

A New Glass Chip System Acquiring Electric Activity And Physiological Parameters of Stem Cell Derived Cells.

Köster, P. J., Bühler, S. M., Tautorat, C., Sakowski, J., Schrott, R., Baumann, W., Gimsa, J., 2008. In A. Stett (Ed.): Conference proceedings of the 6th International Meeting on Substrate Integrated Micro-Electrode Arrays. 315–316, BIOPRO Baden-Württemberg GmbH, Stuttgart. ISBN 3-938345-05-5. MEA Meeting 2008, 08.-11. July. Reutlingen, Germany.

Abstract: *The EU chemical policy REACH regulates the registration, evaluation and authorization of chemicals. Investigations on the effects of neurotoxic and developmental-neurotoxic substances are required by European and US-American test guidelines. However, until now these tests are based on animal experiments contradicting society claims to abolish animal experiments and to implement the 3R-principle. The acquisition of electrophysiological signals of cultivated nerve or muscle cells differentiated from stem cells on a glass chip is a novel method for the reduction of animal experiments. Our Modular Glass Chip System (MOGS) has the potential to become a compact and versatile test system for producers of pharmaceutical, HCS applications as well as bioanalytical substances.*

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