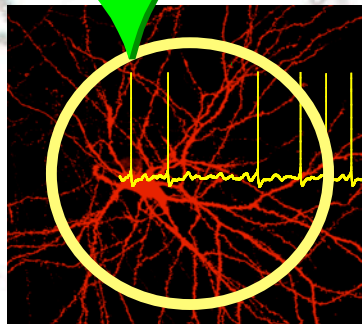
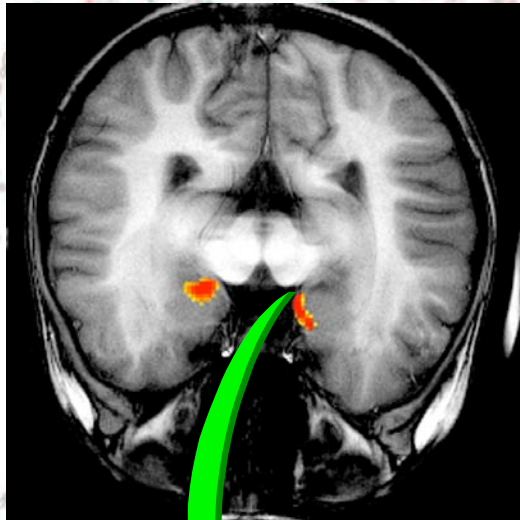


# 4<sup>th</sup> Symposium on Limbic Structures and Functions



SFB 426 / KFG 163  
Magdeburg, Germany  
June 22-23, 2006

- No registration
- No meeting fee
- **Meeting venue:**  
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- **Support and sponsors:**
  - Deutsche Forschungsgemeinschaft
  - Leibniz Institute for Neurobiology
  - FAN gGmbH
  - Center for Advanced Imaging /BMBF



**DFG**

Sonderforschungsbereich 426:  
**Limbische Strukturen und  
Funktionen**

Klinische Forschungsguppe 163:  
**Die kognitive Kontrolle von  
Gedächtnisfunktionen**

## Program Committee:

Eckart D. Gundelfinger (chair)  
Emrah Düzel  
Hans-Jochen Heinze  
Volker Höllt  
Constanze Seidenbecher



# Scientific Program

## Thursday, June 22

13:00 Opening  
*Hans-Jochen Heinze (chairman of the SFB)*

### Session 1: Molecular mechanisms of limbic synapses and signaling systems

*Chair: Volker Höllt & Frank Zufall*

13:10-13:40 Mammalian chemical communication: from genes to behavior  
*Frank Zufall, Baltimore*

13:45-14:00 A role for zinc in synaptic plasticity?  
*Eckart D. Gundelfinger, Magdeburg*

14:05-14:20 Molecular mechanisms of opioid tolerance and dependence  
*Volker Höllt, Magdeburg*

14:25-14:40 A multi-faceted, brain-specific adaptor protein, p42(IP4) / centaurin-alpha1, in limbic brain structures  
*Georg Reiser, Magdeburg*

14:45-15:00 Immediate early gene arg3.1 and information processing  
*Dirk Montag, Magdeburg*

– Coffee break –

### Session 2: Intrinsic organization of limbic structures and signaling systems

*Chair: Herbert Schwegler & H. Christian Pape*

15:30-15:45 Effects of extracellular matrix molecules on hippocampal architecture and plasticity  
*Constanze Seidenbecher & Manfred Krug, Magdeburg*

15:50-16:05 mGluR- and Ca<sup>2+</sup>-dependent mechanisms of hippocampal synaptic plasticity  
*Detlef Balschun & Klaus G. Reymann, Magdeburg*

16:10-16:25 Connections between posterior and paralamina thalamic nuclei and the midbrain tectum  
*Rüdiger Linke, Magdeburg*

16:30-16:45 Neural systems involved in emotional modulation of vegetative responses  
*Deniz Yilmazer-Hanke & Herbert Schwegler, Magdeburg*

16:50-17:05 – Break –

17:05-17:20 Cellular requirements for late phases of hippocampal plasticity: link to long-term memory formation  
*Julietta Frey, Magdeburg*

17:25-17:40 Neuropeptides in fear memory formation  
*Oliver Stork, Magdeburg*

17:45-18:00 Electrophysiological characterization of neuropeptidergic effects in the amygdala  
*Susanne Meis, Magdeburg*

– Dinner –

### Evening session: Mechanisms of fear and anxiety

*Chair: Eckart D. Gundelfinger*

19:30-20:10 Limbic functions modulated by GABA-A receptor subtypes  
*Hanns Möhler, Zurich*

20:15-20:55 To fear or not to fear – rhythms are here  
*H. Christian Pape, Münster*

## Friday, June 23

### Session 3: Functions and dysfunctions of the limbic system and connected brain regions

*Chair: A. Katharina Braun & Julietta Frey*

9:00-9:30 Insights into the integrative roles of hippocampal LTP and LTD in spatial memory formation  
*Denise Manahan-Vaughn, Bochum*

9:35-9:50 Dysfunctions of limbic brain areas after juvenile traumatic experience: involvement of the dopaminergic system  
*Jörg Bock & A. Katharina Braun, Magdeburg*

9:55-10:10 Leptin and insulin resistance in the brain – implications for metabolic and cognitive functions  
*Hendrik Lehnert, Magdeburg*

– Coffee Break –

10:45-11:00 Phencyclidine animal model of psychosis  
*Bernhard Sabel, Magdeburg*

11:05-11:20 Brain processing of prosodies and non-speech vocalizations  
*Henning Scheich, Magdeburg*

11:25-11:40 Lateralized auditory processing in schizophrenia  
*André Brechmann, Magdeburg*

11:45-12:00 Morphometry of GAD immunoreactive neurons in limbic structures of schizophrenics  
*Bernhard Bogerts, Magdeburg*

– Lunch break –

### Symposium of the Clinical Research Group: The cognitive functions of memory control

*Chair: Emrah Düzel & Hans-Jochen Heinze*

13:30-13:40 Introductory remarks  
*Emrah Düzel (chairman of the CRG)*

13:40-14:10 Music and emotions  
*Eckart Altenmüller, Hanover*

14:15-14:30 Dopamine, novelty and reinforcement  
*Emrah Düzel, Magdeburg, London*

14:35-14:50 Neural mechanisms of directed forgetting and errorless learning  
*Thomas Münte, Magdeburg*

14:55-15:10 Dopamine, novelty and memory: insights from brain imaging and molecular genetics  
*Björn Schott, Magdeburg*

– Coffee Break –

15:45-16:00 Selective encoding and emotional interference  
*Daniela Fenker & Hans-Jochen Heinze, Magdeburg*

16:05-16:20 Encoding mechanisms in patients with ADHD  
*Kerstin Krauel, H. Hinrichs & L. Baving, MD*

16:25-16:40 Memory impairment in schizophrenia: evidence for impaired encoding and retrieval processes  
*Kolja Schiltz, Magdeburg*

16:45-17:15 K-ATP channels control selective vulnerability of dopaminergic midbrain neurons  
*Jochen Röper, Marburg*

17:20 Concluding remarks