



Vortragsankündigung

- im Rahmen des UniCat-Kolloquiums -
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Es spricht: **Prof. Dr. Bernhard Jaun**
ETH Zürich

Zeit: **Mittwoch, 18. Juni 2008**
17:15 Uhr

Ort: **Technische Universität Berlin**
Institut für Chemie
Altes Chemiegebäude
Straße des 17. Juni 115, 10623 Berlin
Raum C230

Thema: **The Catalytic Role of the Nickel Hydrocorphin
F430 in Biological Methane Formation and
Functionalization**

Abstract: Methyl-coenzyme M reductase (MCR) is the key enzyme in methanogenesis by archaea¹. It catalyzes the unusual reaction of a thioether (methyl-coenzyme M) with a thiol (coenzyme B) to give the hydrocarbon methane and the mixed disulfide CoB-S-S-CoM. Still indirect but growing evidence indicates that other archaea, genetically related to the methanogens, use a close homologue of MCR to functionalize methane in anaerobic methane oxidation (AOM, hypothetically considered as "reverse methanogenesis"). In both cases, the active site of the enzyme contains a nickel hydrocorphin, either coenzyme F430 (**1**) or a newly discovered methylthio-substituted variant as the prosthetic group.
The presentation will discuss our work on recently discovered states of the enzyme and their implications with regard to possible mechanisms, done in collaboration with other groups.

Organisator: **Prof. Dr. Drs. h. c. Helmut Schwarz (TUB)**

Gäste sind herzlich willkommen!

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