



# **Vortragsankündigung**

**- im Rahmen des UniCat-Kolloquiums -**  
([www.unicat.tu-berlin.de](http://www.unicat.tu-berlin.de))

Es spricht: **Prof. Dr. Robert Huber**, Max-Planck-Institut für Biochemie, Martinsried

Zeit: **Mittwoch, 08. Juli 2009** 17:15 Uhr

Ort: **TU Berlin**  
**Institut für Chemie, Altes Chemiegebäude**  
**Straße des 17. Juni 115, 10623 Berlin**  
**Raum C 243**

Thema: **Catalysis and regulation in biology, proteolytic enzymes as an example**

**Abstract:** Proteolytic enzymes catalyse a very simple chemical reaction, the hydrolytic cleavage of a peptide bond. Nevertheless they constitute a most diverse and numerous lineage of proteins. The reason lies in their role as components of many regulatory physiological cascades in all organisms. To serve this purpose and to avoid unwanted destructive action proteolytic activity must be strictly controlled.

Control is based on different mechanisms which I will discuss and illustrate with examples of systems and structures determined in my laboratory:

- a) by specific inhibition with natural and synthetic inhibitors
- b) by enzymatic specificity
- c) by activation from inactive precursors accompanied or not by allosteric changes
- d) by co-localization of enzyme and substrate
- e) by cofactor binding accompanied or not by allosteric changes
- f) by controlled access to the proteolytic site.

The regulatory principles offer new opportunities of intervention for therapeutic purposes and use in crop science.

**Organisator: Prof. Dr. Roderich Süßmuth (TUB)**

Gäste sind herzlich willkommen!

Prof. Dr. Matthias Drieß  
Sprecher des Exzellenz-Clusters UniCat