cell adhesion over the whole sampling area. The pre-coated chips simplify the working process, reduce manual intervention and, according to initial tests, improve the reproducibility of the results.'

Samuele Tosatti, SuSoS' CEO adds that 'surface matters! It is not a mere slogan that we add to our company's name. We truly believe that in many research areas – and specifically when dealing with the very building blocks of biology – systematically, scientifically taking care of the few nanometres at the surface of our clients' devices truly makes the difference. We're happy that we were able to contribute to a further innovation in 3Brain's already impressive microchip technology. We call AziGrip4™ the molecular superglue. Thanks to this versatile technology we were able to provide a functionalization layer that cells tend to particularly appreciate without interfering with the highly sensitive sensor arrays of 3Brain's cell plates. A further step toward simplification and standardization of otherwise cumbersome tasks to the benefit of the scientific community.'

ABOUT SUSOS AG

SuSoS AG has been engineering, commercializing, and analysing highly functionalised surfaces for the med-tech, ophthalmologic, life-science and biosensing industries since 2004. Thanks to the patented **PAcrAm™**, **Nitro-Dopa** and **AziGrip4™** platforms, SuSoS can offer coating solutions tailored to the very needs of its customers and partners by providing technologies that are ready for volume applications despite a very high level of customization required for each specific device on which the coating is applied. Beside engineering and coating services, SuSoS operates a cutting-edge surface analysis lab and offers **measurement** services to investigate chemical composition, wettability, friction, morphology, contamination, and ad-/absorption.

ABOUT 3BRAIN AG

3Brain is pioneering the use of sophisticated silicon microchips to study cell cultures, tissue preparations and organoids. The company has intensively worked on CMOS-powered cell-electronic interfaces with the aim of boosting research in major fields like neuroscience, ophthalmology and cardiology. 3Brain was the first to introduce **CMOS-based HD-MEA** (high-density microelectrode array), a device similar to the Petri dish used by biologist to study cells but with the important addition of a microchip at the base. Following this achievement, 3Brain is now setting up the next breakthrough with the **CorePlate™ technology**, a **multiwell device** to perform tests in parallel on multiple cell preparations, which holds the potential to improve cell-based assays and with it find new treatments for brain diseases.