

9th Psychoimmunology Expert Meeting

March 08-11, 2007

Neuropsychimmunology of Psychoses

World Psychiatric Association, Section Symposium

supported by:

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Lilly Germany

Bezirkskrankenhaus Günzburg

Organizers: Prof. Karl Bechter, Günzburg /Ulm

Prof. Bernhard Bogerts, Magdeburg

<http://www.med.uni-magdeburg.de>

Final Scientific Programm

Thursday, March 08, 2007

18.00 Registration

20.00 **Welcome and Informations**

Prof. Bernhard Bogerts, Organizer, University of Magdeburg

Prof. Klaus-Michael Debatin, Dean Medical Faculty, University of Ulm

*Prof. Thomas Becker, Director Clinic Psychiatry and Psychotherapy II,
University of Ulm, Bezirkskrankenhaus Günzburg*

Prof. Karl Bechter, Organizer, University of Ulm, Bezirkskrankenhaus Günzburg

Introductory Lecture: Present status of psychoimmunology research

Prof. Julio Licinio, Miami University /USA

Friday, March 09, 2007

Session 1

08.30 - 12.00

Post-mortem and experimental findings in psychoses

Chairs: S. Bahn, Cambridge /UK and B. Bogerts, Magdeburg /Germany

08.30

Search for autoimmune/inflammatory processes in post mortem brains of schizophrenics

B. Bogerts, H.-G. Bernstein, J. Steiner, Magdeburg /Germany

09.00

Long-term behavioural and pharmacological consequences of prenatal immune challenge in mice: the importance of fetal brain pro- and anti-inflammatory cytokines

J. Feldon, Zürich /Switzerland

9.30

Disease biomarkers in first-onset schizophrenia

S. Bahn et al, Cambridge /UK

--- 10.00 coffee break

10.30

T cell responses in schizophrenia: Stimulation with anti-CD3 leads to lower proliferative responses in patients, with changes in gene and protein expression profiles

R.M. Craddock, H.E Lockstone, D.A. Rider, J. Huang, M. Herberth, N.D. Krzyszton, S. Bahn, Cambridge /UK

11.00

Cannabinoid receptors in postmortem brains of schizophrenics

F.M. Leweke et al, Köln /Germany

11.30

Expression of CB₁ cannabinoid receptor in the anterior cingulate cortex in schizophrenia, bipolar disorder, and major depression

D. Koethe, I.C. Llenos, J.R. Dulay, C. Hoyer, E.F. Torrey, S. Weis, F.M. Leweke, Köln /Germany

--- 12.00 lunch + postersession (Poster Nr. 1-9; 13.30 – 13.50)

Session 2

14.00 - 18.00

Psychoneuroimmunology, virology and neurodegeneration***Chairs: B. Leonard, Maastricht /NL and C. Platsoucas, Philadelphia /USA***

- 14.00 Human parvovirus B19 infection: the potential complex interplay of gender, viral infection, autoimmunity, and mental illness
J. Hobbs, Gainesville /Florida USA
- 14.30 Dopaminergic drugs exacerbate immune-mediated neuropathology in SIV-neuropsychiatric disease due to excitotoxic mechanisms
E. Koutsilieri, F. Meisner, E. Neuen-Jacob, S. Sopper, P. Riederer, V. ter Meulen, C. Scheller, Würzburg /Germany
- 15.00 Peripheral cytokine and brain connection: changes in brain, blood and behaviour in interferon-alpha treated rats
A. Mu Myint, H. Steinbusch, S. O' Mahony, D. Luchtman, H. Steinbusch, B.E. Leonard, Maastricht /Netherlands
- 15.30 coffee break
- 16.00 Immunopathology of multiple sclerosis and psychoses
E.L. Oleszak, X. Zhang, W.L. Lin, S. Lu, J.R. Chang, A. Tsygankov, C.D. Katsetos, A. Legido, H. Hardison, M. Bhattacharje, G. Rudner, D.S. Monos, K. Peng, S. Vucetic, Z. Obradovic, S. Herzog, K. Bechter, C.D. Platsoucas, Philadelphia /USA
- 16.30 Toxoplasma gondii infection: a large scale controlled prospective study in individuals with major depression or schizophrenia beyond sero-prevalence
D. Hinze-Selch, W. Däubener, L. Eggert, S. Erdag, R. Stoltenberg, S. Wilms, Kiel /Germany
- 17.00 Neurodegeneration and neuroprotection: disrupted neuronal networks in dementia and depression
B. Leonard, Maastricht /Netherlands/Ireland
- 17.30 (Patho)physiological role of neurotrophins
R. Hellweg, Berlin /Germany

--- 18.30 dinner

20.00

Special Lecture - B lineage cells in the inflammatory CNS environment:

Migration, maintenance, and local antibody production

E. Meinl, M. Krumbholz, R. Hohlfeld, Max Planck-Institute for
Neuroimmunology, Munich /Germany

Saturday, March 10, 2007

Session 3

08.30 - 12.30 ***CSF and serum findings in neurodegenerative, neuroinflammatory and psychiatric disorders***

Chairs: H. Reiber, Göttingen and H. Tuman, Ulm /Germany

08.30 CSF and plasma cytokine levels at delivery and postpartum depression
F. Boufidou, J. Argeitis, P. Msaouel, I. Lambrinoudaki, G. Christodoulakos, A. Leonardou, I.M. Zervas, C. Nikolaou, Athens /Greece

09.00 Functional investigations of high frequency sampling of CSF analytes
from patients and controls obtained by long-term lumbar catheter -
Ultradian Neurochemical Oscillations
R. Salomon, Nashville /USA

9.30 S100B in schizophrenic and affective psychosis
M. Rothermundt, Münster /Germany

--- 10.00 **coffee break**

10.30 The role of cytokines in depression: new findings and novel treatments
C. Song, Charlottetown /Canada

11.00 Kynurenic acid: Immunological and neuropsychopharmacological
aspects
M. Holtze, Stockholm /Sweden

11.30 Serum levels of soluble IL-2 receptor-alpha and IL-1 receptor antagonist
in schizophrenic patients are differentially affected by neuroleptic
drugs
P. Sirota, M. Meiman, R. Herschko, H. Bessler, Tel Aviv /Israel

12.00 Functional abnormalities in the neuroendocrine-immune interplay in
patients with major depression
A. Schuld, S. Birkmann, H. Künzel, T. Pollmächer, Ingolstadt /Germany

--- 12.30 **lunch + postersession (Poster Nr. 10-17; 13.30 – 13.50)**

Session 4

14.00 - 17.30

Psychiatric therapy in a psychoimmunological framework***Chairs: V. Arolt, Münster and N. Müller, München***

14.00

COX-2 inhibition – a new therapy in schizophrenia and affective disorders?

N. Müller, M. Riedel, M. J. Schwarz, München /Germany

14.30

Integrating infectious disease and neuropsychimmunology research into the practice of psychiatry

R. Bransfield, Red Bank, NJ /USA

15.00

Immune modulatory action of various psychopharmaceutic drugs

M.J. Schwarz, M. Riedel, N. Müller, München /Germany

15.30

Dissecting specific etiologies in psychosis, and differential treatments

K. Bechter, Günzburg /Germany

--- 16.00 coffee break

16.30 - 18.30

New Research Session and final discussion***Chairs: H. Drexhage, Rotterdam and M. Schmitt, Ulm***

16.30

Two partly overlapping but different mRNA signatures for bipolar disorder and schizophrenia are formed by an aberrant expression level of inflammatory genes in monocytes

R.C. Padmos, M.H.J. Hillegers, E.M. Knijff, R. Vonk, A. Bouvy, F.J.T. Staal, N. van Beveren, A. Willem, H.A. Drexhage, Rotterdam /Netherlands

17.00

Associations between *Chlamydomphila* infections, HLA-A10 and risk of schizophreniaB. Fellerhoff, B. Laumbacher, N. Mueller, S. Gu, R. Wank, München /Germany

17.30

Comparison of tetra-/penta-/streptamer technology for the characterization of CMV antigen-specific CD8+ T cells by flow cytometry

A. Schmitt, M. Rojewski, H. Maxeiner, J. Chen, C. Bechter, M. Götz, K. Bechter, M. Schmitt, Ulm /Germany

--- 20.00 Buffet dinner, small talk, music

Sunday, March 11, 2007 – Morning Workshops (Time to be scheduled)

Workshop I - H. Reiber, Göttingen: The Blood Brain Barrier and the
Blood CSF Barrier Function

Workshop II - H. Drexhage,
Rotterdam: EU projects

Scientific Posters (displayed throughout the meeting)

- 1 **M. Herberth, N.D. Krzyszton, R.M. Craddock, D. Koethe, F.M. Leweke, S. Bahn**
Extrinsic and Intrinsic T cell Responses in Schizophrenia
- 2 **L. de la Fontaine, N. Müller, M. Riedel, R. Gruber, M.J. Schwarz**
Significant elevation of serum levels of Macrophage-Migration-Inhibitor-Factor (MIF) and CD14 – sign for an overstimulation of the monocytes/macrophages-system (MMS) in schizophrenia
- 3 **S.I. Gerber, G. Valerius, L.O. Schaere, N.C. Biedermann, S. Dittmann, H. Grunze, J.M. Langosch, E.F. Torrey, R.H. Yolken**
The role of infectious agents for cognitive impairment in bipolar disorder
- 4 **J. Steiner, H.-G. Bernstein, H. Biela, B. Bogerts**
Microglial density in schizophrenia and depression is independent from diagnosis but associated with suicide
- 5 **F. Kästner**
Different activation patterns of proinflammatory cytokines in melancholic and non-melancholic major depression are associated with HPA axis activity
- 6 **G. Ponath, C. Schettler, B. Voigt, D. Wentker, V. Arolt, M. Rothermundt**
Autocrine S100B effects on astrocytes are mediated via RAGE
- 7 **R.C. Padmos, E. M. Knijff, H. J. de Wit, H. A. Drexhage**
Bipolar disorder is associated with thyroid autoimmunity Monocyte PDE4B as a decisive determinant in both disorders
- 8 **B. Milleit, S. Smesny, M. Rothermundt, H. Sauer, C. Gaser**
S100B-protein and brain morphology in Schizophrenia
- 9 **R.C. Drexhage, H. de Wit, R.C. Padmos, D. Cohen**
Schizophrenics have raised serum levels of the pro-inflammatory adipokine ccl2. A relation to obesity and diabetes
- 10 **M.J. Schwarz, M. Riedel, N. Müller**
Immune modulatory action of various psychopharmaceutic drugs
- 11 **H.-G. Maxeiner, K. Bechter, M. Rojewski, A. Schmitt, M. Otto, M. Schmitt**
Simultaneous Analysis of T-cell Subsets in the Cerebrospinal Fluid and Peripheral Blood of Patients by Flow Cytometry

12 S. Mesa-Castillo

Direct evidence of intranuclear viral particles in the brain of one of a monozygotic twin pair from a schizophrenic mother

13 M.J. Schwarz, S.J. Teipel, K. Bürger, H. Hampel

Elevated 3-Hydroxykynurenine serum levels in Alzheimer's Disease

14 M.J. Schwarz, M. Riedel, S. Holdenrieder, M. Tischinger, N. Müller

Relationship between Kynurenines and S100b in CSF of schizophrenic patients

15 K. Bechter

Therapy-resistant depression with fatigue. A case of presumed streptococcal-associated autoimmune disorder

16 K. Bechter

Cerebrospinal fluid may mediate pathogenic effects on nerves via efflux: a hypothesis from unexpected improved pain syndromes with cerebrospinal fluid filtration

17 M. Jockers-Scherübl

Nerve growth factor and Brain-derived neurotrophic factor in schizophrenic psychosis

18 M. Losen, P. Martínez-Martínez, B.A. 't Hart, H.P.M. Brok, F. Spaans, H. Duimel, P. Frederik, P.W.H.I. Parren, M.H. De Baets

Passive transfer of a human IgG4 anti-AChR antibody prevents myasthenia gravis in rhesus monkeys