

11th Psychoimmunology Expert Meeting

March 8-11, 2012

New findings and hypotheses
from epidemiology, clinical and experimental research



World Psychiatric Association, Immunology and Psychiatry Section

Organizers

Prof. Karl Bechter, Günzburg /Ulm

Prof. Bernhard Bogerts, Magdeburg

PD Dr. Johann Steiner, Magdeburg

Scientific Board

Prof. Volker Arolt, Münster Dr. Aye-My Myint, München

Prof. Hemmo Drexhage, Rotterdam Prof. Hansotto Reiber, Göttingen

Prof. Brian Leonard, Galway PD Dr. Markus Schwarz, München

Prof. Norbert Müller, München

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11th Psychoimmunology Expert Meeting

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Final Program

Gene-Environment-Interaction in Psychoneuroimmunology

New findings and hypotheses

from epidemiology, clinical and experimental research

Thursday, March 8, 2012

Location: Schloss Reisensburg/Entrance

6.00 pm

Registration

6.45 pm

Dinner Buffet

7.30 – 9.00 pm

Location: Schloss Reisensburg/Red Saloon

Welcome Addresses

Organizers: K. Bechter / B. Bogerts / J. Steiner

Prof. T. Becker, Head of the Clinic for Psychiatry and Psychotherapy II, Günzburg

Prof. T. Wirth, Dean of the Medical Faculty of Ulm University

Opening Lectures

Chairs: *K. Bechter*, Ulm/Germany

B. Leonard, Galway/Ireland

Is inflammation-induced depression mediated by activation of NMDA receptor signalling or deficient serotonergic neurotransmission?

R. Dantzer, Urbana/USA

History of ideas in neural regeneration and repair

G. Kreutzberg, Munich, Germany

Friday, March 9, 2012

Location: Festsaal Bezirkskrankenhaus Guenzburg

8.30 – 10.00 am

Biomarkers (I):

Chairs: *B. Bogerts*, Magdeburg/Germany

R. Yolken, Baltimore/USA

Inflammatory markers associated with mania

F. Dickerson, Baltimore/USA

Antibodies to food antigens: translational research in psychiatric disorders

E. Severance, Baltimore/USA

Maternal antibodies to fetal brain proteins and childhood autism

D. Braunschweig, Davis/USA

High throughput sequencing for the identification of novel infectious agents
associated with human psychiatric disorders

R.H. Yolken, Baltimore/USA

10.00 – 10.30 am: Coffee break

10.30 – 12.00 am

Biomarkers (II):

Chairs: *N. Müller*, Munich/Germany

S. Janelidze, Lund/Sweden

Circulating immune cells shape the mind and fight mental disorders

M. Schwartz, Rehovot/Israel

hsCRP in depressed outpatients. Any association to depressive symptoms?

J. Krogh, Copenhagen/Denmark

Serum S100B in patients with and without delirium

T. Falcone, Cleveland/USA

Associations between focal brain structural alterations, phospholipid metabolism and glutamatergic neurotransmission - a combined ³¹P/¹H MR spectroscopy investigation in patients with first acute onset schizophrenia

B. Milleit, Jena/Germany

12.00 am – 1.30 pm: Lunch break / Posters

1.30 – 3.30 pm

Blood brain barrier and Glia:

Chairs: *H. Wolburg, Tübingen/Germany*

A. Schmitt, Göttingen/Germany

Molecular mechanisms and anatomical routes of immune cell entry into the central nervous system

B. Engelhardt, Bern/Switzerland

Blood-brain barrier and immune privilege: Concepts and misconceptions

I. Bechmann, Leipzig/Germany

Diving into the mechanics of the psychotic brain: Microglia PET imaging

H. Klein, Groningen/Netherlands

The role of glial cells in depression and neurodegeneration

C. Song, Nanning/China

Characterisation of the expression of NMDA receptors in human primary astrocytes

G. Guillemain, Sydney/Australia

The peripheral CSF outflow pathway - possible role in neuropsychiatric disorders

K. Bechter, Ulm/Germany

3.30 – 4.00 pm: Coffee break

4.00 – 4.45 pm

Special topics:

Chairs: *J. Steiner, Magdeburg/Germany*

V. Arolt, Münster/Germany

Hypothalamic circuits control higher brain functions and impairments

T. Horvath, New Haven/USA

Multiple sclerosis and iron homeostasis

F. Marques, Braga/Portugal

Location: Schloss Reisenburg/Red Saloon

5.00 – 6.30 pm

Workshop - Future of Psychiatry: Possible application of immune markers in personalized medicine in depression

Chairs: *B. Leonard, Galway/Ireland*

A. Halaris, Maywood/USA

Vascular endothelial growth factor: can it predict treatment outcome in depression?

A. Halaris, Maywood/USA

Quinolinic acid expression in post mortem brain tissue from depressed patients

J. Steiner, Magdeburg/Germany

Gene-biochemical interaction of kynurenine metabolites in depressed patients

A.M. Myint, Munich/Germany

Kynurenines as predictor for response to add-on COX2 inhibitor therapy

N. Müller, Munich/Germany

7.00 pm: Dinner

8.15 – 9.30 pm

Special lectures and discussion:

Chairs: *I. Bechmann*, Leipzig/Germany

H. Reiber, Berlin/Germany

Pulsatile cerebrospinal fluid flow in the cranial subarachnoid space

V. Kurtcuoglu, Zürich/Switzerland

Human meningeal barrier property modulation with pressure

D. Grzybowski, Columbus/USA

Saturday, March 10, 2011

Location: Festsaal Bezirkskrankenhaus Guenzburg

9.00 – 10.30 am

Environmental factors and Infections (I):

Chairs: *F. Dickerson*, Baltimore/USA

A.M. Myint, Munich/Germany

Autoimmunity and infections as risk factors for depression and other severe mental illnesses

M. Benros, Aarhus/Denmark

Can infections and immune reactions to them cause violent behaviour?

R. Bransfield, Red Bank/USA

Arterial stiffness in depression: does it correlate with inflammation?

A. Halaris, Maywood/USA

Can latent Epstein-Barr virus infection in the central nervous system contribute to neuroinflammation?

U. Meier, London/UK

10.30 – 11.00 am: Coffee break

11.00 – 12.45 am

Environmental factors and Infections (II):

Chairs: *R. Dantzer, Urbana/USA*

K. Bechter, Günzburg/Germany

Brain infection by African trypanosomes during sleeping sickness

H. Wolburg und M. Duszenko, Tübingen/Germany

Toxoplasma gondii and suicidal behavior

T.T. Postolache, Baltimore/USA

Meningoencephalitis as the cause of dementia and psychosis in chronic late neurosyphilis and Lyme neuroborreliosis

J. Miklossy, Martigny-Croix/Switzerland

In vivo LPS administration alters S100B protein content in cerebrospinal fluid, but not in serum

C.A. Goncalves, Porto Alegre/Brazil

Effect of physical exercise on psychoneuroimmunological parameters in patients with depression and patients with somatoform disorders

M. Schwarz, Munich/Germany

12.45 am – 2.00 pm: Lunch break / Posters

2.00 – 3.45 pm**Genetics and Epigenetics:**

Chairs: *T. Horvath*, New Haven/USA

H. Reiber, Berlin/Germany

Epigenesis and epigenetics – Understanding chronic diseases as a selforganizing stable phenotype

H. Reiber, Berlin/Germany

Effect of GSK-3B inhibition on response to antidepressants and brain white matter structure: possible mediators for the interaction between inflammation and depression

F. Benedetti, Milan/Italy

Variance in the MHC genomic region and neurotropic infection status in schizophrenia: potential insights into etiology, pathogenesis and/or severity of schizophrenic subphenotypes

C. Hammer, Göttingen/Germany

Regulation of immune-modulatory genes in brain regions of schizophrenia patients: a genome-wide microarray study

A. Schmitt, Göttingen/Germany

P2RX7 SNP genotypes associated with psychiatric disorders

M. Schneider, Ulm/Germany

3.45 – 4.15 pm: Coffee break**4.15 – 5.45 pm****Therapy:**

Chairs: *M. Schwarz*, Munich/Germany

G. Guillemin, Kensington/Australia

IDO inhibition: a new antidepressant treatment?

P. Barone, Tours/France

The role of dispersible amyloid beta-protein aggregates for Alzheimer's disease and its therapy

D. Thal, Ulm/Germany

Chronic immune activation and inflammation increase plasma phenylalanine to tyrosine ratios

D. Fuchs, Innsbruck/Austria

Are antidepressants anti-inflammatory drugs? A critical look at the evidence

B. Leonard, Galway/Ireland

Escitalopram for the prevention of peginterferon alpha-2a- and ribavirin-associated depression in HCV-infected patients without prior psychiatric disease: a randomized controlled trial

M. Schäfer, Essen/Germany

Location: Schloss Reisensburg

7.30 pm: Dinner & Music

Sunday, March 11, 2012

Location: Schloss Reisensburg

9.00 – 11.00 am

**Workshop – Monocyte and microglia activation in mood disorders.
The outcomes of advanced techniques in patients and animal models.
Genetics, epigenetics and mi-RNA regulations**

Chair: *H. Drexhage, Rotterdam/Netherlands*

Short introduction on activation/suppression patterns in monocytes of patients with mood disorders

H. Drexhage, Rotterdam/Netherlands

Epigenetic regulation of immune activated signature

F. Oberg, Uppsala/Sweden

Micro-RNA's in monocytes and serum of post partum psychosis patients

K. Weigelt, Rotterdam/Netherlands

Activated microglia in animal models, effects on neurons

L. Pont-Lezica, Paris/France

Gene expression in monocytes and microglia in animal models

W. Beumer, Rotterdam/Netherlands

Histopathology: Activated microglia

J. Steiner, Magdeburg/Germany

Brain scans: Activated microglia

H.C. Klein, Groningen/Netherlands

Brain scans: Activated microglia

T. van der Doef, Utrecht/Netherlands

Posters

Location: Festsaal Bezirkskrankenhaus Guenzburg

1. Garden rehabilitation stabilises INF-gamma and IL-2 levels but does not relieve depressive-symptoms
C. Bay-Richter, L. Träskman-Bendz, P. Grahn, L. Brundin, Lund/Sweden
2. Effects of methylphenidate treatment on ROS formation in the blood of children with ADHD
P. Heiser, O. Sommer, A. Hoinkes, M. Röttinger, U. Hopt, E. Schulz, K. Hennighausen, H.W. Clement H.W., Freiburg/Germany
3. Functional effects of anti-neuronal antibodies in patients with encephalitis lethargica and other related disorders associated with streptococcal infection
P. Dua, U.C. Meier, D. Baker, G. Giovannoni, London/United Kingdom
4. Classification of free nucleic acids in cerebrospinal fluid of psychiatric patients
H. Hohmann, L. Lamoller, R. Klein-Unseld, H.G. Maxeiner, K. Bechter, M. Schneider, Ulm/Germany
5. Low chemokine levels in the cerebrospinal fluid of suicide attempters
S. Janelidze, F. Ventorp, S. Erhardt, O. Hansson, L. Minthon, M. Samuelsson, L. Traskman-Bendz, L. Brundin, Lund/Sweden
6. Effect of different antipsychotic compounds on tryptophan metabolites and cytokines after different immune challenges in astrocytes culture
Y. Pujol-Lopez, O. Arisoy, H. Noll-Puchta, G. Schuetze, N. Mueller, M. Schwarz, A.-M. Myint, Munich/Germany
7. Ibuprofen effect on inflammatory cytokines production by mononuclear cells of schizophrenic patients
P. Sirota, D.Choen-Terika, H. Bessler, Tel Aviv/Israel
8. Effect of different antidepressants and cyclooxygenase-2 inhibitor on tryptophan breakdown and cytokines after different immune challenges in astrocytes culture: a preliminary study
A. Weiss, Y. Pujol-Lopez, H. Noll-Puchta, W. Stettinger, G. Schütze, U. Nägele, M.J. Schwarz, N. Müller, A.-M. Myint, Munich/Germany