



Université Blaise Pascal

UNIVERSITÉ BLAISE PASCAL  
U.F.R de Recherche Scientifique et Technique



## **CYCLE DE CONFÉRENCES DE CHIMIE**

*Avec le concours de :* **Manufacture Française des Pneumatiques MICHELIN**  
**Centre de Développement Préclinique, Schering-Plough**  
**Fédération de Chimie (FR 2404)**  
**Section Auvergne de la Société Française de Chimie**  
**U.F.R.S.T. / Master de Chimie / Département de Chimie**

---

# **Jeudi 14 Mai 2009 à 16h (Hors cycle)**

**Amphi de Chimie Paul REMI - (Site des Cézeaux)**

## **Drs. Anders A. Jensen and Lennart Bunch**

*Dept of medicinal chemistry, Faculty of pharmaceutical sciences  
University of Copenhagen*

# **Discovery of UCPH-101 - The First Subtype Selective EAAT1 Inhibitor**

L-Glutamate (Glu) is the major excitatory neurotransmitter in the central nervous system (CNS). Upon synaptic firing Glu is released from storage vesicles in the presynaptic terminal into the synaptic cleft, where it exerts its physiological effects through a plethora of ionotropic and metabotropic Glu receptors. However, immediately after its synaptic release Glu is taken up from the synaptic cleft by a family of excitatory amino acid transporters (EAATs) located in the membrane of glia cells and neurons. This reuptake pathway is the essential component in the termination of glutamatergic neurotransmission and therefore of key importance in the maintenance of a proper concentration of Glu in the synapse. To date five EAAT subtypes have been identified, termed EAAT1-5.

The lecture describes the biological background, discovery of lead structure, synthesis of analogs, and Structure-Activity-Relations