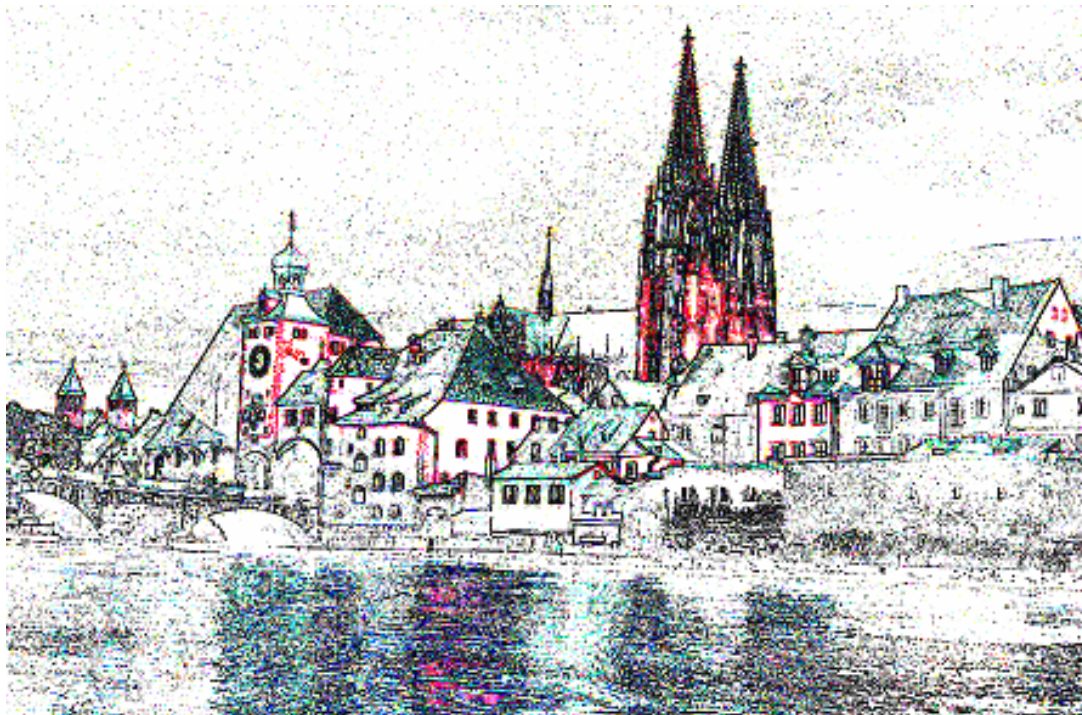


# 1<sup>st</sup> Conference on Impedance-Based Cellular Assays



August 10<sup>th</sup> - 12<sup>th</sup>, 2011  
in Regensburg



## Scientific Program

Wednesday, August 10<sup>th</sup> 2011

### Tutorial on Impedance-Based Cellular Assays

10:15 – 10:30 **Welcome and Overview of the day**

**Andreas Janshoff:**

10:30 – 11:15 From Ohm's law to complex impedance: a guided tour through the physics behind the measurement.

**Joachim Wegener:**

11:15 – 12:00 Impedance of cell-covered gold-film electrodes: what information is available at what frequency?

12:00 – 13:30 **Lunch**

**Christian Renken:**

13:30 – 14:15 Impedance-based cellular assays for adherent cells: an overview over different assay formats and approaches.

**Chun-Min Lu:**

14:15 – 15:00 How to record and analyze micromotion data.

15:00 – 15:30 **Coffee Break**

**Uwe Pliquet:**

15:30 – 16:00 Membrane electroporation: a general description of the phenomenon.

**Charles Keese:**

16:00 – 16:30 About the use of invasive electric fields to study adherent cells: in situ electroporation and wounding.

**Joachim Wegener:**

16:30 – 17:00 Impedance-based cellular assays: some practical issues.

**Ulf Rädler:**

17:00 – 17:15 Free discussion on open questions.

**Thursday, August 11<sup>th</sup> 2011**

**Impedance-Based Cellular Assays - Day 1**

08:30 – 08:45		<b>Welcome</b>
08:45 – 09:30	<b>T1</b>	<b>Ivar Giaever (USA)</b> The future of science?
09:30 – 10:00	<b>T2</b>	<b>Pierre Bagnaninchi (UK):</b> Monitoring stem cell differentiation with impedance sensing.
10:00 – 10:30	<b>T3</b>	<b>Michael Angstmann (G):</b> Impedance sensing of mesenchymal stem/stromal cell adhesion and differentiation.
10:30 – 11:00		<b>Coffee Break</b>
11:00 – 11:30	<b>T4</b>	<b>Andrea Robitzki (G):</b> Bioimpedance spectroscopy on microcavity arrays: real time monitoring of degeneration and injury in viable 3D spheres.
11:30 – 12:00	<b>T5</b>	<b>Stefanie Michaelis (G):</b> Two-in-One: Measuring electrical and acoustic impedance of adherent cells.
12:00 – 12:20	<b>S1</b>	<b>Josef Unger (G):</b> The many Faces of Impedance Analysis of Adherent Cells.
12:20 – 12:40	<b>S2</b>	<b>Thomas Nacke (G):</b> Evaluation of electrodes for impedance spectroscopy.
12:40 – 14:00		<b>Lunch Break &amp; Group Photo</b>
14:00 – 14:30	<b>T6</b>	<b>Chun-Min Lo (TW):</b> Polypeptide Multilayer-Coated Electrodes for Impedance-Based Cellular Assay.
14:30 – 14:50	<b>S3</b>	<b>Pavlos Anastasiadis (USA):</b> Ultrasound-Induced Cell Permeability for Drug and Gene Delivery.
14:50 – 15:10	<b>S4</b>	<b>Judith Stolwijk (G):</b> Monitoring Fusion of Adherent Cells in Real-Time by ECIS.
15:10 – 15:30		<b>Applied Biophysics Inc. (USA)</b> Company Presentation
15:30 – 17:30		<b>Poster Session &amp; Coffee</b>
19:00		<b>Conference Dinner</b>

**Friday, August 12<sup>th</sup> 2011**

**Impedance-Based Cellular Assays – Day 2**

09:00 – 09:30	<b>T7</b>	<p><b>Jochen Seebach (G):</b> Regulation of endothelial barrier function under fluid flow.</p>
09:30 – 10:00	<b>T8</b>	<p><b>Geerten van NieuwAmerongen (NL):</b> Dynamic regulation of endothelial cell-cell interactions.</p>
10:00 – 10:30	<b>Coffee &amp; Posters</b>	
10:30 – 11:00	<b>T9</b>	<p><b>Wenguo Jiang (UK)</b> The use of ECIS in the investigation of cancer cell aggressiveness.</p>
11:00 – 11:30	<b>T10</b>	<p><b>Robert Meissner (Sui):</b> Continuous and label-free toxicity screening of human hepatocytes on chip reveals frequency-dependent impedance profiles.</p>
11:30 – 12:00	<b>T11</b>	<p><b>John Luong (CD):</b> Probing cytotoxicity of Anti-Cancer Drugs by Cell-Based Impedance Spectroscopy.</p>
12:00 – 12:20	<b>S5</b>	<p><b>Hamed Alborzinia (G):</b> Time-resolved Online Monitoring of Cellular Response to Drug Treatment.</p>
12:20 – 12:40		<p><b>ibidi GmbH (G):</b> Company Presentation</p>
12:40 – 14:00	<b>Lunch Break &amp; Posters</b>	
14:00 – 14:30	<b>T12</b>	<p><b>Andreas Janshoff (G):</b> Impact of nanoparticles on cellular dynamics and mechanics.</p>
14:30 – 14:50	<b>S6</b>	<p><b>Peter Ertl (AU):</b> Monitoring Cellular Stress Responses to Nanoparticles using a Lab-on-a-Chip.</p>
14:50 – 15:10	<b>S7</b>	<p><b>Lazlo Kóhidai (HUN):</b> Cell physiological effects elicited by silver nanoparticles – Cytotoxicity, cell adhesion and migration monitored by impedanciometry in human THP-1 monocyte and HMEC-1 endothelial cell lines.</p>
15:10 – 15:30		<p><b>Summary and Farewell</b></p>
<b>Coffee to Go</b>		