Biophysical Analysis of Molecular Interactions with Electro-Switchable Biosurfaces

Date: March 22nd, 2018  |  Time: 11:00 - 01:30 pm
Location: Room K 503, Konstanz Research School Chemical Biology, University of Konstanz, Universitätsstrasse 10, 78457 Konstanz, Germany
Lunch & Refreshments provided

**switchSENSE®** is an automated biosensor chip technology that employs electrically actuated DNA nanolevers for the real-time measurement of binding kinetics ($k_{\text{on}}$, $k_{\text{off}}$) and affinities ($K_D$). Interactions between proteins, DNA/RNA, and small molecules can be detected with femto-molar sensitivity.

At the same time, protein diameters ($D_H$) are analyzed with 0.1 nm accuracy and conformational changes as well as melting transitions ($T_m$) can be measured using minimal amounts of sample.

The principles and applicability of three complementary measurement modalities of **switchSENSE®** will be introduced in this talk: Fluorescence Proximity Sensing, Molecular Ruler Measurements, and Switching Dynamics Measurements.

We will discuss workflows and unique possibilities for monitoring protein size and assembly of biomolecular complexes in solution by assessing the hydrodynamic radius.

Application examples from drug development and fundamental research will be discussed, including:

- Conformation Changes in Proteins
- Small Molecule Inhibitors
- DNA/RNA Binding Proteins & Enzymes

**The Speakers**
Dr. Ulrich Rant, Dynamic Biosensors, DE
Dr. Nena Matscheko, Dynamic Biosensors, DE
Dr. Guido Uhlenbrock, Dynamic Biosensors, DE

**In Cooperation with**

**Host**
Prof. Dr. Andreas Marx, University of Konstanz, Chair of Organic Chemistry / Cellular Chemistry

**Seminar Registration Deadline is March 9th, 2018**
To register for this event please write a message to events@dynamic-biosensors.com stating your full name and institution.