



**UNIVERSITY OF VERONA**  
**DEPARTMENT OF NEUROLOGICAL, NEUROPSYCHOLOGICAL, MORPHOLOGICAL AND**  
**MOTOR SCIENCES**  
*Section of Physiology and Psychology*

*PhD SCHOOL "SCIENCE ENGINEERING MEDICINE"*  
*PhD Program in PSYCHOLOGICAL AND PSYCHIATRIC SCIENCES*  
*PhD Program in NEUROSCIENCE*



**ASSOCIAZIONE PER LE NEUROSCIENZE**  
**"GIUSEPPE MORUZZI"**

***Seminars in PSYCHOLOGICAL and PSYCHIATRIC SCIENCES***  
***and***  
***NEUROSCIENCE***

**Wednesday, July 18, 2012**  
**at 3:00 p.m.**  
**Room 1 – Lente Didattica**

**Prof. Thilo van Eimeren, M.D.**  
Christian-Albrechts University, Kiel  
Functional Imaging Team, Department of Neurology  
Schleswig-Holstein University Hospital  
Kiel, Germany

***Title of the Seminar***

**“Dancing with the devil. Reward-seeking behaviors in Parkinson's disease”**

**Abstract**

The development of an impulse control disorder (ICD) is now recognized as a potential nonmotor adverse effect of dopamine replacement therapy in Parkinson's disease (PD). Recent epidemiological, neurophysiological and genetic advances have shed some light on potential mechanisms involved. It is safe to say that dopaminergic drugs - particularly dopamine agonists - are able to induce ICDs only in a minority of the patients, while the majority is somehow protected from this adverse effect. While it seems clear that men with early-onset PD are more vulnerable, other predisposing factors, such as various current or pre-PD personality traits are a matter of debate. In terms of neurophysiological advances, one may find striking analogies to the addiction literature suggesting a causal chain beginning with certain predisposing conditions of striatal dopamine synapses, an "unnatural" increase of dopamine stimulation and a characteristic pattern of resulting functional changes in remote networks of appetitive drive and impulse control. Future prospects include potential add-on medications and the possible identification of genetic predispositions at a genome-wide scale. Functional imaging of pharmacogenetic interactions (imaging pharmacogenomics) may be an important tool on that road.

**Everyone is welcome to attend**

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