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**“Immobilization-free analytics of  
biomolecules using Microscale  
Thermophoresis (MST)”**

**13 April 2012, 11:00 (s.t.)**

**Venue:** Seminar Room, 2<sup>nd</sup> floor  
Institute of Molecular Biology (IMB)  
Johannes Gutenberg University Campus Mainz

**All are welcome to attend**

## Abstract:

### **Immobilization-free Analytics of biomolecules using Microscale Thermophoresis (MST)**

The term Microscale Thermophoresis refers to the directed movement of molecules in optically generated microscopic temperature gradients. This thermophoretic movement is determined by the entropy of the hydration shell around the molecules. Almost all interactions between molecules and virtually any biochemical process related to a change in size, stability and conformation of molecules alters this hydration shell and can be quantified. Such changes allow quantification of binding affinities of proteins, nucleic acids and small molecules as well as measurement of enzymatic activities with MST.

In this seminar we will describe the technical details and the benefits of the Microscale Thermophoresis technology platform. We will show examples for interaction measurements ranging from protein – ribosome, protein – protein, small molecule – receptor binding studies to experiments where the interactions between a receptor incorporated in a vesicle and soluble proteins are analyzed. MST-Analysis is buffer independent, therefore analysis in blood serum and cell lysates is possible as well.

***To demonstrate the performance of Microscale Thermophoresis, we would like to invite you after the Talk to analyze your samples on the Monolith NT.115 benchtop instrument.*** You could easily measure your samples even without having any fluorescently labeled molecules. We could label any protein in 30 minutes.

Interested in measuring your samples: Please contact:

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