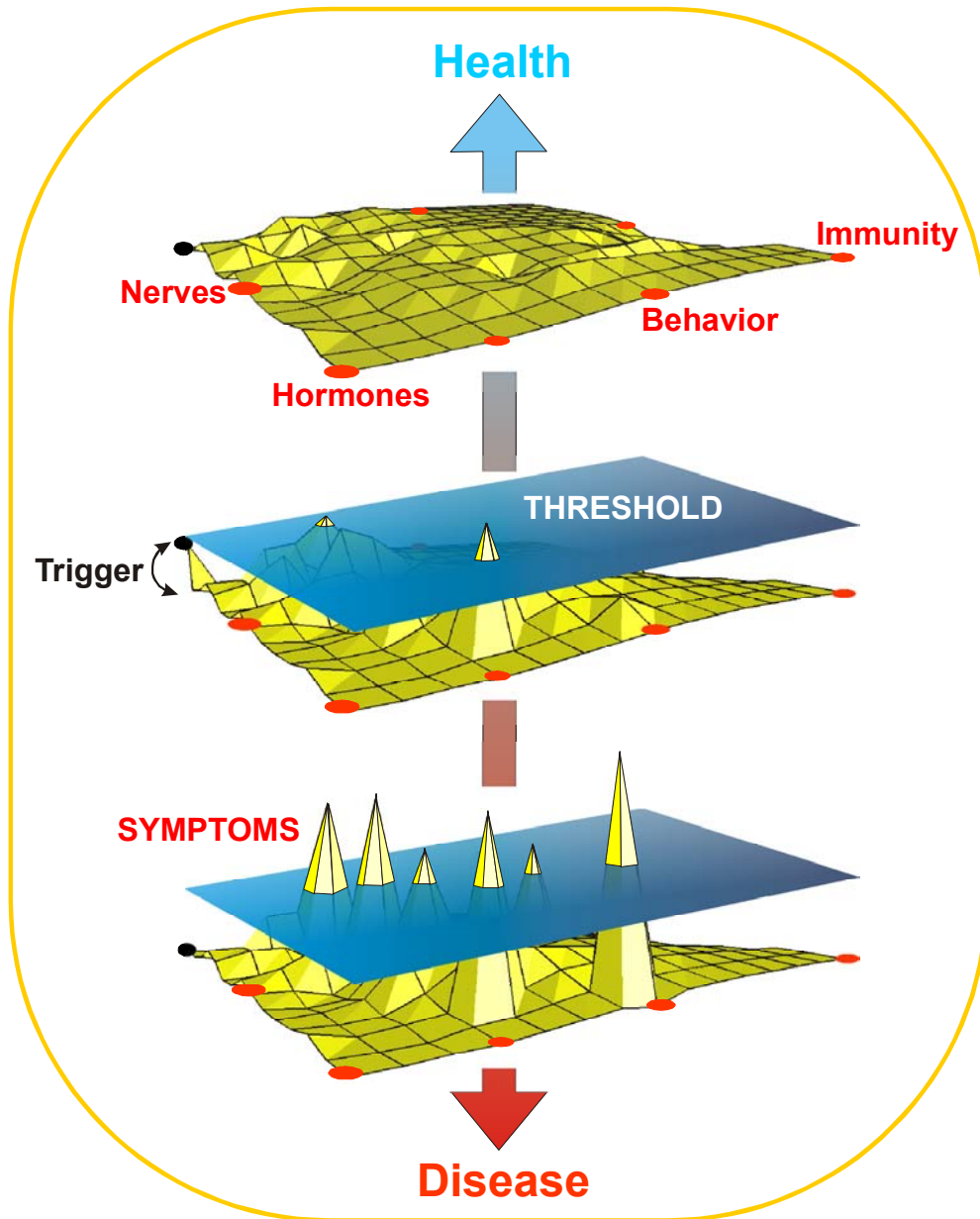


11th Annual Meeting of the PsychoNeuroImmunology Research Society

co-sponsored by GEBIN

PNI Meets Chronic Disease



May 26 - 29, 2004, Titisee, Germany

About PNIRS – PsychoNeuroImmunology Research Society

The PsychoNeuroImmunology Research Society is an international organization for researchers in a number of scientific and medical disciplines, including psychology, neurosciences, immunology, physiology, pharmacology, psychiatry, behavioral medicine, infectious diseases, and rheumatology, who are interested in interactions between the nervous and immune systems, and the relationship between behavior and health. An important goal is to conduct basic research that can be translated into clinically relevant health applications.

The PsychoNeuroImmunology Research Society (PNIRS) was incorporated in the state of Pennsylvania in 1993 after a meeting in April of that year and is a nonprofit organization. During the meeting the founding members determined that the purpose of the Society is to promote the study of interrelationships among behavioral, neural, endocrine and immune processes and to encourage collaborations among immunologists, neuroscientists, clinicians, health psychologists and behavioral neuroscientists.

Membership PNIRS:

Membership is open to students and professionals with an interest in PNI research. Annual dues are \$130 for full regular membership, and \$30 for trainee membership. Dues payment includes an individual subscription to Brain Behavior & Immunity, the official JOURNAL of the society. Please visit the homepage for further details: www.pnirs.org.

Administrative Office PNIRS:

PsychoNeuroImmunology Research Society
6619 Palma Lane
Morton Grove, Illinois 60053-1342 USA
E-Mail: pnirs@pnirs.org

About GEBIN – The German Brain Endocrine Immune Network

The GEBIN is a network that combines activities in different German scientific societies with special interest in Behavior-Neuro-Endocrine-Immune interactions. The GEBIN was founded in November 1997 in Munic during the Volkswagen-Symposium "Neuroimmunologie, Verhalten und Befinden". Spokesmen of the German Society of Biological Psychiatry, the Max-Planck Institute of Psychiatry Munich, the German Society of Medical Psychology, the German Society of Endocrinology, the German Society of Ethology, the German Society of Immunology, the German Society of Neurology, and the German Society of Dermatology build the nodes of the network. The promotion of scientific interactions and the coordination of exchange of information between these different groups is one of the main aims of this network.

For helping to support the 2004 meeting, PNIRS would like to express its appreciation to:

- Johannes Menzel, Academic Press (Elsevier Science)
- Susan Solomon, Fund for PsychoNeuroImmunology
- Michael Stefanek, Fred Altman, The National Cancer Institute, The National Institute of Mental Health. The PNIRS Senior Faculty-Trainee Colloquium is supported by a grant from the National Institute of Mental Health (R13 MH59793).
- Ralf Bäuerle, BIOZOL Diagnostica Vertrieb GmbH, Eching, Germany
- Gerd Neubert, Sigfried Ferner, IBL Gesellschaft für Immunchemie und Immunbiologie mbH, Hamburg, Germany
- Ulrike Kreilinger, Perbio Science GmbH, Bonn, Germany
- Karl-Heinz Kuhn, Biosource Deutschland GmbH, Solingen, Germany
- Lisa Locher, S. Karger AG, Basle, Switzerland

Message From The President of the PNIRS

Dear Colleagues,

To the longstanding members of the PNIRS, thank you for your support. For those people who became members over the last year or two, and particularly to those who became members in response to a communication that was sent earlier this year, welcome! We continue to encourage an increase in membership from countries all over the world. Having international meetings both in the United States and other countries is fostering the philosophy of interaction between colleagues from many countries.

The PNIRS is very supportive of trainees at all levels and encourages the trainees to submit abstracts for both oral and poster presentations. Like all fields of research, it is imperative that we attract junior people because they are the seed corn for the next generation of scientists/clinicians working in psychoneuroimmunology (PNI).

The field of PNI has come a very long way over the last three decades. For those of you who have been working in this area since the 1980s, you know how much skepticism there was about the role of behavior on modulating the immune system. I think all of you would agree that most of that skepticism is gone.

Brain, Behavior and Immunity, which is the Journal for the Society, continues to flourish. The original initiative by the first Editor in Chief, Bob Ader, to establish this journal was an important contribution to the promulgation of the important work being performed in PNI. Keith Kelley, who is now the Editor in Chief, is doing an excellent job building upon Bob Ader's efforts.

The field of PNI is doing quite well. It continues to attract people with a variety of backgrounds who are attracted to working in a multidisciplinary arena. Most importantly, the literature is rich in studies on mechanisms to start to help us understand the implications of the interactions between the central nervous system, endocrine system and immune system. An expanding literature showing that even low levels of stress and depression can produce health outcomes is helping provide momentum to apply what we have learned at the bench to a clinical setting, i.e., translational research. We have to wait and see how these translational research initiatives play out, but from my perspective, it is very exciting to sit back and watch the field move forward this way.

The annual meeting on Amelia Island, Florida, last year was great and reflected the effort and organizational skills of Andy Miller and his colleagues who did a wonderful job. The presentations and posters covered virtually all aspects of PNI and were of high quality. Robert Dantzer, in his role as President, played an important role in the success of the meeting and did an excellent job carrying out the Society's business at the annual business meeting.

This annual meeting in Titisee, Germany that Rainer H. Straub and his group are organizing will provide an opportunity for all of us to get the latest information on where we are as a field. I hope that all of you are as excited as I am about how far we have come, where we are going and the important role that the PNIRS is playing in this process. I look forward to seeing you all here in Titisee, Germany.

Ron Glaser, President
The Ohio State University, Columbus, Ohio, U.S.A.



Current Society Officers PNIRS

President 2003-2004 Ronald Glaser, The Ohio State University
E-mail: glaser.1@osu.edu
Secretary 2001-2004 Mark Laudenslager, University of Colorado
E-mail: secretary@pnirs.org
Treasurer 2002-2004 Dana Bovbjerg, Mount Sinai School of Medicine
E-mail: treasurer@pnirs.org
Past-President 2002-2003 Robert Dantzer, INSERM U394, Bordeaux
E-mail: E-mail: robert.dantzer@bordeaux.inserm.fr
President-Elect 2004-2005 Virginia M. Sanders, The Ohio State University
E-mail: sanders.302@osu.edu
Secretary/Treasurer-Elect 2004-2007 Monika Fleshner, University of Colorado-Boulder
E-mail: fleshner@colorado.edu

Nominating Committee PNIRS

Chair: Robert Dantzer, INSERM U394, Bordeaux
Members: Rob Bonneau, Steve Cole, Margaret Kemeny, Nancy McCain, Virginia M. Sanders

Constitution and Bylaws Committee PNIRS

Chair: Robert Dantzer, INSERM U394, Bordeaux
Members: Virginia M. Sanders, Ron Glaser

Scientific Council PNIRS

Shamgar Ben-Eliyahu (2007), Steve Cole (2004), Moni Fleshner (2004), Cobi Heijnen (2004), Gayle Page (2005), Rob Bonneau (2005), Manfred Schedlowski (2005), John Sheridan (2007), Annemieke Kavelaars (2007), Raz Yirmiya (2004)

Program / Scientific Affairs / Local Arrangements 2003 – 2004, PNIRS

Chair: Ronald Glaser, The Ohio State University
Members: Dana Bovbjerg, Robert Dantzer, Monika Fleshner, Cobi Heijnen, Mark Laudenslager, Virginia M. Sanders, Manfred Schedlowski, Rainer H. Straub

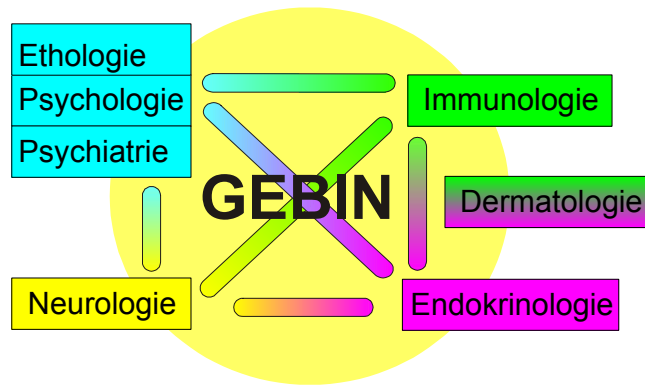
Fundraising Committee PNIRS

Co-Chair: Ron Glaser
Co-Chair: Susan Solomon
Members: Dana Bovbjerg, Robert Dantzer, Keith Kelley, Mark Laudenslager, Andy Miller, Rainer H. Straub

Local Organizing Committee, Titisee, Germany, 2004

Chair: Rainer H. Straub, Dept. of Internal Medicine I, University Hospital, Regensburg, Germany

Members: Angelika Gräber, Florian Grum, Melanie Grünbeck, Peter Härle, Daniel Möbius, Georg Pongratz, Manfred Schedlowski, Claudia Weidler



Current Nodes of the GEBIN

Spokesman: Rainer H. Straub, Dept. of Internal Medicine I, University Hospital, Regensburg, Germany

German Society of Biological Psychiatry

Norbert Müller (Munich)
Markus J. Schwarz (Munich)

German Society of Dermatology

Markus Böhm (Münster)
Thomas Luger (Münster)

German Society of Endocrinology

Hugo O. Besedovsky (Marburg)
Jan Born (Lübeck)
Adriana del Rey (Marburg)
Karlheinz Voigt (Marburg)

German Society of Ethology

Volker Stefanski (Bayreuth)

German Society of Immunology

Rainer H. Straub (Regensburg)
Manfred Schedlowski (Zürich)

German Society of Medical Psychology

Manfred Schedlowski (Zürich)

German Society of Neurology

Peter Rieckmann (Würzburg)

Max-Planck Institute for Psychiatry Munich

Thomas Pollmächer (Munich)

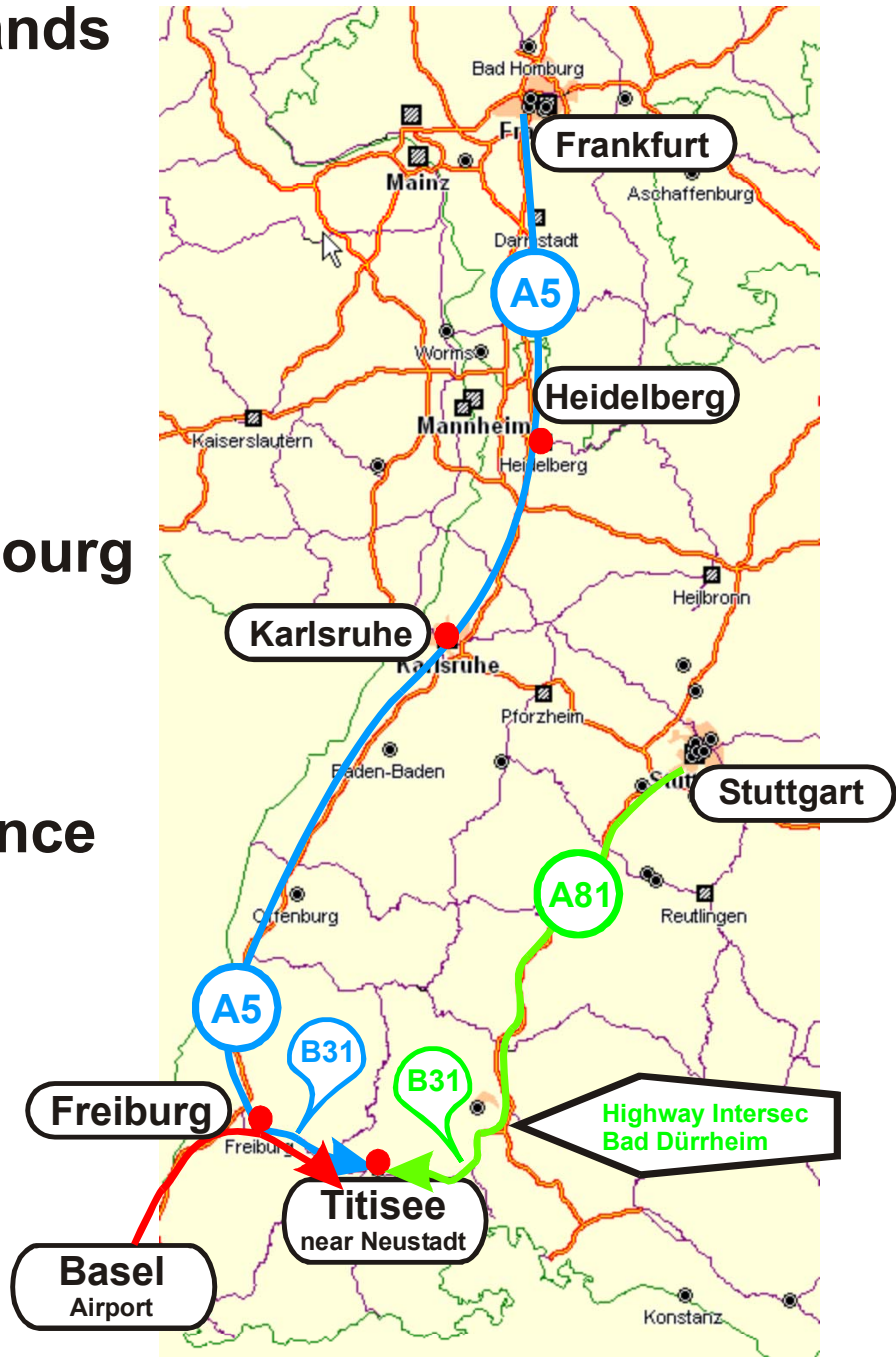
Where are we now ?

The Netherlands

Belgium

Luxembourg

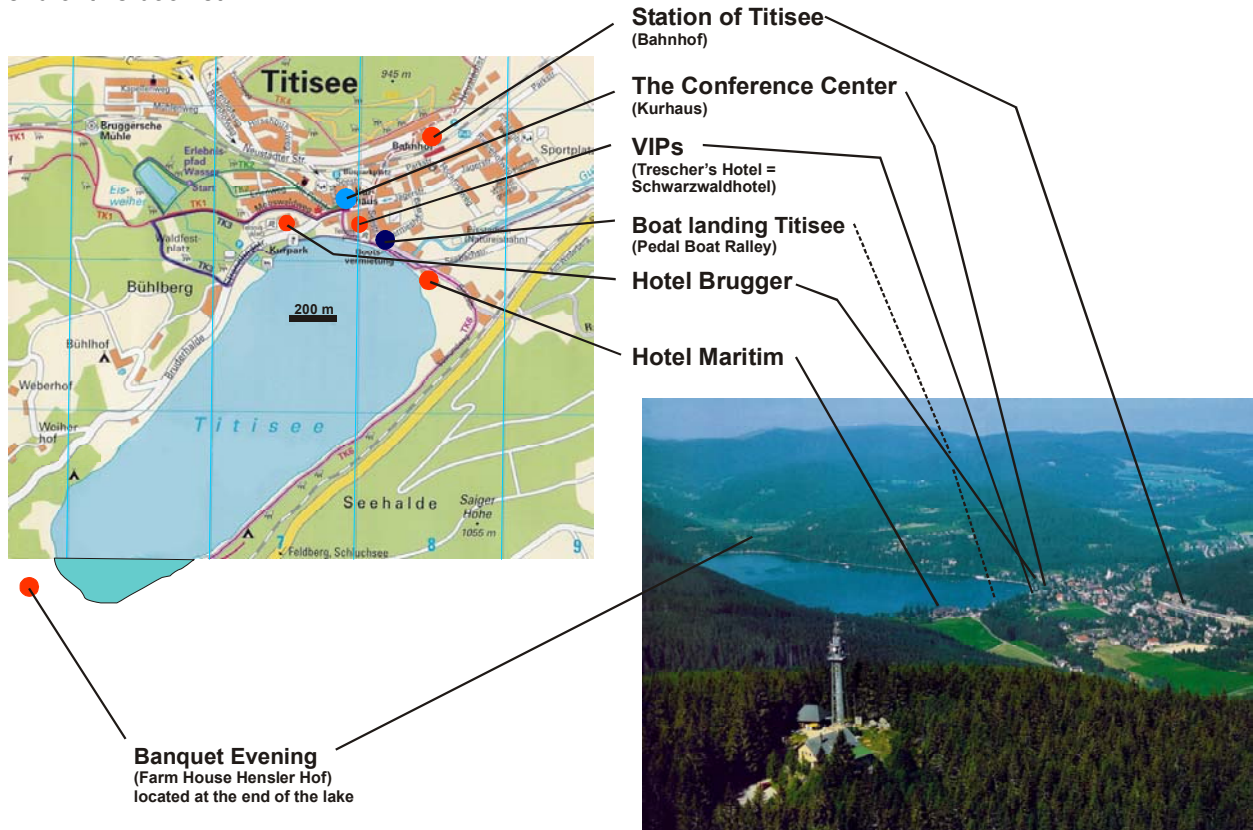
France



Switzerland

Titisee, Assembly Hall, Station, Hotels, Banquet Evening

A detailed map of the town can be found at the end of this booklet.



The Conference Center (Kurhaus)



- **Registration:** Second floor, in front of the Large Assembly Hall
- **Meeting:** Second floor, The Large Assembly Hall
- **Reception:** First floor
- **Posters:** First floor, The Poster Hall
- **Lunch:** First floor, The Lunch Bar in the Foyer
- **Cloakroom:** First floor, behind the Lunch Bar
- **Local Information:** First floor, The Tourist Office
- **Industry:** First floor, The Foyer
- **Press Conference:** Second floor, The Restaurant of the Conference Center

Registration:

On site meeting registration will be open 5:00-8:00 pm on Tuesday, May 25 at second floor of the Conference Center and will continue there for the remainder of the meeting from 8:00 am – 6:00 pm.

Late attendees can contact an organizing committee member with a red dot on the name badge to obtain their registration packets.

Phone Number:

Registration Area

Tel.: +49 (0) 7651 988 223

Tel.: +49 (0) 7651 988 224

Locations: (Please see also maps and “Meeting at a glance”)

Registration: The second floor, Conference Center

Messages: Bulletin Board at Registration

PNIRS scholars award program: The Hotel Maritim (By invitation only)

Short course: Room Titisee, The VIP Hotel Trescher (only registered people)

Plenary sessions: The Large Assembly Hall, Conference Center (only registered people)

Meals:

Breakfast: In the hotels (is included)

Coffee Breaks: The first floor, Conference Center, The Lunch Bar

Lunch: The first floor, Conference Center, The Lunch Bar

Editorial Board Meeting of BBI: Room Titisee, The VIP Hotel Trescher (By invitation only)

GEBIN Steering Committee: Room Hirschbühl, The VIP Hotel Trescher (By invitation only)

Trainee Dinner: Restaurant, The VIP Hotel Trescher

The Education Breakfast Roundtable of the NIH: Room Hirschbühl, The VIP Hotel Trescher

Press conference: Restaurant of the Conference Center

Reception: The first floor, Conference Center

Poster sessions: Poster Room, Conference Center

Council meeting: Room Hirschbühl, The VIP Hotel Trescher (By invitation only)

Pedal boat rally: Titisee boat landing (see map)

Sightseeing tours: Meeting place in front of the Conference Center

The “P” in PNIRS discussion: Room Titisee, The VIP Hotel Trescher

Business meeting: The Large Assembly Hall, Conference Center (only for members)

Banquet: Hensler Hof (Black Forest farm house) (only registered people due to space constraints, no extra costs, tickets at the Registration desk)

GEBIN steering committee: Room Hirschbühl, The VIP Hotel Trescher (By invitation only)

Posters:

There are two poster sessions, 1 and 2, on Thursday, May 27, 04:00-06:00 pm for authors A-M (Session 1), and on Saturday, May 29, 04:00-05:30 pm. for authors N-Z (Session 2). Poster format is width x height = 35 inch x 59 inch = 90cm x 150cm. List of posters and assigned numbers can be found on page 24--.

Meals:

Registration fees include coffee breaks, lunches, a dinner for trainees (only invited trainees), and the Banquet evening (only registered attendees). Refreshments will be provided at the Reception on Wednesday, during the Poster Sessions, and for participants of the PNIRS scholars award program.

Recreation / Fun:

THE PEDAL BOAT RALLEY:

This event had a pre-registration but there may still be room available. This event will start around 6:00 pm, Thursday, May 27, at the Titisee Boat landing. The exact location is indicated on the map on last page. Everybody is invited to watch the athletes.

SIGHTSEEING TOUR 1 "FREIBURG"

This event had a pre-registration but there may still be room available. Check the registration desk for potential openings and sign up.

Freiburg is the capital of the black forest. It is located between the Black Forest and the Rhine valley. Enjoy the southern charm of this town with its many cafes, its offer of cultural events (the Cathedral, the Medieval Towers) or simply the variety of shops and gastronomic delights! Freiburg is a flourishing town. Many people come to the town because of the University and many of them remain here - Freiburg has accommodated them all and is today one of the few cities, whose number of inhabitants is growing.

This event will start around 3:00 pm, Friday, May 28. Buses wait in front of the Conference Center.

SIGHTSEEING TOUR 2 "BLACK FOREST FARM HOUSES"

This event had a pre-registration but there may still be room available. Check the registration desk for potential openings and sign up.

The Black Forest (Schwarzwald) stretches 170 kms/106 miles, from Karlsruhe in the north to Basle in the south. It is essentially composed of two densely-wooded ranges, the Feldberg and the Grand Ballon. The Black Forest is a massif itself, both denser and vaster than the Vosges, and crossed by large valleys; but it is the freshness of the woods, streams and springs, the quiet valleys with typical alpine -like houses with long slanting roofs, and the colorful folklore, best exemplified by the rustic production of cuckoo clocks, that give the region its unique character.

On this trip you visit traditional Black Forest farm houses, which are surrounded by meadows and forests. Enjoy a splendid panoramic view. The beautiful, picturesque landscape invites you for walking.

This event will start around 3:00 pm, Friday, May 28. Buses wait in front of the Conference Center.

OTHER TOURS

Other trips are available upon request. Please ask the tourist office at the Conference Center.

THE BANQUET EVENING (Hensler Hof)

This event had a pre-registration but there may still be room available. Check the registration desk for potential openings and sign up. If room is available there are no extra costs (included in the registration fees). Due to space constraints only 200 people can enter the farm house.

The Banquet Evening will be under the roof of a marvelous old Black Forest farm house. Buses to the Hensler Hof will leave in front of the Conference Center on Saturday, May 29, 6:30 pm and 7:00 pm. Buses from the Hensler Hof to the Conference center (the way back) will leave at 10:00 pm (Saturday), 11:00 pm (Saturday), 12:00 pm (Saturday), 1:00 am (Sunday), 2:00 am (Sunday). Walking time from the Conference center to the Hensler Hof is approximately 30 min.

**Congratulations to our
2004 PNIRS Trainee Travel Award Recipients**

- **Avraham, Roi** Schwartz, Yossi Rosenne, Ella Melamed, Rivka Ben-Eliyahu, Shamgar
- **Bailey, Michael T** Engler, Harald Sheridan, John F
- **Bilbo, Staci D** Levkoff, Lindsay H Mahoney, John H Rudy, Jerry W Watkins, Linda R Maier, Steven F
- **Craft, Tara KS** DeVries, A Courtney
- **Cross, Rebecca L** Doering, Lynn V Cowan, Marie J Martinez, Otoniel M
- **Eijkelkamp, Niels** Cobelens, Pieter M Sanders, Virginia M Heijnen, Cobi J Kavelaars, Annemieke
- **Elliott, Jay C** Lysle, Donald T
- **Emeny, Rebecca T** Gao, Dawn Mondal, Tapan Lawrence, David A
- **Engeland, Christopher G** Cacioppo, John T Marucha, Phillip T
- **Farrow, Michael J** Head, Cynthia C Padgett, David A
- **Gajendrareddy, Praveen K** Ilangovan, Govindasamy Kuppusamy, Periannan Eijkelkamp, Niels Marucha, Phillip T
- **Godbout, Jonathan** Berg, Brian Richwine, Amy Johnson, Rodney
- **Haack, Monika** Sanchez, Elsa Broussard, Josiane Regan, Meredith Mullington, Janet M
- **Härle, Peter** Straub, Rainer H
- **Johnson, John D** O'Connor, Kevin A Watkins, Linda R Maier, Steven F
- **Johnson, Robin R** Hare, Katie Conner, Marilyn Hardin, E Ashley Welsh, Thomas Stortz, Ralph Welsh, CJR Meagher, Mary W
- **Kin, Nicholas W** Podojil, Joseph R Sanders, Virginia M
- **Maninger, Nicole** Capitanio, John P Mendoza, Sally P
- **Motivala, Sarosh J** Proudfoot, Kathryn Irwin, Michael
- **Nair, Aji** Bonneau, Robert H
- **Neigh, Gretchen** N Bilbo, Staci D Glasper, Erica R DeVries, A Courtney
- **Nickerson, Molly** Elphick, Gwen Campisi, Jay Fleshner, Monika
- **Okun, Michele** L Coussons-Read, Mary ME
- **Phillips, Anna C** Burns, Victoria E Ring, Christopher Carroll, Douglas
- **Pollak, Yehuda** Ben Menachem, Ofra Ovadia, Hayim Gilboa, Adi Ben Hur, Tamir Soreq, Hermona Yirmiya, Raz
- **Richwine, Amy F** Berg, Brian M Chen, Jing Godbout, Jonathan P Johnson, and Rodeny W
- **Saurer, Timothy B** Carrigan, Kelly A Ijames, Stephanie G Lysle, Donald T
- **Smith, Taro P** Fleshner, Monika
- **Thomson, Lisa M** Sutherland, Robert G
- **Tseng, Raymond J** Padgett, David A Dhabhar, Firdaus S Engler, Harald Hunzeker, John T Sheridan, John F
- **Veldhuijzen van Zanten, Jet** Carroll, Douglas Ring, Christopher Kitas, George
- **Walker, Frederick R** Tape, Nicolette A Hodgson, Deborah M
- **Wiesehan, Jacqueline D** Hunzeker, John T Padgett, David A Sheridan, John F
- **Wolf, Gilly** Gabay, Eran Tal, Michael Shavit, Yehuda Yirmiya, Raz
- **Wolf, Jutta M** Rohleder, Nicolas Bierhaus, Angelika Nawroth, Peter P Kirschbaum, Clemens

Travel Awards were allocated to the Trainees and their groups according to the quality of the submitted work. The NIMH in conjunction with the PNIRS funded 26 US-Citizens and 9 Non-US-Citizens. The PNIRS Senior Faculty-Trainee Colloquium is supported by a grant from the National Institute of Mental Health (R13 MH59793). This was organized by Michael Irwin, The University of California, Los Angeles.

| | Symposium | | Paper Talk | | | Poster Session | | | | Meal | Meeting | | Fun | | |
|----------------------------|---|--|--|--------------------------------|--|-----------------|--|---|------------------------------|--|----------------------------------|---|---|------------------|--|
| Time: | 8:00AM - 9:00AM | 9:00AM - 10:00AM | 10:00AM - 11:00AM | 11:00AM - 12:00PM | 12:00PM - 1:00PM | 1:00PM - 2:00PM | 2:00PM - 3:00PM | 3:00PM - 4:00PM | 4:00PM - 5:00PM | 5:00PM - 6:00PM | 6:00PM - 7:00PM | 7:00PM - 8:00PM | 8:00PM - 9:00PM | 9:00PM - 10:00PM | |
| Tuesday May 25 | | | | | | | | | | | | | | | |
| R Feldberg (Maritim) | | | | | | | | | | | | Scholar Awards 1: This meeting will take place in the Hotel Maritim 6:00PM - 9:00PM | | | |
| R Schauinsland (Maritim) | | | | | | | | | | | | Scholar Awards 2: This meeting will take place in the Hotel Maritim 6:00PM - 9:00PM | | | |
| R Höllental (Maritim) | | | | | | | | | | | | Scholar Award 3: This meeting will take place in the Hotel Maritim 6:00PM - 9:00PM | | | |
| R Hochfirst (Maritim) | | | | | | | | | | | | Scholar Award 4 This meeting will take place in the Hotel Maritim 6:00PM - 9:00PM | | | |
| Baerental (Maritim) | | | | | | | | | | | | Scholar Award 5 This meeting will take place in the Hotel Maritim 6:00PM - 9:00PM | | | |
| Wednesday May 26 | | | | | | | | | | | | | | | |
| Assembly Hall (Kurhaus) | | | | | | | Opening of the Meeting 2:00PM - 2:15PM | The Presidential Address 2:15PM - 3:15PM | Coffee Break 3:15PM - 3:45PM | The Presidential Symposium: Implications of PNI for Health and Quality of Life 3:45PM - 5:45PM | | Reception 7:00PM - 10:00PM | | | |
| R Titisee (Trescher) | | Short Course 9:00AM - 10:30AM | | Coffee Break 10:30AM - 11:00AM | Short course II 11:00AM - 12:00PM | | | | | | | | | | |
| Restaurant (Assembly Hall) | | | | | | | | | | | Press Conference 5:45PM - 6:45PM | | | | |
| Thursday May 27 | | | | | | | | | | | | | | | |
| Assembly Hall (Kurhaus) | Oral Session 1: Innate Immunity 8:30AM - 9:15AM | Oral Session 2: Molecular Mediators of PNI Interactions 9:15AM - 10:15AM | Norman Cousin Memorial Lecture 10:15AM - 11:00AM | Coffee Break 11:00AM - 11:15AM | Symposium: Neuroendocrine immune mechanisms in rheumatic diseases 11:15AM - 1:00PM | | Lunch time 1:00PM - 2:00PM | Oral Session 3: Cellular and Molecular Influences of Stress 2:00PM - 3:30PM | | | | | | | |
| Poster hall (Kurhaus) | | | | | | | | | | Coffee Break 3:30PM - 4:00PM | Poster Session 1 4:00PM - 6:00PM | | | | |
| R Titisee (Trescher) | | | | | | | | | | | | | The "P" in PNIRS - A Discussion 7:30PM - 9:30PM | | |
| R Hirschbühl (Trescher) | | | | | | | GEBIN Steering Committee Meeting 1:00PM - 2:00PM | | | Council Meeting 3:30PM - 6:30PM | | | | | |
| Titisee boat landing | | | | | | | | | | | | Pedal Boat Rally 6:00PM - 7:30PM | | | |

Continued

| | | Friday May 28 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|-----------------|--|-----------------------------------|---|-------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------------------------------|-----|
| Assembly Hall (Kurhaus) | | | Symposium: Cytokines, Neural Plasticity and Memory 9:00AM - 10:30AM | Coffee Break 10:30AM - 11:00AM | Symposium: Pain and Immunity: Bidirectional Interactions 11:00AM - 1:00PM | Lunch time 1:00PM - 2:00PM | Oral Session 4: Clinical Models of PNI 2:00PM - 3:00PM | | | | | | | | | | | | | | | | | | | | | |
| R Titisee (Trescher) | | | | | | | BBI Editorial Board Meeting 1:00PM - 2:00PM | | | | | | | | | | | | | | | | | | | | | |
| Sightseeing Tours | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trescher (Restaurant) | | | | | | | | | | | | | | | | | | | | | | | | | | Trainee Dinner 8:00PM - 11:00PM | | |
| | | Saturday May 29 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Assembly Hall (Kurhaus) | | | Oral Session 5: Cytokines and Hormones 9:00AM - 10:30AM | Coffee Break 10:30AM - 11:00AM | Symposium: Circadian Rhythm Dysregulation of Cortisol and Sleep 11:00AM - 1:00PM | Lunch time 1:00PM - 2:00PM | Oral Session 6: Illness Behavior and Wound Healing 2:00PM - 3:30PM | | | | | | | | | | | | | | | | | | | Business Meeting 5:30PM - 7:15PM | | |
| Poster hall (Kurhaus) | | | | | | | | | | | | | | | | | | | | | | | | | | Coffee Break 3:30PM - 4:00PM | Poster Session 2 4:00PM - 5:30PM | |
| R Hirschbühl (Trescher) | Breakfast Roundtable with the NIH 7:30AM - 8:30AM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Banquet (Hensler Hof) | | | | | | | | | | | | | | | | | | | | | | | | | | Banquet Evening (Hensler Hof) 7:30PM - 1:30AM | | |
| | | | Symposium | | Paper Talk | | | | | | | | | | | | | | | | | | | | | Meal | Meeting | Fun |

PNIRS Senior Faculty-Trainee Colloquium

Supported by a Grant #R13-MH59793 from the National Institute of Mental Health (NIMH)

May 25, 2004, 6:00 pm to 9:00 pm

Maritim Hotel, Titisee, Germany

Opening Remarks: Michael Irwin, UCLA Neuropsychiatric Institute

| Group A Room: Bärental Faculty: Robert Dantzer Raz Yirmiya | Group B Room: Schauinsland Faculty: Robert Bonneau Virginia Sanders | Group C Room: Höllental Faculty: Manfred Schedlowski Cobi Heijnen | Group D Room: Hochfirst Faculty: Steve Cole Monika Fleshner | Group E Room: Feldberg Faculty: Shamgar Ben-Eliyahu Annemieke Kavelaars |
|---|---|---|---|--|
| Tara Craft IL-1[beta] mediates post-stroke depressive-like behavior in mice | Michael T. Bailey Stress-induced translocation of skin microflora to the inguinal lymph nodes of C57BL/6 mice is not dependent upon wounding | Molly Nickerson Physical activity alters the brain Hsp72 and IL-1[beta] response to peripheral E.coli challenge and enhances E.coli clearance | Aji Nair Differential effects of corticosterone and the NMDA receptor on microglia function during stress and the impact of these effects on the development of stress-induced HSV-1 encephalitis | Michael Farrow Androstenediol may restore stress-impaired transcription through an NF-[kappa]B dependent mechanism |
| Lisa M. Thomson Sick animals can learn: A dissociation between anorexia, weight loss, and cognition | Robin R. Johnson Chronic Theiler's virus infection: Effects of acute phase social stress on development and severity of chronic phase disease | Christopher G. Engeland Stress hormones modulate the healing rates of oral wounds | Nicholas W. Kin Stimulation of CD86 (B7-2) on a CD40L/IL-4-Activated B cell signals through NF-[kappa]B | Raymond Tseng Stress-induced regulation of NK activity during an influenza A viral infection |
| Amy F. Richwine Cognitive and motor deficits in aging mice are paralleled by increases in brain oxidative stress and interleukin-6 (IL-6) | Jacqueline D. Wiesehan Modulation of immunological memory by social disruption stress | Praveen K. Gajendrareddy Psychological stress impaired healing: Decreased wound oxygenation as a potential pathway | Nicole Maninger Relationship of adrenal hormones DHEAS and cortisol to SIV disease in rhesus monkeys | Timothy B. Saurer Nucleus accumbens dopamine receptors mediate morphine-induced NK cell suppression |
| John D. Johnson The role of IL-1[beta] in stress-induced sensitization of brain IL-1[beta] and corticosterone responses | Sarosh Motivala Acute psychological stress and proinflammatory cytokines in humans: Differential effects on monocyte intracytoplasmic expression and production | Rebecca Cross Infection, depression, and immunity after coronary artery bypass: A pilot study | Frederick R. Walker The effect of postnatal endotoxin exposure on nociception in adulthood: Hyper-analgesia following immune challenge | Jay C. Elliot Sex differences in opioid modulation of contact hypersensitivity: An investigation of pharmacological specificity and putative effector mechanisms |

Continued

PNIRS Senior Faculty-Trainee Colloquium

Supported by a Grant #R13-MH59793 from the National Institute of Mental Health (NIMH)

May 25, 2004, 6:00 pm to 9:00 pm

Maritim Hotel, Titisee, Germany

| <p>Group A Room: Bärental Faculty: Robert Dantzer Raz Yirmiya</p> | <p>Group B Room: Schauinsland Faculty: Robert Bonneau Virginia Sanders</p> | <p>Group C Room: Höllental Faculty: Manfred Schedlowski Cobi Heijnen</p> | <p>Group D Room: Hochfirst Faculty: Steve Cole Monika Fleshner</p> | <p>Group E Room: Feldberg Faculty: Shamgar Ben-Eliyahu Annemieke Kavelaars</p> |
|--|--|--|---|--|
| <p>Staci D. Bilbo Neonatal infection induces memory impairments and cytokine alterations following an immune challenge in adulthood</p> | <p>Taro P. Smith Anti-KLH antibody and delayed-type hypersensitivity responses in older stable coronary artery disease patients</p> | <p>Gretchen N. Neigh Cardiac arrest/cardiopulmonary resuscitation increases the delayed-type hypersensitivity response and alters hypothalamic-pituitary-adrenal axis activity</p> | <p>Roi Avraham IL-12-based immunotherapy reduces post-surgery immunosuppression and metastasis, and increases survival from experimental leukemia</p> | <p>Rebecca Emery The effects of stress on host Immunity: [beta]-adrenergic receptor contribution to stress-induced immunosuppression</p> |
| <p>Jonathan Godbout Brain inflammation and weight loss after peripheral challenge with lipopolysaccharide (LPS) are exacerbated in aged mice</p> | <p>Jet Veldhuijzen van Zant Increased inflammatory response to acute psychological and postural stress in patients with rheumatoid arthritis compared to patients with osteoarthritis</p> | <p>Monika Haack Sleep restriction increases IL-6 levels and subjective pain-related symptoms in healthy volunteers</p> | <p>Niels Eijkelkamp The [beta]2-adrenergic agonist salbutamol modulates LPS-induced cytokine production in vivo in a tissue-specific way</p> | <p>Anna Phillips Life events, perceived stress, and upper respiratory tract infection in the elderly following influenza vaccination</p> |
| <p>Yehuda B. Pollak Peripheral acetylcholinesterase inhibitors attenuate IL-1 production in blood and brain</p> | <p>Peter Härle The sympathetic nervous system confers a bimodal effect on arthritis intensity, cumulative arthritis incidence, and cytokine profile in the naive versus effector phase of collagen-induced arthritis</p> | <p>Michel Okun Neuro-immunological consequences of stress during pregnancy</p> | <p>Gilly Wolf Impairment of interleukin-1 (IL-1) signaling attenuates neuropathic pain and spontaneous ectopic neuronal activity following nerve injury</p> | <p>Jutta M. Wolf Altered pattern of NF[κ]B activation after psychosocial stress in patients with atopic diseases</p> |

Wrap-up and Remarks by Representatives from the National Institutes of Health (NIH)

Detailed Meeting Schedule

Wednesday, May 26, 2004

The Educational Short Course (Room Titisee, Hotel Trescher)

Chair and Organizer: A del Rey, University Marburg, Germany

09:00 AM - 09:20 AM A del Rey, University Marburg, Germany
Welcome: Chronic diseases, more than a health problem

PNI: very early

09:20 AM - 09:55 AM D Hodgson, University of Newcastle, Australia
Effects of early-life immune activation on endocrine, metabolic, behavioral and immune outcomes

09:55 AM - 10:30 AM A Kavelaars, University Medical Center Utrecht, The Netherlands
Consequences of early behavioral or pharmacological interventions for the severity of chronic diseases in adult life

10:30 AM - 10:45 AM Coffee Break

PNI: rather late

10:45 AM - 11:20 AM C Kirschbaum, Dresden Technical University, Germany
Stress, hormones, and the immune system: age, sex, and other individual differences

11:20 AM - 11:55 AM R Johnson, University of Illinois at Urbana-Champaign, USA
Inflammatory cytokines in the aging brain: do they play a role in neurobehavioral deficits and in chronic degenerative disorders?

11:55 AM - 12:00 PM Give us your opinion! A discussion.

PNIRS 2004

- 02:00 PM - 02:15 PM **Opening of the PNIRS MEETING** (Assembly Hall, Conference Center)
RH Straub, University Regensburg
Address of the local organizer
- 02:15 PM - 03:15 PM **The Presidential Address** (Assembly Hall, Conference Center)
R Glaser, The Ohio State University, Columbus
Stress-associated immune dysregulation and its importance for human health:
a personal history of psychoneuroimmunology
- 03:15 PM - 03:45 PM Coffee Break (1st floor, Conference Center)
- 03:45 PM - 05:45 PM **The Presidential Symposium** (Assembly Hall, Conference Center)
Implications of PNI for Health and Quality of Life
Chair: R Glaser, The Ohio State University, Columbus

J Kiecolt-Glaser, The Ohio State University, Columbus
Psychological Influences on Immune Function: Health Implications

N Schneiderman, University of Miami
Psychosocial Variables, Immunity and Disease Progression in HIV/AIDS

M Irwin, University of California, Los Angeles
Shingles Immunity in the Elderly: Mind-Body Interactions

C Coe, University of Wisconsin, Columbus
Applying PNI to understand pain and immunity in fibromyalgia
- 05:45 PM - 06:45 PM **Press Conference** (Restaurant, Conference Center)
Only for invited people
- 07:00 PM - 10:00 PM **Reception** (1st floor, Conference Center)

Thursday, May 27, 2004

08:30 AM - 09:15 AM

Oral Session 1: Innate Immunity (Assembly Hall, Conference Center)

Chairs: U Shavit, Hebrew University of Jerusalem; M Harbuz, University of Bristol

MT Bailey, H Engler, JF Sheridan, The Ohio State University, Columbus
Stress-induced translocation of skin microflora to the inguinal lymph nodes of C57BL/6 mice is not dependent upon wounding

JA Bosch, GG Berntson, JT Cacioppo, PT Marucha, University of Illinois at Chicago
Differential mobilization of functionally distinct Natural Killer subsets during acute psychological stress

M Fleshner, C Sharkey, A Asea, JD Johnson, University of Colorado, Boulder
Extracellular Hsp72 released by stress facilitates innate immunity: In vivo & in vitro support

TB Saurer, KA Carrigan, SG Ijames, DT Lysle, University of North Carolina, Chapel Hill
Nucleus Accumbens Dopamine Receptors Mediate Morphine-induced NK Cell Suppression

09:15 AM - 10:15 AM

Oral Session 2: Molecular Mediators of PNI Interactions (Assembly Hall, Conference Center)

Chairs: M Schedlowski, ETH Zürich; R Weber, UIC, College of Medicine Peoria

RTAM Chang, T Symensma, J Zack, R Sun, S Cole, University of California, Los Angeles, School of Medicine
Beta-adrenergic signaling reactivates human Herpesvirus 8 via PKA modulation of viral RTA

R Dantzer, M Moreau, N Castanon, KW Kelley, University of Bordeaux
Cytokines and Depression: Role of Brain Indoleamine 2,3 Dioxygenase

BL Fiebich, RS Akundi, K Lieb, E Candelario-Jalil, U Haus, T Stratz, W Mueller, E Munoz, University of Freiburg
Serotonin 5-HT₃ receptor antagonists inhibit the release of pro-inflammatory cytokines and p38 MAPK activation in human monocytes

A Kavelaars, MS Lombardi, E van der Tweel, F Groenendaal, F van Bel, C Heijnen, University Medical Center Utrecht
Neonatal hypoxic-ischemic brain damage: a role for the GRK and β -arrestin machinery

G Pongratz, VM Sanders, The Ohio State University, Columbus
Higher levels of IgE antibodies are produced after the β ₂-adrenergic receptor is stimulated on the B-cell surface

10:15 AM - 10:30 AM

Coffee Break (1st floor, Conference Center)

- 10:30 AM - 11:15 AM **Norman Cousin Memorial Lecture** (Assembly Hall, Conference Center)
 Introduction: VM Sanders, The Ohio State University, Columbus
- R Glaser, The Ohio State University, Columbus
 Stress associated changes in the steady state expression of latent Epstein Barr Virus: Implications for Chronic Fatigue Syndrome and Cancer
- 11:15 AM - 01:00 PM **Symposium: Neuroendocrine immune mechanisms in rheumatic diseases** (Assembly Hall, Conference Center)
 Chairs: A Kavelaars, University Medical Center Utrecht; M Harbuz, University of Bristol
- D Jessop, University of Bristol
 Involvement of the HPA axis in mediating effects of stress on arthritis
- M Cutolo, University of Genova
 The role of androgens and estrogens in rheumatoid arthritis
- D Lorton, Sun Health Research Institute, Sun City
 RH Straub, University of Regensburg
 The role of neuropeptides and monamines in arthritis
- C Heijnen, A Kavelaars, University Medical Center Utrecht
 Regulation of receptor function by inflammatory processes during arthritis and other autoimmune diseases
- H Schaible, University of Jena
 Molecular mechanisms of pain sensitization in arthritis
- 01:00 PM - 02:00 PM **Lunch time** (1st floor, Conference Center)
- 01:00 PM - 02:00 PM **GEBIN Steering Committee Meeting** (Room Hirschbühl, Hotel Trescher)
- 02:00 PM - 03:30 PM **Oral Session 3: Cellular and Molecular Influences of Stress** (Assembly Hall, Conference Center)
 Chairs: CJ Heijnen, University Medical Center Utrecht; DL Bellinger, Loma Linda University, Loma Linda
- J Veldhuijzen van Zanten, D Carroll, C Ring, G Kitas, University of Birmingham (UK)
 Increased inflammatory response to acute psychological and postural stress in patients with rheumatoid arthritis compared to patients with osteoarthritis
- J Wolf, N Rohleder, A Bierhaus, P Nawroth, C Kirschbaum, Dresden Technical University
 Altered pattern of NF κ B activation after psychosocial stress in patients with atopic diseases
- GE Miller, University of British Columbia, Vancouver
 Depressive symptoms are associated with increased c-reactive protein and pathogen burden in patients with stable coronary artery disease

G Neigh, SD Bilbo, ER Glasper, AC DeVries, The Ohio State University,
Columbus
Cardiac Arrest/Cardiopulmonary Resuscitation Increases the Delayed-
Type Hypersensitivity Response and Alters Hypothalamic-Pituitary-
Adrenal Axis Activity

- 03:30 PM - 04:00 PM Coffee Break (1st floor, Conference Center)
- 03:30 PM - 06:30 PM **PNIRS Council Meeting** (Room Hirschbühl)
- 04:00 PM - 06:00 PM **Poster Session 1: Poster Presenters A-M** (Poster Hall, Conference Center)
Names and titles on page 24 --
- 06:00 PM - 07:30 PM **Pedal Boat Rally** (Titisee boat landing, see map on last page)
- 07:30 PM - 09:30 PM **The "P" in PNIRS - A discussion over beer** (Room Titisee, Hotel Trescher)
Chair: R Glaser, The Ohio State University; M. Irwin, University of California
Los Angeles

Friday, May 28, 2004

- 09:00 AM - 10:30 AM **Symposium: Cytokines, Neural Plasticity and Memory** (Assembly Hall, Conference Center)
 Chairs: Raz Yirmiya, The Hebrew University, Jerusalem; Steve Maier, University of Colorado, Boulder
- R Yirmiya, The Hebrew University of Jerusalem
 The role of IL-1 in hippocampal-dependent memory processes and neural plasticity
- H Besedovsky, University Marburg
 Role of brain-born cytokines in synaptic plasticity and memory formation
- M Lynch, Trinity College, Dublin
 Evidence that IL-1beta plays a role in age-related synaptic dysfunction in the hippocampus: Interaction with antiinflammatory cytokines
- S Maier, University of Colorado, Boulder
 IL-1 and memory: The role of brain derived neurotrophic factor (BDNF)
- 10:30 AM - 11:00 AM Coffee Break (1st floor, Conference Center)
- 11:00 AM - 01:00 PM **Symposium: Pain and Immunity: Bidirectional Interactions** (Assembly Hall, Conference Center)
 Chairs: Gayle Page, Johns Hopkins University, Baltimore; Linda Watkins, University of Colorado, Boulder
- L Watkins, University of Colorado, Boulder
 An overview of pain modulation by immune and glial activation
- Y Shavit, Hebrew University of Jerusalem
 IL-1 signaling plays a role in baseline pain sensitivity, in acute opiate analgesia, and in the development of opiate tolerance
- S Ben-Eliyahu, Tel Aviv University
 The involvement of pain and nociception in the promotion of experimental metastasis by surgery: mediating mechanisms and prophylactic measures
- L McGuire, University of Maryland, Baltimore
 Cytokines and pain in patients with scleroderma
- 01:00 PM - 02:00 PM Lunch time (1st floor, Conference Center)
- 01:00 PM - 02:00 PM BBI Editorial Board (Room Titisee, Hotel Trescher)
 By invitation only
- 02:00 PM - 03:00 PM **Oral Session 4: Clinical Models of PNI** (Assembly Hall, Conference Center)
 Chairs: Gayle Page, Johns Hopkins University, Baltimore; Keith Kelley, University of Illinois

E Chen, EB Fisher, LB Bacharier, RC Strunk, University of British Columbia, Vancouver
 Social environment relationships with cytokines and cortisol in adolescents with asthma

RR Johnson, K Hare, M Conner, EA Hardin, T Welsh, R Stortz, CJR Welsh, MW Meagher, Texas A&M University, College Station
 Chronic Theiler's virus infection: effects of acute phase social stress on development and severity of chronic phase disease

IEM Stec, M Erlacher, G Böck, G Wick, GJ Wieggers, Medical University of Innsbruck
 Crosstalk between TCR- and glucocorticoid receptor-mediated apoptosis in thymocytes of normal vs non-obese diabetic mice

C Weidler, C Holzer, M Harbuz, R Hofbauer, P Angele, J Schölmerich, RH Straub, University of Regensburg
 Low density of sympathetic nerve fibers and increased density of brain-derived neurotrophic factor-positive cells in rheumatoid arthritis synovium

SJ Yermal, LW Janusek, HL Mathews, Loyola University Chicago
 Perioperative Pain, Psychological Distress, and Immune Function During Prostatectomy

03:00 PM - 07:30 PM

Sightseeing Tours

Tour 1: Freiburg: The Capitol of the Black Forest

Tour 2: Black Forest Farm Houses

Buses leave in front of the Conference Center. For further details see page 9.

08:00 PM - 11:00 PM

Trainee Dinner (Restaurant of the Hotel Trescher)

Chair: Virginia "Ginny" M. Sanders, The Ohio State University

Faculty:

Annemieke Kavelaars, University Medical Center Utrecht

Firdaus Dhabhar, The Ohio State University, Columbus

Keith Kelley, University of Illinois, Urbana

Raz Yirmaya, The Hebrew University of Jerusalem

Andy Miller, Emory University, Atlanta

Saturday, May 29, 2004

- 07:30 AM - 08:30 AM **Breakfast Roundtable with the NCI** (Room Hirschbühl, Hotel Trescher)
Chair: M Stefanek, National Cancer Institute, Frederick
- 09:00 AM - 10:30 AM **Oral Session 5: Cytokines and Hormones** (Assembly Hall, Conference Center)
Chairs: C Kirschbaum, Dresden Technical University; AJ Dunn, Louisiana State University Health Science Center, Shreveport
- JD Johnson, KA O'Connor, LR Watkins, SF Maier, University of Colorado, Boulder
The Role of IL-1 β in Stress-Induced Sensitization of Brain IL-1 β and Corticosterone Responses
- A Nair, RH Bonneau, Penn State University College of Medicine, Hershey
Differential effects of corticosterone and the NMDA receptor on microglia function during stress and the impact of these effects on the development of stress-induced HSV-1 encephalitis
- M Wiczorek, AJ Dunn, Louisiana State University Health Science Center, Shreveport
The role of the vagus nerve in responses to interleukin-1: Behaviour, temperature, brain norepinephrine and HPA axis activation
- R Avraham, Y Schwartz, E Rosenne, R Melamed, S Ben-Eliyahu, Tel Aviv University
IL-12-based immunotherapy reduces post-surgery immunosuppression and metastasis, and increases survival from experimental leukemia
- TKS Craft, AC DeVries, The Ohio State University, Columbus
IL-1 β mediates post-stroke depressive-like behavior in mice
- 10:30 AM - 11:00 AM Coffee Break (1st floor, Conference Center)
- 11:00 AM - 01:00 PM **Symposium: Circadian Rhythm Dysregulation of Cortisol and Sleep** (Assembly Hall, Conference Center)
Chairs: David Spiegel, Stanford University; Linda E. Carlson, University of Calgary
- M Antoni, University of Miami
Depressive symptoms, urinary cortisol and sleep disruption in women at risk for cervical cancer
- LE Carlson, University of Calgary
Improvements in sleep quality and cortisol secretion patterns in cancer outpatients after participation in mind-body interventions
- D Spiegel, Stanford University
Flattened Diurnal Cortisol Rhythms in Metastatic Breast Cancer Patients
- JE Bower, University of California, Los Angeles
Cortisol and immune responses to experimental psychological stress in breast cancer survivors with persistent fatigue

| | |
|---------------------|--|
| 01:00 PM - 02:00 PM | Lunch time (Assembly Hall, Conference Center) |
| 02:00 PM - 03:30 PM | <p>Oral Session 6: Illness Behavior and Wound Healing (Assembly Hall, Conference Center)</p> <p>Chairs: R Booth, The University of Auckland; M Antoni, University of Miami</p> <p>AJ Dunn, R Newman, RA Newman, AH Swiergiel, Louisiana State University Health Science Center, Shreveport Neurobehavioural responses to leukemia in mice</p> <p>DR Johnson, JC O'Connor, GG Freund, University of Illinois, Urbana Vanadyl Sulfate Speeds Recovery From Lipopolysaccharide-induced Sickness</p> <p>DA Lawrence, VJ Bolivar, CA Hudson, Wadsworth Center, Albany Autoantibodies, behavior, and neuropsychiatric lupus</p> <p>P Marucha, C Engeland, J Bosch, J Chou, J Cacioppo, University of Illinois, Chicago Adults with depressive symptoms have delayed healing and impaired angiogenic growth factor expression</p> <p>DA Padgett, CC Head, MJ Farrow, J Akagi, P Mikhli, JF Sheridan, The Ohio State University, Columbus Stress-induced regulation of NF-κB activity during wound healing in mice.</p> <p>AF Richwine, BM Berg, J Chen, JP Godbout, RW Johnson, University of Illinois, Urbana Cognitive and motor deficits in aging mice are paralleled by increases in brain oxidative stress and interleukin-6 (IL-6)</p> |
| 03:30 PM - 04:00 PM | Coffee Break (Poster Hall, Conference Center) |
| 04:00 PM - 05:30 PM | <p>Poster Session 2: Poster Presenters N-Z (Poster Hall, Conference Center)</p> <p>Names and titles on page 34--</p> |
| 05:30 PM - 07:15 PM | Business Meeting (Assembly Hall, Conference Center) |
| 07:30 PM - 01:30 AM | <p>Banquet Evening (Hensler Hof)</p> <ul style="list-style-type: none"> Buses to the Hensler Hof will leave in front of the Conference Center 6:30 pm and 7:00 pm Buses from the Hensler Hof to the Conference center (the way back) will leave at 10:00 pm (Saturday), 11:00 pm (Saturday), 12:00 pm (Saturday), 1:00 am (Sunday), 2:00 am (Sunday). Walking time from the Conference center to the Hensler Hof is approx. 30 min. |

Poster Session No. 1: Poster Presenters A-M (Poster Hall, Conference Center)

Full names, titles, affiliation, and text can be found on the compact disk provided with registration.

- 1 AMYLOID B PEPTIDES (25-35) ACTIVATE PROTEIN KINASE C LEADING TO CYCLOOXYGENASE-2 INDUCTION AND PROSTAGLANDIN E2 RELEASE IN PRIMARY MIDBRAIN ASTROCYTES. Ravi S Akundi, Michael Hüll, Barbara Mueksch, Anne Waschbisch, and Bernd L Fiebich
- 2 SIGNAL TRANSDUCTION PATHWAYS IN ACTIVATED MICROGLIA. Ravi S Akundi, Michael Hüll, Klaus Lieb, and Bernd L Fiebich
- 4 STRESS-TRIGGERED DYSREGULATIONS OF THE IMMUN-ENDOCRINE EQUILIBRIUM DURING MAMMALIAN PREGNANCY IS ASSOCIATED WITH AN INCREASED RATE OF MISCARRIAGES. Petra C Arck, Mirjam Rücke, Sandra Blois, Matthias Rose, Alison Douglas, Julia Szekeres-Bartho, and Burghard F. Klapp
- 5 BLOOD TRANSFUSION SUPPRESSES HOST RESISTANCE TO EXPERIMENTAL TUMOR METASTASIS: EFFECTS OF HISTOCOMPATIBILITY AND STORAGE TIME. Shir Atzil-Berkenfeld, Michal Arad, Noa Abiri, Ella Rosenne, Benzion Beilin, and Shamgar Ben-Eliyahu
- 6 LONG-LASTING EFFECTS OF MATERNAL SEPARATION ON THE INFLAMMATORY AND BEHAVIORAL RESPONSES TO INFLUENZA INFECTION IN MICE. Ronit Avitsur, John Hunzeker, and John F. Sheridan
- 7 THE EFFECTS OF E.COLI ON HIPPOCAMPAL-DEPENDENT LEARNING AND MEMORY IN AGED RATS. Ruth M. Barrientos, Joseph C. Biedenkapp, David B. Sprunger, Karli J. Wright-Hardesty, Emily A. Higgins, Jerry W. Rudy, Linda R. Watkins, and Steven F. Maier
- 8 IMMUNIZATION WITH COMPLETE FREUND'S ADJUVANT TO INDUCE EXPERIMENTAL ARTHRITIS IN LEWIS RATS INCREASES C-FOS EXPRESSION IN THE HIPPOCAMPUS. Denise L. Bellinger, Cheri Lubahn, Jeff Carter, Natalie Ruff, Christine Molinaro, and Dianne Lorton
- 9 AGE EFFECTS ON T-LYMPHOCYTE FUNCTION IN SHORT- AND LONG-LIVED RATS WITH AGE-RELATED DIFFERENCES IN SYMPATHETIC INNERVATION OF THE SPLEEN. Denise L. Bellinger, Amanda Karsten, Dorian Silva, Srinivasan Thyagarajan, Cheri Lubahn, and Dianne Lorton

- 11 ENRICHED ENVIRONMENT PROLONGS SURVIVAL OF LYMPHOMA- BEARING IDIOTYPE- VACCINATED MICE. N. Benaroya-Milshtein, N. Hollander, T. Kukulansky, N. Raz, A. Apter, I. Yaniv, Y. Haberman, H. Halpert, and C.G. Pick
- 12 DIETARY VITAMIN E AND SELENIUM MODULATE LIPOPOLYSACCHARIDE (LPS)-INDUCED SICKNESS BEHAVIOR IN AGED MICE. Brian M Berg, Jonathan P Godbout, and Rodney W Johnson
- 13 NEONATAL INFECTION INDUCES MEMORY IMPAIRMENTS AND CYTOKINE ALTERATIONS FOLLOWING AN IMMUNE CHALLENGE IN ADULTHOOD. Staci D. Bilbo, Lindsay H. Levkoff, John H. Mahoney, Jerry W. Rudy, Linda R. Watkins, and Steven F. Maier
- 14 IMMUNE AND PSYCHOSOCIAL OUTCOMES IN STAGE II-IV HER-2+ BREAST CANCER SURVIVORS FOLLOWING AN 8-WEEK COMPLEMENTARY YOGA INTERVENTION. Sally E. Blank, Jacquelyn L. Banasik, Michelle A. Crowe, Melanie Matson, Joni C. Nichols, Robert Bendel, and Mel R. Haberman
- 15 STRESS-TRIGGERED ABORTION IN MICE ARE ASSOCIATED WITH TH1 PREDOMINANCE AND MEDIATED BY CELL ADHESION MOLECULES. Sandra M Blois, Mareike Tometten, Burghard F Klapp, Ricardo A Margni, and Petra C Arck
- 17 EFFECT OF WRITTEN EMOTIONAL EXPRESSION ON IMMUNE FUNCTION IN PATIENTS WITH HIV INFECTION. Roger J Booth, Keith J Petrie, Iris Fontanilla, Mark G Thomas, and James W Pennebaker
- 18 A COMPREHENSIVE PHENOTYPIC ANALYSIS OF STRESS-INDUCED LYMPHOCYTOSIS. Jos A. Bosch, Firdaus S. Dhabhar, Gary G. Berntson, John T. Cacioppo, and Phillip T. Marucha
- 19 PROINFLAMMATORY CYTOKINES IMPAIR IGF-I-STIMULATED PROTEIN SYNTHESIS IN SKELETAL MUSCLE MYOFIBERS VIA AN AMINO ACID TRANSPORT-INDEPENDENT MECHANISM. Suzanne R Broussard, Robert H McCusker, Klemen Strle, Wen Hong Shen, Robert Dantzer, and Keith W Kelley
- 20 KINETICS OF COMPLEMENT CASCADE ACTIVATION FOLLOWING ACUTE PSYCHOLOGICAL STRESS. Victoria E Burns, Kate M Edwards, Mark Drayson, Christopher Ring, and Douglas Carroll
- 21 EVIDENCE FOR MOOD DISTURBANCE, BUT NOT INCREASED PSYCHOLOGICAL STRESS, PRIOR TO INFLAMMATORY ATTACKS IN PATIENTS WITH HEREDITARY ANGIOEDEMA. Victoria E Burns, Mark Drayson, Christopher Ring, and Douglas Carroll

- 22 INVOLVEMENT OF CYCLOOXYGENASE-2 IN BLOOD-BRAIN BARRIER DAMAGE AND LEUKOCYTE INFILTRATION FOLLOWING TRANSIENT FOCAL CEREBRAL ISCHEMIA IN RATS. Eduardo Candelario-Jalil, Olga S. Leon, and Bernd L. Fiebich
- 23 FRONTO-PARIETAL RECRUITMENT ENABLES INTERFERON-ALPHA-TREATED PATIENTS TO MAINTAIN NORMAL PERFORMANCE ON A TASK OF VISUO-SPATIAL ATTENTION. Lucile Capuron, Giuseppe Pagnoni, Marina Demetrashvili, Charles B Nemeroff, Gregory S Berns, and Andrew H Miller
- 24 CNS ADAPTATION TO CHRONIC PERIPHERAL INFLAMMATION. San Ching, Harald Engler, John Sheridan, and Ning Quan
- 25 MULTIPLE ROLE OCCUPANCY AND CORTISOL PRODUCTION IN MOTHERS OF PRESCHOOL CHILDREN. Christina Chryssanthopoulou, Julie M. Turner-Cobb, and David Jessop
- 26 SALIVARY S-IGA IN RELATION TO GENDER, SMOKING STATUS AND AN ACUTE SYMPATHETICALLY AROUSING STIMULUS. Angela Clow, Andre Lynam-Smith, Cathrine Fredhoi, Phil Evans, and Frank Hucklebridge
- 27 PSYCHOLOGICAL DISTRESS, LIFE STRESSORS, SOCIAL SUPPORT AND ILLNESS PROGRESSION INDICATORS IN NEW IMMIGRANTS WITH HIV. Miri Cohen, Sandra Arad, Margalit Lorber, and Shimon Pollack
- 28 THE ASSOCIATION OF FORSKOLIN-STIMULATED CYCLIC AMP LEVELS IN PERIPHERAL BLOOD MONONUCLEAR CELLS OF HEALTHY PEOPLE WITH PSYCHOLOGICAL DISTRESS AND SENSE OF COHERENCE. Miri Cohen, Liora Taveron, and Shimon Pollack
- 29 GENOMIC STRUCTURE OF HUMAN STRESS RESPONSES. Steve Cole, and Weihong Yan
- 30 INFECTION, DEPRESSION, AND IMMUNITY AFTER CORONARY ARTERY BYPASS: A PILOT STUDY. Rebecca L Cross, Lynn V Doering, Marie J Cowan, and Otoniel M Martinez
- 31 COMPLEMENTARY YOGA INTERVENTION INCREASES NUCLEAR NF-KB IN STIMULATED LYMPHOCYTES OF WOMEN WITH STAGE II-IV HER-2+ BREAST CANCER. Michelle A. Crowe, Mel R. Haberman, Jacquelyn L. Banasik, Joni C. Nichols, Melanie Matson, and Sally E. Blank
- 32 EFFECTS OF ACUTE AND CHRONIC PSYCHOSOCIAL STRESS ON MADB106 TUMOR METASTASIS IN MALE FISCHER F344 RATS. Lutz Dawils, and Volker Stefanski

- 33 PRENATAL CORTISOL EXPOSURE AFFECTS SENSITIVITY TO LPS IN YOUNG PIGS. Johanna de Groot, Godelieve Kranendonk, Hans Hopster, Maaïke Fillerup, Kees van Reenen, Deborah Hodgson, Wim Boersma, and Marcel Taverne
- 34 IMMUNOLOGICAL CONSEQUENCES OF NEONATAL CASTRATION IN PIGS. Johanna de Groot, Frank Tuytens, Maaïke Fillerup, Leo Kruijt, Rob Zwart, Norbert Stockhofe-Zurwieden, and Wim Boersma
- 35 CHANGES IN LEUKOCYTE POPULATIONS IN SURVIVORS OF A NATURAL DISASTER IN VARGAS STATE, VENEZUELA. Crisanta M De Macedo V, Pablo A. Canelones B, Marisol Pocino G, Carlos Villarino, Patricia Rodríguez, Pedro Sánchez, and Marianela Castells B.
- 36 PHYSIOLOGICAL CONCENTRATIONS OF GROWTH HORMONE AND CORTISOL MODULATE T HELPER 1/ T HELPER 2 IN-VITRO CYTOKINE PRODUCTION IN HUMAN T CELLS. Stoyan Dimitrov, Tanja Lange, Horst-Lorenz Fehm, and Jan Born
- 37 INCREASES IN INTERLEUKIN-6 FOLLOWING MAXIMAL AND SUBMAXIMAL EXERCISE TASKS: EVIDENCE FOR SIMILAR PROFILES DURING RECOVERY. Kate M Edwards, Victoria E Burns, Douglas Carroll, Mark Drayson, and Christopher Ring
- 38 ACUTE PSYCHOLOGICAL STRESS DOES NOT PRODUCE A SIGNIFICANT INTERLEUKIN-6 RESPONSE. Kate M Edwards, Victoria E Burns, Mark Drayson, Christopher Ring, and Douglas Carroll
- 39 THE β 2-ADRENERGIC AGONIST SALBUTAMOL MODULATES LPS-INDUCED CYTOKINE PRODUCTION IN VIVO IN A TISSUE-SPECIFIC WAY. Niels Eijkelkamp, Pieter M. Cobelens, Virginia M. Sanders, Cobi J. Heijnen, and Annemieke Kavelaars
- 40 SEX DIFFERENCES IN OPIOID MODULATION OF CONTACT HYPERSENSITIVITY: AN INVESTIGATION OF PHARMACOLOGICAL SPECIFICITY AND PUTATIVE EFFECTOR MECHANISMS. Jay C. Elliott, and Donald T. Lysle
- 41 PSYCHONEUROIMMUNOLOGICAL RESPONSES TO VISCERAL AND PSYCHOLOGICAL STRESS. Sigrid Elsenbruch, Ayscha Lucas, Katrin Strassburger, Stefan Gesing, Angelika Pietsch, Ute Braun-Lang, Kaschayar Gilani, Annemieke Kavelaars, Cobi J Heijnen, Manfred Schedlowski, and Gerald Holtmann

- 42 THE EFFECTS OF STRESS ON HOST IMMUNITY: β -ADRENERGIC RECEPTOR CONTRIBUTION TO STRESS-INDUCED IMMUNOSUPPRESSION. Rebecca T. Emeny, Dawn Gao, Tapan Mondal, and David A. Lawrence
- 43 STRESS HORMONES MODULATE THE HEALING RATES OF ORAL WOUNDS. Christopher G Engeland, John T Cacioppo, and Phillip T Marucha
- 44 CHRONIC RESTRAINT ALTERS THE GENE EXPRESSION PATTERN IN LUNGS OF INFLUENZA A VIRUS INFECTED MICE. Andrea Engler, and John F. Sheridan
- 45 THE MURINE BONE MARROW AS A POTENTIAL SOURCE OF GLUCOCORTICOID-INSENSITIVE IMMUNE CELLS. Harald Engler, Michael T. Bailey, Andrea Engler, and John F. Sheridan
- 46 ANDROSTENEDIOL MAY RESTORE STRESS-IMPAIRED TRANSCRIPTION THROUGH AN NF-KB DEPENDENT MECHANISM. Michael J. Farrow, Cynthia C. Head, and David A. Padgett
- 47 SUBSTANCE P – INDUCED GENE EXPRESSION PATTERNS IN ASTROCYTES: INDUCTION OF CORTICOTROPIN RELEASING FACTOR RECEPTOR-1 (CRF-R1). Bernd L. Fiebich, Maïke Hamke, Mathias Berger, and Klaus Lieb
- 48 ADVERSE WORKING CONDITIONS AND VITAL EXHAUSTION AFFECT CYTOTOXIC T-CELL SUBPOPULATIONS AFTER CONTROLLING FOR DEMOGRAPHIC AND BIOMEDICAL VARIABLES. Johannes C. Fischer, and Joachim E. Fischer
- 49 HEALTH BEHAVIOR AND CHRONIC DISTRESS (ALLOSTATIC LOAD) AFFECT MONOCYTE-ACTIVATION IN A PREDOMINANTLY MALE MIDDLE AGED WORKING POPULATION. Johannes C. Fischer, and Joachim E. Fischer
- 50 PSYCHOLOGICAL STRESS IMPAIRED HEALING: DECREASED WOUND OXYGENATION AS A POTENTIAL PATHWAY. Praveen K Gajendrareddy, Govindasamy Ilangovan, Periannan Kuppusamy, Niels Eijkelkamp, and Phillip T Marucha
- 51 AN ANALYSIS OF SALIVARY CORTISOL IN PATIENTS WITH EARLY BREAST CANCER. Malcolm R Garland, Derek Doherty, Lucy Golden-Mason, and Cliona O'Farrelly
- 52 PRIOR INCUBATION OF PBMCS WITH CRH ABROGATES THE SUPPRESSIVE EFFECTS OF CORTISOL ON NKA. Malcolm R Garland, Derek Doherty, Lucy Golden-Mason, and Cliona O'Farrelly

- 53 LIPOPOLYSACCHARIDE, BUT NOT STAPHYLOCOCCAL ENTEROTOXIN B, DEPRESSES PLAY BEHAVIOR IN ADOLESCENT MALE RATS, A NOVEL MODEL TO ASSESS HEDONIC STATE. Ronald P.A. Gaykema, Heather D. Wyan, Nadia A. Badr, and Lisa E. Goehler
- 54 IMMUNOREACTIVITY FOR THE INTERLEUKIN-1 RECEPTOR TYPE I PROTEIN IN HIPPOCAMPAL NEURONS IN THE MOUSE BRAIN: AN ELECTRON MICROSCOPIC ANALYSIS. Ronald P. Gaykema, Alev Erisir, and Lisa E. Goehler
- 55 STABILITY OF GLUCOCORTICOID- AND CATECHOLAMINE-SENSITIVITY. Andrea C. Gierens, Judith Hesse, Wolff Schlotz, and Dirk H. Hellhammer
- 56 SOCIAL STRUCTURE INFLUENCES EFFECTS OF PAIR HOUSING ON WOUND HEALING. Erica R. Glasper, and A. Courtney DeVries
- 57 BRAIN INFLAMMATION AND WEIGHT LOSS AFTER PERIPHERAL CHALLENGE WITH LIPOPOLYSACCHARIDE (LPS) ARE EXACERBATED IN AGED MICE. Jonathan Godbout, Brian Berg, Amy Richwine, and Rodney Johnson
- 58 BEHAVIORAL CONDITIONING OF THE ACUTE EFFECTS OF INTERFERON-BETA-1A ADMINISTRATION IN HEALTHY SUBJECTS. Marion U. Goebel, Diana Hübell, Wei Kou, Zaza Katsarava, Manfred Schedlowski, and Volker Limmroth
- 59 IMMUNOHISTOCHEMICAL DETECTION OF TYPE 1 INTERLEUKIN-1 RECEPTOR PROTEIN IN VAGAL SENSORY GANGLIA AND PARAGANGLIA OF THE MOUSE. Lisa E. Goehler, Alev Erisir, and Ronald P.A. Gaykema
- 60 ENVIRONMENTAL ENRICHMENT REVERSES THE MEMORY IMPAIRMENTS AND DECREASED PAIN SENSITIVITY IN MICE WITH IMPAIRED INTERLUKIN-1 (IL-1) SIGNALING. Inbal Goshen, Tirzah Kreisel, Joseph Weidenfeld, Gilly Wolf, Yehuda Shavit, and Raz Yirmiya
- 61 QUALITATIVE DATA CONTEXTUALIZE FINDINGS OF SPIRITUALITY INTERVENTION DESIGNED TO REDUCE STRESS AND ENHANCE COPING IN PEOPLE WITH HIV INFECTION. D. Patricia Gray, Nancy McCain, Inez Tuck, Alison Martin, and Amanda O'Brient
- 62 SLEEP RESTRICTION INCREASES IL-6 LEVELS AND SUBJECTIVE PAIN-RELATED SYMPTOMS IN HEALTHY VOLUNTEERS. Monika Haack, Elsa Sanchez, Josiane Broussard, Meredith Regan, and Janet M. Mullington

- 63 REGULATION OF DOPAMINERGIC LOSS BY FAS IN AN MPTP MODEL OF PARKINSON'S DISEASE. Shawn P Hayley, Steven J Crocker, Patrice D Smith, Ruth Slack, Hymie Anisman, and David S Park
- 64 ANDROGEN STEROIDS AUGMENT THE INFLAMMATORY RESPONSE AND WOUND REPAIR. Cynthia C. Head, Michael J. Farrow, John F. Sheridan, and David A. Padgett
- 65 A PSYCHOBIOLOGICAL PERSPECTIVE ON CHRONIC FATIGUE SYNDROME. Christine Heim, Andrew H. Miller, and William C. Reeves
- 66 EFFECTS OF DIFFERENT DOSAGES OF DEXAMETHASONE ON CYTOKINE mRNA LEVELS IN HEALTHY SUBJECTS. Judith Hesse, Joana Macedo, Andrea C. Gierens, Jonathan D. Turner, Claude P. Muller, and Dirk H. Hellhammer
- 67 IMMUNE CHANGES IN THE PERIPHERAL BLOOD AND SECONDARY LYMPHOID ORGANS OF SOCIALLY STRESSED MALE LONG EVANS RATS. Adriene K. Hogg, and Volker Stefanski
- 68 THE EFFECTS OF RACE, GENDER, AND INTERLEUKIN-6 ON SLEEP. Suzi Hong, Paul J. Mills, Jose Loreda, and Joel E. Dimsdale
- 69 SOCIAL STRESS ADMINISTERED CONCURRENTLY TO INFLUENZA A/PR8 VIRUS INFECTION IN MICE SUPPRESSED INFECTION-INDUCED CYTOKINE GENE EXPRESSION. John Hunzeker, Ronit Avitsur, Jennifer L. Stark, David A. Padgett, and John F. Sheridan
- 70 KEY ROLE OF THE SYMPATHETIC MICROENVIRONMENT FOR THE INTERPLAY OF TNF AND IL-6 IN MOUSE COLON MUCOSA. Peter Härle, Frieder Kees, Werner Falk, Jürgen Schölmerich, and Rainer H. Straub
- 71 THE SYMPATHETIC NERVOUS SYSTEM CONFERS A BIMODAL EFFECT ON ARTHRITIS INTENSITY, CUMULATIVE ARTHRITIS INCIDENCE, AND CYTOKINE PROFILE IN THE NAIVE VERSUS EFFECTOR PHASE OF COLLAGEN-INDUCED ARTHRITIS. Peter Härle, and Rainer H Straub
- 72 CONVERSION OF DEHYDROEPIANDROSTERONE INTO ITS SULFATE IN PREMENOPAUSAL FEMALES WITH RHEUMATOID ARTHRITIS. Richard Imrich, Jozef Rovensky, Frantisek Malis, Martin Zlnay, Milan Vigas, and Juraj Koska
- 73 INTRACEREBROVENTRICULAR INJECTION OF LEPTIN INDUCES INTERLEUKIN-1 β AND CYCLOOXYGENASE-2 IN THE RAT BRAIN. Wataru Inoue, Helen Ashdown, and Giamal N. Luheshi

- 74 SULFORAPHANE INHIBITS MITOTIC PROGRESSION AND DISRUPTS TUBULIN POLYMERIZATION IN HUMAN MCF-7 MAMMARY CARCINOMA CELLS. Steven J. T. Jackson, and Keith W. Singletary
- 75 STRESS INFLUENCES CYTOKINE PROFILE OF IMMUNE CELLS IN AN ANIMAL MODEL OF ALLERGIC AIRWAY INFLAMMATION. Ricarda A Joachim, Viktoriya Sagach, David Quarcoo, Petra C Arck, and Burghard F Klapp
- 76 CATECHOLAMINES MEDIATE STRESS-INDUCED ELEVATION IN BRAIN IL-1 β . John D. Johnson, Jay Campisi, Sarah L. Kennedy, Molly Nickerson, and Monika Fleshner
- 77 LIPOPOLYSACCHARIDE DOES NOT IMPAIR ACOUSTIC STARTLE RESPONSE IN MICE. Grzegorz Juszcak, Janusz Blaszczyk, Adam Sliwa, and Artur H. Swiergiel
- 78 DIFFERENT ACTIVATION PATTERNS OF CYTOKINE SYSTEM AND HPA AXIS IN MELANCHOLIC AND NON-MELANCHOLIC MAJOR DEPRESSION. Florian Kästner, Michael Hettich, Marion Peters, Walter Sibrowski, Günter Hetzel, Volker Arolt, Uwe Cassens, and Matthias Rothermundt
- 79 PRENATAL STRESS INFLUENCES GENDER, WEIGHT AND NUMBER OF RESIDENT MUCOSAL IMMUNE CELLS IN A MURINE MODEL. Judith Kandil, Sandra Blois, Arne Kuhlmei, Maike Knackstedt, and Petra Arck
- 80 IMPACT OF EARLY LIFE STRESS ON RESPONSE OF NEONATAL PIGS TO AN ENDOTOXIN CHALLENGE. Ellen Kanitz, Margret Tuchscherer, Birger Puppe, Armin Tuchscherer, and Gerhard Manteuffel
- 81 STRESSES OF SPACEFLIGHT AND THE RESPONSE OF MONOCYTES TO LPS. Indreshpal Kaur, Elizabeth R. Simons, Sondra L. Fontenot, and Duane L. Pierson
- 82 SPLENIC NOREPINEPHRINE DEPLETION IS NECESSARY FOR STRESS-INDUCED SUPPRESSION OF ANTI-KLH ANTIBODY: THE EFFECT OF TYROSINE. Sarah L. Kennedy, Molly Nickerson, Taro P. Smith, Craig Sharkey, John Johnson, and Monika Fleshner
- 83 COMPARISON ANALYSIS OF PSYCHOLOGICAL AND BIOCHEMICAL INDICES OF CHRONIC LIFE STRESS. Dongsoo Kim, Se-kwon Park, Yeon-Soo Chung, and Soo-Jong Moon
- 84 STIMULATION OF CD86 (B7-2) ON A CD40L/IL-4-ACTIVATED B CELL SIGNALS THROUGH NF-KB. Nicholas W. Kin, Joseph R. Podojil, and Virginia M. Sanders

- 85 SOCIAL DISRUPTION INDUCES CHANGES IN OPEN FIELD BEHAVIOR IN C57BL/6 MICE. Steven G Kinsey, Michael T Bailey, Ronit Avitsur, John F Sheridan, and David A Padgett
- 86 AN EXERCISE INTERVENTION ENHANCES INFLUENZA IMMUNITY, IMPROVES PSYCHOSOCIAL FACTORS AND ALTERS THE RELATIONSHIP BETWEEN PSYCHOSOCIAL VARIABLES AND IMMUNOCOMPETENCE AMONG OLDER ADULTS. Marian Kohut, Wanglok Lee, Aisha Martin, Barbara Arnston, Daniel Russell, Paddy Ekkekakis, Alex Bishop, and Joan Cunnick
- 87 ACUPUNCTURE TREATMENT AFFECTS PERIPHERAL LEUKOCYTE CIRCULATION IN HEALTHY YOUNG MALE SUBJECTS. Wei Kou, Isabel Gareus, Gustavo Pacheco-Lopez, Marion Goebel, John Daniel Bell, Günther Spahn, Michael Stratmann, Onno E. Janssen, Gustav J. Dobos, and Manfred Schedlowski
- 88 STRESS AND HAIR LOSS: BIDIRECTIONALITY BETWEEN NGF, SUBSTANCE P AND CGRP IN DORSAL ROOT GANGLIA AND SKIN IN A MOUSE MODEL. Arne Kuhlmei, Quoc T. Dinh, Eva M. J. Peters, Judith Kandil, Ralf Paus, Burghard F. Klapp, and Petra C. Arck
- 89 NITRIC OXIDE EXPRESSION IS ALTERED BY HEROIN ADMINISTRATION IN MODELS OF GRAM-NEGATIVE AND GRAM-POSITIVE BACTERIAL INFECTION. Ryan K. Lanier, Stephanie G. Ijames, Roland R. Arnold, and Donald T. Lysle
- 90 CONTRIBUTIONS OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) TO STRESS-INDUCED DISEASES: A CASE FOR HOMEOPATHY. Maria L Lara-Marquez
- 91 SALIVARY CORTISOL AND DHEA FOLLOWING VIRAL INFECTION. Mark L. Laudenslager, Julie M. Worlein, Jim Ha, and Christy Blind
- 92 CHRONIC INFLAMMATION DOES NOT INDUCE AN INJURY/SPROUTING RESPONSE OF SPLENIC NORADRENERGIC NERVES IN LEWIS RATS. Dianne Lorton, Cheri Lubahn, Jill Schaller, and Denise Bellinger
- 93 CELLULAR MECHANISMS OF AB-INDUCED INTERLEUKIN-1B (IL-1B) SYNTHESIS FROM HUMAN MONOCYTIC CELLS. Dianne Lorton, Cheri Lubahn, and Jill Schaller
- 94 DIFFERENCES IN THE INJURY/SPROUTING RESPONSE OF SPLENIC NORADRENERGIC NERVES IN LEWIS RATS WITH ADJUVANT-INDUCED ARTHRITIS COMPARED TO TREATMENT WITH 6-HYDROXYDOPAMINE. Cheri Lubahn, Jill Schaller, Denise Bellinger, and Dianne Lorton

- 96 EVIDENCE THAT IL-1 β PLAYS A ROLE IN AGE-RELATED SYNAPTIC DYSFUNCTION IN THE HIPPOCAMPUS: INTERACTION WITH ANTIINFLAMMATORY CYTOKINES. Marina Lynch
- 97 NEUROTRANSMITTER AND CYTOKINE CHANGES IN THE BRAIN OF LISTERIA-INFECTED MICE. Gregory D. Lyng, Richard F. Seegal, and David A. Lawrence
- 98 MODULATION OF SKIN NOREPINEPHRINE TURNOVER BY ALLERGEN-SENSITIZATION: IMPACT ON CONTACT HYPERSENSITIVITY AND TH PRIMING. Georges JM Maestroni
- 99 LANGERHANS CELLS β 2-ADRENOCEPTORS: ROLE IN MIGRATION, CYTOKINE PRODUCTION, TH PRIMING AND CONTACT HYPERSENSITIVITY. Georges JM Maestroni, and Paola Mazzola
- 100 RELATIONSHIP OF ADRENAL HORMONES DHEAS AND CORTISOL TO SIV DISEASE IN RHESUS MONKEYS. Nicole Maninger, John P. Capitanio, and Sally P. Mendoza
- 101 AEROBIC EXERCISE TRAINING INCREASES THE PERCENTAGE OF CD8+ T CELLS PRODUCING IL-2 IN RESPONSE TO INFLUENZA VIRUS FOUR WEEKS POST-IMMUNIZATION AMONG OLDER ADULTS. Aisha Martin, Joan Cunnick, David Senchina, Wanglok Lee, Warren Franke, Del Konopka, and Marian Kohut
- 102 THE BIOCOGNITIVE SPACE OF AUTOIMMUNE DISORDERS: AUTOGENIC COMMUNICATION WITH PSYCHONEUROIMMUNOLOGICAL PROFILES. Mario E. Martinez
- 103 COMPARISON OF FENTANYL AND BUPRENORPHINE INDUCED IMMUNOMODULATION IN MICE FOLLOWING ACUTE AND CHRONIC SUBCUTANEOUS ADMINISTRATION. Cataldo Martucci, Alberto E Panerai, and Paola Sacerdote
- 104 DEPLETION OF C-TYPE NERVE FIBERS AND SUBSTANCE P PROTECTS MICE FROM ANTIBODY-INDUCED ARTHRITIS. Subhasis Mohanty, and Illges Harald
- 105 THE PSYCHOPHYSIOLOGY OF BURNOUT: CORTISOL SAMPLING IN BURNOUT SUBJECTS. Paula M.C. Mommersteeg, Lorenz J.P. van Doornen, and Cobi J. Heijnen
- 106 ACUTE PSYCHOLOGICAL STRESS AND PROINFLAMMATORY CYTOKINES IN HUMANS: DIFFERENTIAL EFFECTS ON MONOCYTE INTRACYTOPLASMIC EXPRESSION AND PRODUCTION. Sarosh J. Motivala, Kathryn Proudfoot, and Michael Irwin

Poster Session No. 2: Poster Presenters N-Z (Poster Hall, Conference Center)

Full names, titles, affiliation, and text can be found on the compact disk provided with registration.

- 1 MICROARRAY EVALUATION OF PNI GENES EVIDENCES ALTERED IMMUNE RESPONSE IN CHRONIC FATIGUE SYNDROME. Ainsley Nicholson, Suzanne Vernon, Toni Whistler, Elizabeth Unger, Dimitris Papanicolaou, James Jones, and William Reeves
- 2 PHYSICAL ACTIVITY ALTERS THE BRAIN HSP72 AND IL-1 β RESPONSE TO PERIPHERAL E.COLI CHALLENGE AND ENHANCES E.COLI CLEARANCE. Molly Nickerson, Gwen Elphick, Jay Campisi, and Monika Fleshner
- 3 IMMUNOLOGICAL CONSEQUENCES OF DISTURBED SLEEP DURING PREGNANCY. Michele L Okun, and Mary ME Coussons-Read
- 4 NEURO-IMMUNOLOGICAL CONSEQUENCES OF STRESS DURING PREGNANCY. Michele L Okun, and Mary ME Coussons-Read
- 5 LPS-INDUCED ALTERATIONS IN SLEEP AND BODY TEMPERATURE OF MICE: ROLES OF IL-6 AND TNF. Mark R Opp, Sundeep Vikraman, and Jonathan D Morrow
- 6 CENTRAL PROCESSING OF THE BEHAVIORALLY CONDITIONED IMMUNOSUPPRESSION: EXCITOTOXIC LESIONS OF INSULAR CORTEX, AMYGDALA AND VENTROMEDIAL NUCLEUS OF THE HYPOTHALAMUS DIFFERENTLY AFFECT LEARNING & MEMORY. Gustavo Pacheco-Lopez, Maj-Britt Niemi, Wei Kou, Margarete Härting, Marion U. Goebel, and Manfred Schedlowski
- 7 PLUS-MAZE BEHAVIOUR IN WISTAR RATS AND HIPPOCAMPAL LEVELS OF CYTOKINE mRNA. Cornelius R. Pawlak, Artur Bauhofer, and Rainer K.W. Schwarting
- 8 THE EFFECTS OF HEAD-LOCALIZED CARBON RADIATION ON CNS INFLAMMATION. Michael J. Pecaut, Gregory A. Nelson, Anna Smith, Steve Rightnar, and Daila S. Gridley
- 9 NEGATIVE LIFE EVENTS ARE ASSOCIATED WITH BLUNTING OF CARDIAC AND CORTISOL REACTIONS TO ACUTE STRESS. Anna C Phillips, Victoria E Burns, Christopher Ring, and Douglas Carroll
- 10 LIFE EVENTS, PERCEIVED STRESS, AND UPPER RESPIRATORY TRACT INFECTION IN THE ELDERLY FOLLOWING INFLUENZA VACCINATION. Anna C Phillips, Victoria E Burns, Christopher Ring, and Douglas Carroll

- 11 RELATIONSHIPS BETWEEN TRAUMATIC PSYCHOPATHOLOGY AND IMMUNOLOGICAL MODIFICATIONS IN SURVIVORS OF A NATURAL DISASTER. Marisol Pocino, Pablo Canelones, Marisol De Macedo, Maira Cabrera, Guillermo Teran-Angel, Carlos Villarino, and Marianela Castés
- 12 PERIPHERAL ACETYLCHOLINESTERASE INHIBITORS ATTENUATE IL-1 PRODUCTION IN BLOOD AND BRAIN. Yehuda Pollak, Ofra Ben Menachem, Hayim Ovadia, Adi Gilboa, Tamir Ben Hur, Hermona Soreq, and Raz Yirmiya
- 13 LOW INTRACELLULAR AND HIGH EXTRACELLULAR S100B CONCENTRATIONS SYNERGISTICALLY PROMOTE ASTROCYTIC SECRETION OF IL-6. Gerald Ponath, Volker Arolt, and Matthias Rothermundt
- 14 INTRACELLULAR S100B REGULATES ASTROCYTIC INTERMEDIATE FILAMENT ASSEMBLY AND NEURITE OUTGROWTH IN VITRO. Gerald Ponath, Volker Arolt, Christian August, and Matthias Rothermundt
- 15 A SINGLE DOSE OF LIPOPOLYSACCHARIDE HAS LONG-TERM EFFECTS ON ACTH, CORTICOSTERONE AND CYTOKINE SECRETION. Louise J Richards, Michael S Harbuz, and David S Jessop
- 16 STRESS-INDUCED CHANGES IN GLUCOCORTICOID SENSITIVITY OF LYMPHOCYTE PROLIFERATION IN PATIENTS WITH ATOPIC DISEASES. Nicolas Rohleder, Jutta M. Wolf, and Clemens Kirschbaum
- 17 INCREASED CONCENTRATION OF THE NEUROPLASTICITY MARKER S100B IS CORRELATED WITH TREATMENT RESPONSE IN MAJOR DEPRESSION. Matthias Rothermundt, Marion Peters, Gerald Ponath, Andreas Erfurth, Martin Wiesmann, Ulrich Missler, Sebastian Rudolf, Holger Kirchner, and Volker Arolt
- 18 THE NEUROPLASTICITY MARKER S100B IN CHRONIC SCHIZOPHRENIC PATIENTS WITH PREDOMINANT NEGATIVE SYMPTOMS. Matthias Rothermundt, Gerald Ponath, Thomas Glaser, and Volker Arolt
- 19 NUCLEAR STAT3 TRANSLOCATION IS OBSERVED IN ENDOTHELIAL CELLS AND ASTROCYTES OF THE GUINEA PIG BRAIN DURING PYROGENIC CHALLENGE WITH LPS. C. Rummel, T. Voss, R. Gerstberger, J. Roth, and T. Hübschle
- 20 MONITORING OF MEMBRANE ACTION: PROCESSING OF PROOPIOMELANOCORTIN PEPTIDES BY DERMAL MICROVASCULAR ENDOTHELIAL CELLS. Thomas E Scholzen, Simone König, Michaela Fastrich, Markus Böhm, and Thomas A Luger

- 21 STRESS-INDUCED IMMUNE CONDITIONING CAUSES A PRIMARY HYPOIMMUNE RESPONSE IN MICE. Christine B. Schuett, Cornelia Kiank, Christian Wilke, and Birgitt Fülll
- 22 SYNOVIOCYTES FROM THE RAT KNEE JOINT INFLUENCES RECEPTOR EXPRESSION IN DORSAL ROOT GANGLION NEURONES IN A CO-CULTURE SYSTEM. Gisela Segond von Banchet, Jonny Pilecki, Marion Hückel, Rolf Bräuer, and Hans-Georg Schaible
- 23 THE ROLE OF CYTOKINES IN SURGERY STRESS-INDUCED ALTERATIONS IN MEMORY FUNCTIONING IN HUMANS. Irit Shapira-Lichter, Benzion Beilin, Hanna Bessler, Galina Grinevich, Michal Ballas, Yehuda Shavit, Dan Zror, Eldad Posner, Hermona Soreq, and Raz Yirmiya
- 24 ANTI-KLH ANTIBODY AND DELAYED-TYPE HYPERSENSITIVITY RESPONSES IN OLDER STABLE CORONARY ARTERY DISEASE PATIENTS. Taro P. Smith, and Monika Fleshner
- 25 OPPOSITE EFFECTS OF STRESS AND BETA-ENDORPHIN ON INFLAMMATORY RESPONSES IN TWO INBRED RAT STRAINS. Stanislava Stanojevic, Katarina Mitic, Vesna Vujic, Vesna Kovacevic-Jovanovic, and Mirjana Dimitrijevic
- 26 PSYCHOSOCIAL STRESS IN PREGNANT RATS. Volker Stefanski, Denise Tischner, Claudia Raabe, and Marcus Schulte
- 27 ABLATION OF THE SYMPATHETIC NERVOUS SYSTEM DECREASES GRAM-NEGATIVE AND INCREASES GRAM-POSITIVE BACTERIAL DISSEMINATION. Rainer H. Straub, Georg Pongratz, Claudia Weidler, Hans-Jörg Linde, Carsten J. Kirschning, Hermann Wagner, Thomas Glück, Jürgen Schölmerich, and Werner Falk
- 28 INTERLEUKIN 1 β IMPAIRS IGF-I-INDUCED DIFFERENTIATION AND DOWNSTREAM ACTIVATION SIGNALS OF THE IGF-I RECEPTOR IN MUSCLE PROGENITOR CELLS. K Strle, SR Broussard, RH McCusker, JE Novakofski, WH Shen, RW Johnson, and R Dantzer
- 29 PRENATAL EXPOSURE TO ENDOTOXIN IN THE FISCHER 344 RAT: CONSEQUENCES FOR NEUROENDOCRINE AND IMMUNE FUNCTION, AND NOCICEPTIVE THRESHOLDS IN THE OFFSPRING. Nicolette A Tape, Frederick R Walker, Cristina Mears, Kylie Hume, and Deborah M Hodgson
- 30 SICK ANIMALS CAN LEARN: A DISSOCIATION BETWEEN ANOREXIA, WEIGHT LOSS, AND COGNITION. Lisa M. Thomson, and Robert G. Sutherland

- 31 ESTROGEN-INDUCED INHIBITION OF SYMPATHETIC NORADRENERGIC NEURONAL ACTIVITY IN THE SPLEENS OF MALE AND FEMALE RATS. Srinivasan ThyagaRajan, Denise L. Bellinger, Dwight M. Nance, and Amanda Karsten
- 32 DIMINUTION OF MURINE STRESS-TRIGGERED ABORTIONS BY NEUTRALIZATION OF NERVE GROWTH FACTOR. Mareike Tometten, Sandra Blois, Burghard F. Klapp, and Petra C. Arck
- 33 CORTICOSTERONE IMPAIRS CLASS I ANTIGEN PROCESSING AND PRESENTATION BY DENDRITIC CELLS VIA REDUCTION OF PEPTIDE GENERATION. M. E. Truckenmiller, Chris C. Norbury, and Robert H. Bonneau
- 34 STRESS-INDUCED REGULATION OF NK ACTIVITY DURING AN INFLUENZA A VIRAL INFECTION. Raymond J. Tseng, David A. Padgett, Firdaus S. Dhabhar, Harald Engler, John T. Hunzeker, and John F. Sheridan
- 35 STEROID HORMONE RECEPTORS AND INTRACELLULAR SIGNALLING: SHARED MECHANISMS INVOLVING NF-KB AND IKK. Jonathan D Turner, and Claude P Muller
- 36 MATERNAL OCCUPATIONAL STRESS AND CORTISOL PRODUCTION IN PRESCHOOL AND SCHOOL TRANSITIONING CHILDREN. Julie M. Turner-Cobb, Christina Chryssanthopoulou, and David Jessop
- 37 THE HOST GENE EXPRESSION RESPONSE FOLLOWING ACUTE EPSTEIN BARR VIRUS (EBV) INFECTION. Suzanne D Vernon, Toni Whistler, Barbara Cameron, William C Reeves, and Andrew Lloyd
- 38 CHANGES OF IMMUNE AND ENDOCRINE PARAMETERS IN PTSD OVER TIME. Anđelko Vidović, Katja Gotovac, Maja Vilibić, Ante Sabioncello, Sabina Rabatic, Vera Folnegović-Šmalc, and Dragan Dekaris
- 39 SPIRITUALITY AND NATURAL KILLER CELL ACTIVITY IN WOMEN WITH BREAST CANCER: AN EXPLORATORY STUDY. Diane M von Ah, Sandra Sephton, and Duck-Hee Kang
- 40 PYROGENIC PROPERTIES OF DOUBLE STRANDED RNA IN GUINEA PIGS. Thilo Voss, Stephan Barth, Christoph Rummel, Rüdiger Gerstberger, Thomas Hübschle, and Joachim Roth
- 41 INFLUENCE OF CATECHOLAMINES ON CYTOKINE PRODUCTION OF RESTING AND IL-2 ACTIVATED CD4 AND CD8 POSITIVE T CELLS. Matthias Wahle, Ina Naumann, Gesine Hanefeld, Andreas Krause, Holm Häntzschel, and Christoph G O Baerwald

- 42 EFFECTS OF LIPOPOLYSACCHARIDE ON INSTRUMENTAL FEEDING IN RESPONSE TO CONTEXT. Grazyna Walasek, Tomasz Werka, Adrian J. Dunn, and Artur H. Swiergiel
- 43 A PROFILE OF THE IMMEDIATE ENDOCRINE, METABOLIC AND BEHAVIOURAL RESPONSES FOLLOWING A DUAL EXPOSURE TO ENDOTOXIN IN EARLY LIFE. Frederick R Walker, Antonia Brogan, Nicolette A Tape, and Deborah M Hodgson
- 44 THE EFFECT OF POSTNATAL ENDOTOXIN EXPOSURE ON NOCICEPTION IN ADULTHOOD: HYPER-ANALGESIA FOLLOWING IMMUNE CHALLENGE. Frederick R Walker, Nicolette A Tape, and Deborah M Hodgson
- 45 DECREASED TUMOR SIZE AND INCREASED SURVIVAL IN MICE TREATED WITH THE DELTA OPIOID SNC80. Richard J. Weber, Diana Caballero-Hernandez, Kenner C. Rice, Christina Rodríguez-Padilla, Reyes Tamez-Guerra, and Ricardo Gomez-Flores
- 46 PLACENTAL GROWTH FACTOR IS RELATED TO INFLAMMATION, VASCULARIZATION, AND DHEAS TO DHEA CONVERSION IN SYNOVIAL TISSUE OF PATIENTS WITH RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS. Claudia Weidler, Martin Schmidt, Lars Perlick, Jürgen Schölmerich, and Rainer H. Straub
- 48 EXACERBATION OF SYMPTOMS WITH EXERCISE TO IDENTIFY DIFFERENTIALLY EXPRESSED FATIGUE GENES. Toni Whistler, Suzanne D. Vernon, Kelly Bowen, James F. Jones, and William C. Reeves
- 49 THE INFLUENCE OF SEX AND SEX HORMONES ON THE PROGRESSION OF AUTOIMMUNE DISEASE. Caroline C. Whitacre, Tracey L. Papenfuss, Melanie A. McClain, Connie L. Rogers, Nicole Damico, Ingrid Gienapp, Todd Shawler, and Fei Song
- 50 MODULATION OF IMMUNOLOGICAL MEMORY BY SOCIAL DISRUPTION STRESS. Jacqueline D. Wiesehan, John T. Hunzeker, David A. Padgett, and John F. Sheridan
- 51 IMPAIRMENT OF INTERLEUKIN-1 (IL-1) SIGNALING ATTENUATES NEUROPATHIC PAIN AND SPONTANEOUS ECTOPIC NEURONAL ACTIVITY FOLLOWING NERVE INJURY. Gilly Wolf, Eran Gabay, Michael Tal, Yehuda Shavit, and Raz Yirmiya
- 52 EXERCISE DELAYS ALLOGENEIC TUMOR GROWTH AND REDUCES INTRA-TUMORAL INFLAMMATION AND VASCULARIZATION. Jeffrey A. Woods, Mark R. Zielinski, Matthew A. Wallig, Melissa Muenchow, and Peggy L. Horn

- 53 POSTPARTUM MATERNAL CORTICOSTERONE DECREASES MATERNAL AND NEONATAL ANTIBODY LEVELS AND INCREASES THE SUSCEPTIBILITY OF NEWBORN MICE TO HERPES SIMPLEX VIRUS (HSV)-ASSOCIATED MORTALITY. Jodi L. Yorty, Stephanie A. Schultz, and Robert H. Bonneau
- 55 EP3 RECEPTOR EXPRESSING NEURONS OF THE RAT PREOPTIC AREA PARTICIPATE IN THE EFFERENT REGULATION OF BAT THERMOGENESIS DURING FEVER. K. Yoshida, K. Nakamura, K. Matsumura, M. König, H.-J. Thiel, Z. Boldogki, I. Toth, J. Roth, R. Gerstberger, and T. Hübschle



1. Station (Bahnhof)
2. Conference Center (Kurhaus)
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5. Hotel Maritim
6. Hotel Brugger

Banquet evening (Hensler Hof)
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