A new Principle for intracellular Potential Measurements of adherently growing Cells.

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Abstract: *The investigation of cellular reactions in living cell cultures gets increasingly into focus of drug development and environmental monitoring. Existing classical methods for intracellular measurements are time-consuming and complex. Existing Patch-on-chip systems are limited to the investigation of suspended single cells. Nevertheless, most cells in the human body are adherently growing. To address this problem, we are developing a new chip system with 64 micro-structured needle electrodes arranged within a measuring area of 1 mm2. We believe that the intracellular investigation of electro-chemical properties and processes in adherently growing cells will become possible with our new analytical chip.*