

7th Meeting

of the

German-Endocrine-Brain-Immune-Network

Frankfurt, July 8-11, 2009



Dear Colleagues,

The 7th GEBIN Symposium will be held in Frankfurt a.M. between July 8th-11th, 2009. This year it will be a joint meeting with the Germinal Center Conference (GCC). The GCC meeting will be between July 5-9, 2009.

According to the overall aim of the GEBIN, this meeting will provide an exciting and interdisciplinary program covering various fields including anatomy, dermatology, endocrinology, ethology, immunology, neurology, pharmacology, psychiatry, psychology, and zoology. The GEBIN meeting is supported by the two International societies of International Society of Neuroimmunomodulation and PsychoNeuroImmunology Research Society.

The Symposium will be divided into several thematic sessions. Each session consisting of short oral presentations will be opened with an introductory lecture of an internationally recognized expert in the respective field. All contributions will be published in an issue of *Brain Behavior and Immunity*.

The organizers of the GEBIN Symposium 2009 are proud to offer again an Educational Short Course for students. This course will be held prior to the official start of the GEBIN meeting, and is intended to present aspects of Behavior-Neuro-Endocrine-Immune interactions on a scholarly level.

We would highly appreciate your participation in this exciting meeting and look forward to welcoming you in Frankfurt in July 2009.

With kind regards

Rainer H. Straub, GEBIN



Local Organizing Committee

Rainer H. Straub and team, for GEBIN
Silvia Capellino
Alexander Faßold
Stefanie Haas
Torsten Lowin
Georg Pongratz
Christine Wolff

Scientific Committee

Prof. Dr. P.C. Arck, Berlin
Prof. Dr. H.O. Besedovsky, Marburg
Prof. Dr. M. Böhm, Münster
Prof. Dr. J. Born, Lübeck
Prof. Dr. A. del Rey, Marburg
Dr. H. Engler, Essen
Dr. B. Fiebich, Freiburg
Prof. Dr. R. Gold, Bochum
Prof. Dr. V. Höllt, Magdeburg
PD Dr. J. Kraus, Magdeburg
Dr. T. Lange, Lübeck
Prof. Dr. N. Müller, München
Prof. Dr. M. Schedlowski, Essen
PD Dr. M. Schwarz, München
Prof. Dr. G.K. Stalla, München
PD Dr. V. Stefanski, Berlin
Prof. Dr. R.H. Straub, Regensburg
Prof. Dr. E. Weihe, Marburg

Abstract quality estimation was performed by all members of the scientific committee using a metric system similar to a visual analog scale. The mean value of the estimation score was calculated to find the best 5 abstracts, which will be presented on Thursday afternoon (16:30).



Information

Further information about the GEBIN and the GEBIN 2009 meeting can be found on the GEBIN homepage: www.gebin.org

Coffee Breaks and Lunch

Coffee, lunch and refreshments will be available in the foyer (ground level) and in the Mensa of the Campus Westend.

Main Sponsors / Exhibitors

Biozol
Frankfurt Institute for Advanced Studies (FIAS)
EU-NEST-project MAMOCELL within FP6
(<http://fias.uni-frankfurt.de/immunology/RESEARCH/mamocell.html>)
Merck Serono
Millipore
Roche

Supported by

Deutsche Forschungsgemeinschaft

Deutsche Anatomische Gesellschaft
Deutsche Dermatologische Gesellschaft
Deutsche Ethologische Gesellschaft
Deutsche Gesellschaft für Biologische Psychiatrie
Deutsche Gesellschaft für Endokrinologie
Deutsche Gesellschaft für Immunologie
Deutsche Gesellschaft für Medizinische Psychologie
Deutsche Gesellschaft für Neurologie
Deutsche Gesellschaft für Pharmakologie
Deutsche Gesellschaft für Psychologie
Deutsche Gesellschaft für Zoologie



PsychoNeuroImmunology Research Society (PNIRS)
International Society of Neuroimmunomodulation (ISNIM)
The European Neuropeptide Club
World Psychiatric Association, Section Immunology and Psychiatry

Acknowledgements

The organizers are grateful for expert assistance to:

Angelika Gräber

Madlen Melzer

Margit Nützel

Luise Rauch

Olga Wiesner

all from the University Hospital Regensburg, Dept. of Internal Medicine



Wednesday July 8th, 2009

9am - 6:30pm Educational Short Course

Organizer: *Adriana del Rey*

Location: Eisenhower Conference Room, IG Farben Building, Campus Westend of the JW Goethe-University

Time	Title	Speaker	Affiliation
09:00-09:15	Introduction		
09:15-10:00	Infectious diseases in today's world	Thomas Jacobs	Abt. für Immunologie und Medizinische Mikrobiologie, Bernhard-Nocht-Institut für Tropenmedizin, Hamburg
10:00-10:45	INEI and infectious diseases	Adriana del Rey	Inst. of Physiology and Pathophysiology, Philipps University, Marburg
10:45-11:15	COFFEE BREAK		
11:15-12:00	Development of autoimmune diseases	Alexander Dalpke	Dept. of Hygiene and Medical Microbiology, University of Heidelberg
12:00-12:45	INEI and autoimmunity	Matthias Wahle	Division of Rheumatology, JW Goethe-University Hospital, Frankfurt am Main
12:45-13:30	LUNCH BREAK		



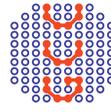
Wednesday July 8th, 2009

9am - 6:30pm Educational Short Course

Organizer: *Adriana del Rey*

8pm Trainee Dinner (only for participating students)

Time	Title	Speaker	Affiliation
13:30-14:15	The basis of central neurological disease	Prof. Dr. Richard Dodel	Neurologische Universitätsklinikum Giessen und Marburg
14:15-15:00	INEI and neuroimmunology	Dr. Ralf Linker	Neuroimmunologisches Labor, Neurologische Klinik der Ruhr-Universität, Bochum
15:00-15:30	COFFEE BREAK		
15:30-16:15	The most common psychiatric diseases	Prof. Dr. Thomas Pollmächer	Klinikum Ingolstadt, Zentrums für psychische Gesundheit, Ingolstadt
16:15-17:00	INEI and psychiatric diseases	PD Dr. Markus Schwarz	Laborsektion PsychoNeuroImmunologie, Klinik Psychiatrie und Psychotherapie, München
17:00-17:30	COFFEE BREAK		
17:30-18:30	Discussion with the Students		



Thursday July 9th, 2009

9am - 1pm Peripheral Neuroimmune Interactions, Part 1 (Organized jointly with the GCC)

Chairs: Cobi J. Heijnen, Rainer H. Straub

Time	Page	Speaker	Title
09:00		Rainer H. Straub	Role of the nervous system in arthritis
09:35		Thomas Bollinger	Analysis of the molecular clock in CD4+ T cells and its relevance for the functional circadian rhythm of CD4+ T cells
09:55		Ernst Heinen	Germinal centre innervation of bovine and human tonsils related to prion diseases
10:15		Ayşe Kilic	Nerve Growth Factor: a candidate for airway remodeling?
10:35			BREAK
11:05		Cobi J. Heijnen	Regulatory mechanisms of chronic inflammatory pain
11:40		Jürgen Kraus	Cannabinoid and opioid-mediated increase in cyclic AMP inhibits T cell receptor-triggered signaling
12:00		Christiane Liezmann	A new role for the spleen as a conductor of neuro-immune regulation in allergic dermatitis?
12:20		Olga Malysheva	Suppression of IL-6 production from cholinergic stimulated PBMS is connected to high expression of non α -Bungarotoxin nicotine type of acetylcholine receptor on CD14+ cells
12:40		Carsten Riether	Beta-adrenoceptor stimulation inhibits calcineurin in CD4+ T lymphocytes via a PKA-dependent pathway
13:00			LUNCH



Thursday July 9th, 2009

2pm - 4:05pm Neuroimmunology Related to the CNS

Chairs: Ralf Gold, Bernd Fiebich, Ralf A. Linker

Time	Page	Speaker	Title
14:00		Ralf A. Linker	Neuroimmunology and Neuroprotection
14:35		Isabella Peruga	Altered affective behavior in a model of multiple sclerosis: impact of neurotrophic factors
14:50		Larissa de la Fontaine	Significant elevation of serum levels of macrophage-migration-inhibitory-factor (MIF) and CD14 - Sign for over-stimulation of the monocytes/macrophages-system (MMS) in schizopfhrenia
15:05		Vikramjeet Singh	The mood stabilizer valproic acid down regulates neuronal cyclooxygenase-2 expression: central role of nuclear factor-kappa B after long term, but not short-term treatment
15:20		Knut Biber	Secondary lymphoid tissue chemokine (CCL21) in neuron-microglia signaling
15:35		Horst-G Maxeiner	T-cell alterations in CSF and peripheral blood in patients with neuropsychiatric disorders
15:50		Barbara Fellerhoff	Association between Chlamydia infections and schizopfhrenia
16:05			BREAK



Thursday July 9th, 2009

4:30pm - 6:10pm Top Contributions Session (best abstracts)

Chairs: Markus Böhm, Hugo O. Besedovsky

Time	Page	Speaker	Title
16:30		Georg Pongratz	The SNS promotes the development of B cells that show regulatory potential in arthritis
16:50		Silvia Capellino	Local catecholamine production and synovial inflammation: new target for arthritis therapy?
17:10		Harald Engler	Destruction of brainstem noradrenergic neurons affects splenic cytokine production
17:30		Sven Benson	Subclinical depressive symptoms are associated with galectin-1 and interleukin-6 levels
17:50		Jutta M. Wolf	PTSD: Changes in signal transduction pathways central to the endocrine-immune interplay
18:15			BREAK



Thursday July 9th, 2009

6:30pm - 8:15pm Peripheral Neuroimmune Interaction, Part 2

Chairs: Harald Engler, Georg Pongratz

Time	Page	Speaker	Title
18:30		Timo Wirth	Regulatory T cells and the sympathetic nervous system in a murine model of autoimmune disease
18:45		Alexander Faßold	Interception of repulsion factors: a possible treatment of rheumatoid arthritis?
19:00		Agatha Kokot	Tropisetron - a novel antifibrotic agent
19:15		Markus Böhm	Melanocortin peptides and derivatives - emerging antifibrotic therapeutic tools
19:30		Ngoc Quan Phan	Uremic pruritus: Characterization of clinical and immunohistological parameter
19:45		Torsten Lowin	Cortisol, steroid hormones and cannabinoids influence integrin alpha5 expression and adhesion to fibronectin in synovial fibroblasts
20:00		Tanja Lange	Cortisol and epinephrine differentially influence CXCR4+ and CX3CR1+ lymphocytes



Friday July 10th, 2009

9am - 11:45am Neuroendocrine Network in Psychiatric Disease

Chairs: Norbert Müller, Markus J. Schwarz, Bernd Fiebich

Time	Page	Speaker	Title
09:00		Hemmo Drexhage	An activated inflammatory response system as co-factor for the development of major psychiatric diseases
09:35		Markus J. Schwarz	Tryptophan metabolism and immunogenetics in major depression
09:50		B. D. Karrenbauer	Interleukin-2 reduces extracellular cortical serotonin and increases depression-related behaviour in the forced swim test in rats
10:05		Daniela Friebel	The impact of COX-2 inhibitors for the treatment of early stage schizophrenia
10:20			BREAK
11:00		Norbert Müller	Antiinflammatory therapy in psychiatric disorders
11:15		Richard Musil	Changes in prolactin levels as predictor of response to treatment with aripiprazole
11:30		Daniela Friebel	The association between the immune system, neurotransmitter balance, infections and schizophrenia
11:45			LUNCH



Friday July 10th, 2009

1:30pm - 4pm Neuroendocrinology and Immune Function

Chairs: Adriana del Rey, Rainer H. Straub, Tanja Lange

Time	Page	Speaker	Title
13:30		Eduardo Arzt	Molecular transduction mechanisms in cytokine-hormone interactions
14:05		Michael Meyer-Hermann	Mathematical modeling of the circadian rhythm of key neuroendocrine immune players in rheumatoid arthritis - A systems biology approach
14:40		Christiane Berndt	Psychological and physiological consequences of chronic partial sleep loss in young parents preliminary data and future intentions
14:55		Christian Benedict	Enhancing influence of intranasal interleukin-6 on slow wave activity and memory consolidation during sleep
15:10		Stefanie Haas	Circadian rhythms of synoviocytes in rheumatoid arthritis (RA)
15:25		Bianca Fröhlich	TLR4 and NOD innate immune receptors modulate the response of tumor pituitary AtT-20 cells through the PI3K/Akt survival pathway
15:40		Martin Schmidt	Estrone/17 β -estradiol conversion and TNF inhibition by estrogen metabolites in synovial cells of patients with RA and OA
16:00			BREAK



Friday July 10th, 2009

4:30pm - 5:45pm Stress, Behaviour and Immune Function, Part 1

Chair: Manfred Schedlowski

Time	Page	Speaker	Title
16:30		Jan-S. Grigoleit	Effects of an acute experimental immune activation on mood and memory functions
16:45		Ulrike Gimsa	Increased response to psychological stress in TNF-receptor deficient mice
17:00		Kerstin Schunke	Agonistic behaviour and susceptibility to collagen-induced arthritis (CIA) in male Wistar rats
17:15		Annette Sommershof	Chronic social stress influences virus specific T-cell response to LCMV infection
17:30		Chadi Touma	Altered balance of pro- and anti-inflammatory cytokines in mice selected for increased stress reactivity

6pm - 7pm Meeting of the Steering Committee of the GEBIN

Location: Seminarraum 1.802



Saturday July 11th, 2009

9am - 12noon Stress, Behaviour and Immune Function, Part 2

Chairs: Volker Stefanski, Sigrid Elsenbruch, Harald Engler, Manfred Schedlowski

Time	Page	Speaker	Title
09:00		Urs Meyer	In-vivo rodent models for the experimental investigation of prenatal immune activation effects in neurodevelopmental brain disorders
09:35		Siobhan Lynch	Effects of mindfulness-based coping with university life (MBCUL): a pilot study
09:50		Peggy Schneider	Interleukin-2 affects social interaction behavior in relation to anxiety-like trait behavior in the elevated plus-maze in adult Wistar rats
10:05		Nicolas Rohleder	Acute psychosocial stress induces short-term catecholamine resistance of TNF, but not of IL-6 production in healthy young men
10:20		Sven Benson	Subjective well-being is associated with marathon-induced pro-inflammatory state in older runners
10:35			BREAK
11:00		Jutta M. Wolf	Effects of parent versus child asthma self-efficacy on changes in inflammatory profiles over time
11:15		Stefan Reber	Mechanisms behind psychosocial stress-induced spontaneous colitis in male mice
11:30		Kerstin Schunke	Psychosocial confrontation stress reduces the susceptibility to collagen type II induced arthritis in rats
11:45		Clemens Steinert	Stress challenge during late murine gestation: A programming agent for the origin of disease

Conference Venue

The GCC and GEBIN meetings of 2009 are being held in the Casino of the historical IG Farben Building, located at the following address. A brief history of this building follows.

IG Farben Building
Campus Westend of the Johann Wolfgang Goethe-University
Grüneburgplatz 1
60323 Frankfurt

In 1925, six major German chemical companies including BASF, Bayer and Hoechst, merged to form a consortium called IG Farben. They chose the city of Frankfurt to house their corporate headquarters because of its central location, and accessibility by land and air. The famous architect Hans Poelzig was commissioned to design the building, a task which he completed in only 24 months, in 1930. With nine floors and six wings, the IG Farben building was one of the largest and most modern buildings in Europe. It remained in the hands of IG Farben until the end of the Second World War.

From 1945 onwards, the IG Farben building was used as the headquarters of the American Forces in Europe, under the command of General Dwight D. Eisenhower. From 1949-1952, the United States High Commissioner for Germany and his staff occupied the building. It became the principal location for implementing the Marshall Plan, which largely financed the post-war reconstruction of Europe. The state apparatus of the Federal German Government was also devised there.

In 1996, the state of Hesse bought the building and associated land for the University of Frankfurt. In 2001, parts of the Social Sciences were relocated to the IG Farben-Haus. Today, the building forms the core of a new Campus Westend which includes the departments of Philosophy, History, Theology, Modern Languages and Linguistics, and Cultural and Civilization Studies

More information about the rich history of the building can be found on Wikipedia, at http://en.wikipedia.org/wiki/IG_Farben_Building.

Visitor Information

Getting there

The IG Farben Building is easily accessible by public transport. The nearest U-Bahn station is Holzhausenstrasse, serviced by lines U1/2/3. From here, the venue is a 10 minute walk. The nearest bus stop is Uni Campus Westend, serviced by lines 36 and 75, and is only a 4 minute walk away. You may plan your journey online at www.rmv.de.

Coffee Breaks and Lunch

Coffee, lunch and refreshments will be available in the foyer and in the Mensa of the campus Westend located at the ground level of the Casino. Visitors can also enjoy several restaurants located within walking distance of the building. A few of these are listed below and shown on a map overleaf. Alternatively, visitors may travel to the city-center (metro-station Hauptwache, U1/2/3/6/7) for a wide choice in eateries.

A. Sushi King
Grüneburgweg 81
069 71448955

B. Gargantua
Liebigstr. 47
069 720718

C. Omonia
Vogtstr. 43
069 593314

D. Knoblauch
Staufenstr. 39
069 722828

E. Vini... da Sabatini
Grüneburgweg 81
069 726665

F. Pizzeria Romanella
Wolfgangstr. 84
069 5961117

G. Le Cafe
Grüneburgweg 88
069 5971509

H. Ernos Bistro
Liebigstr. 15
069 721997

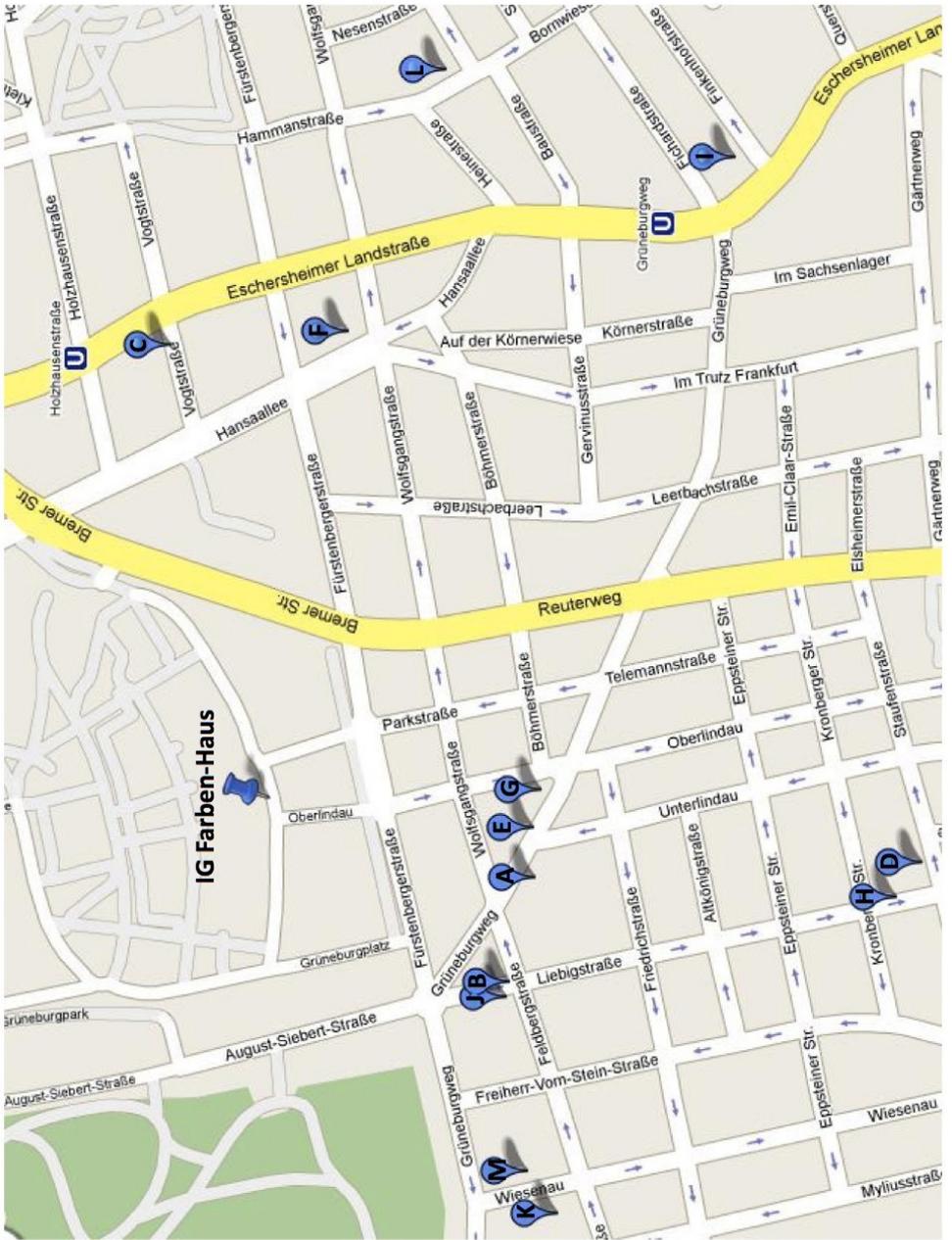
I. Pizzeria Armonia
Eschersheimer Landstr. 38
069 558924

J. La Boveda
Feldbergstr. 10
069 723220

K. Novita
Feldbergstr. 30
069 97205548

L. Casa Pintor
Bornwiesenweg 75
069 5973723

M. Isoletta
Feldbergstr. 31
069 174770



Social Program

A social program has been organized for GCC16 participants on Tuesday, 7th July. We offer sightseeing tours by foot through Frankfurt with 4 different themes:

1. Cultural Frankfurt (referee: Barbara Rubert)

You will find a unique museum experience in downtown Frankfurt. The theatre landscape in Frankfurt entices you with its great variety.

2. Old Town (referee: Irina Andrej)

See one of the most important market places in the history of Germany. Rebuilt after the last war, Frankfurt has many historical sights and traditions.

3. Goethe and his Frankfurt (referee: Alexander Ruhe)

The most well-known German poet is a son of Frankfurt. Follow the trail of a man who knew how to enjoy life and transfer the experience to poetry.

4. Frankfurt and its history (referee: Alexander Berger)

No other German city has as many high rise buildings as Frankfurt. Learn about the details of the architecture and the occupants and come with us the top of the Maintower and enjoy the fascinating view of the town.

The common meeting point for all tours will be at **Justitiabrunnen auf dem Römerberg** (fountain) at **3pm**. The tours will take about 2 hours and will be conducted in English. The tours will take place in all weather conditions, please come prepared!!

Getting there by Public Transport

From the IG Farben Building, walk to the **Holzhausenstrasse** metro-station. Take the U1/2/3 in the direction Frankfurt Süd to the station **Willy-Brandt-Platz**. Change here either to U4 in the direction Preungesheim or to U5 in the direction Enkheim. Travel to the metro station **Dom/Römer**. Reaching the surface, one is located on the marketplace Römer, and has to walk to the Justitiabrunnen (fountain). A map has been provided in the welcome pack for your convenience.

Conference Abstracts

The abstracts accepted for presentation in either poster or talk form for both conferences are printed here. These are arranged chronologically by session, so that GCC Satellite session is followed by GCC1 through GCC6, and finally by GEBIN. Within each session, the abstracts are arranged in alphabetic order, by presenting authors last name. To facilitate search, an index of all authors is also included at the end of the abstract booklet.

Awards and publications

The best poster in the GCC will be awarded with an annual subscription to *Science*, the world's leading scientific journal. The winner will receive 52 issues of *Science* over a year and access to news and research archives dating back to 1880.

We support the submission of full-length papers with theoretical and mathematical contributions in Immunology. Selected contributions that link Immunology to the science of Complex Systems will be published in the journal *Advances in Complex Systems*, as a topical part of a regular issue.

The 5 best abstracts submitted to the GEBIN meeting will be presented on Thursday afternoon (4:30pm). Abstract quality estimation was performed by all members of the scientific committee using a metric system similar to a visual analog scale. The mean value of the estimation score was calculated to find these.

Poster Hanging

The position on the board where the posters must be hung is identified by the *page number* in this booklet where the abstract appears. Posters from the GCC Satellite session, together with subsessions GCC1 through GCC3 must be displayed from Sunday, 5th July to Tuesday, 7th July, until 1pm. Posters belonging to the subsessions GCC4 through GCC6 must be displayed from 1pm on Tuesday, July 7th to the end of the conference, on Thursday, July 9th at 1pm.