Characterization of the thermodynamic parameters of protein interactions by ITC (isothermal titration calorimetry)

Date: November/December 2013
Duration 2-3 Days
Number of Participants: 2-4

With ITC it is possible to define the thermodynamic parameters of an interaction during one single experiment.
By measuring the generated or absorbed heat of a biomolecular reaction the association constant (kA), the stoichiometry of the reaction (N) and the change of entropy (ΔS) and enthalpy (ΔH) is determined.
On the first day the participants will be introduced to the theoretical principals of ITC and will get familiar with the fully automated AutoITC 200. This will be done by prepared "test"-reactions/systems.
On the second day the participants have the opportunity to do first measurements with their own protein samples, otherwise some additional "test"-measurements will be performed to demonstrate the potential of ITC for the analysis of protein interactions.
The third day is blocked for analysis of the data and trouble shooting.

The introduction of this method will take two or three days.

1. Day: theoretical aspects of ITC
   Measurements of prepared examples

2.-3. Day: Measurements of individual prepared samples.
   Evaluation and interpretation of the results

Contact: Klaus Kock, Klaus.Kock@rub.de