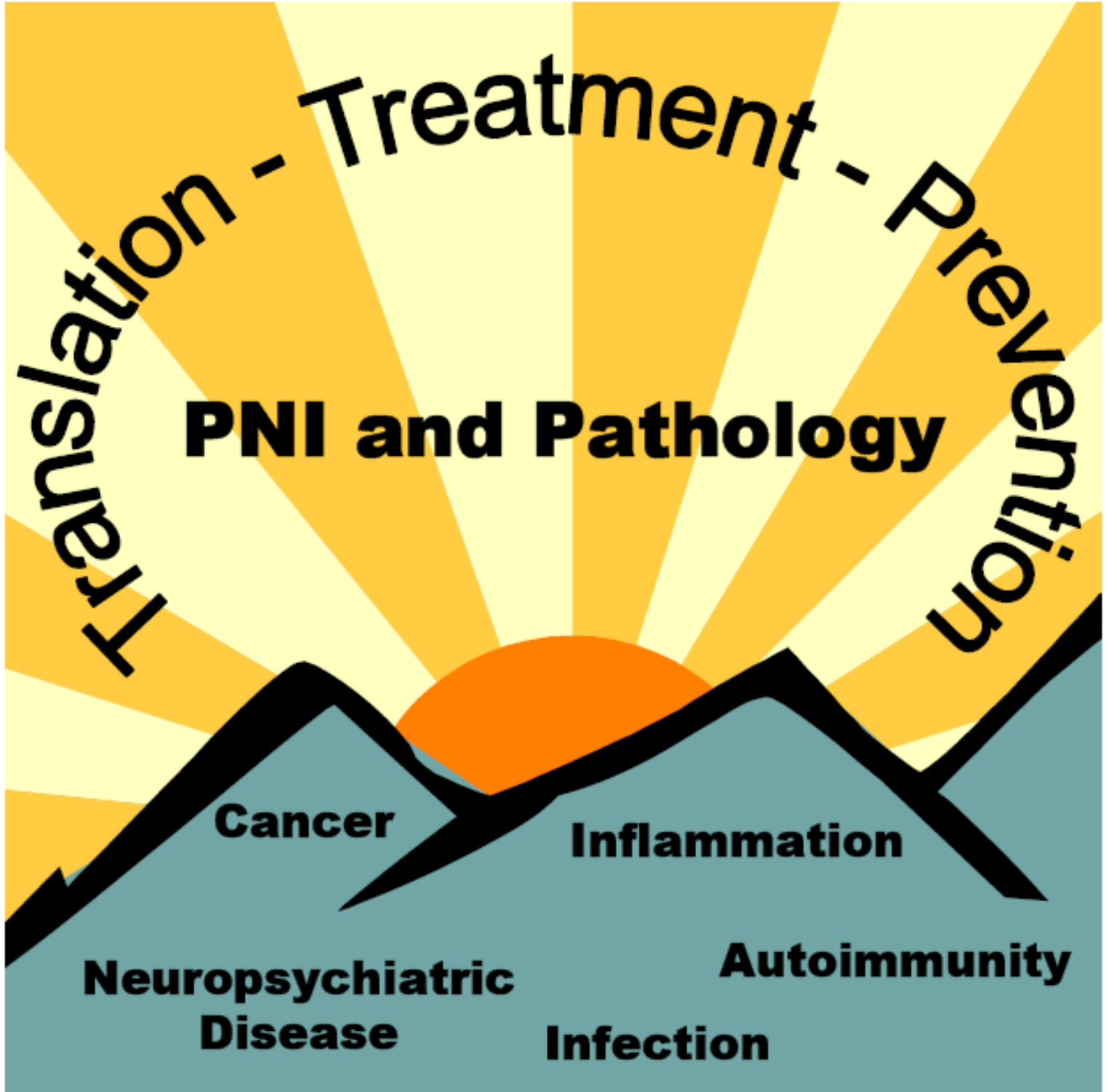


16th Annual Meeting of
The PsychoNeuroImmunology Research Society

*PNI and Pathology:
Translation, Treatment, and Prevention*



June 3-6, 2009
Breckenridge, Colorado
Beaver Run Resort and Conference Center

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Announcements

The winners of the officer elections (President-Elect, Secretary-Treasurer-Elect, and Scientific Council) will be announced at the Business Meeting on Friday, June 5th.

The winners of the Norman Cousins Award Lecture and the Robert Ader New Investigator Award will be announced at the Closing Banquet on Saturday, June 6th.

Acknowledgements

Funding for the 2009 meeting was made possible in part by a conference grant (R13) from the National Cancer Institute. We also gratefully appreciate the support of Elsevier Inc. for sponsoring the Brain, Behavior, and Immunity Editorial Board luncheon and providing the complimentary copies of Brain, Behavior, and Immunity for non-member registrants.

Special acknowledgements are extended to local organizers, Monika Fleshner and Mary Coussons-Read. Their dedication and commitment to making this meeting a success is greatly appreciated.

The views expressed in written conference materials and publications, or by speakers and moderators, do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Officers

Andrew Miller (President)
Margaret Kemeny (Past-President)
Rainer Straub (President-Elect)
Rodney Johnson (Secretary/Treasurer)
Susan Solomon (Executive Director)

PNIRS Staff

Lauren Redman
Katharine Strelitz
Brienne Loughridge

PNIRS Trainee Scholars Program Coordinator

Thaddeus Pace

Senior Faculty Trainee Mentors

Michael Irwin
Margaret Kemeny
Janice Kiecolt-Glaser
Andrew Miller
Mark Opp
Carmine Pariante
Virginia Sanders
Susan Segerstrom
Ed Suarez
Julian Thayer
Raz Yirmiya

Scientific Affairs Committee

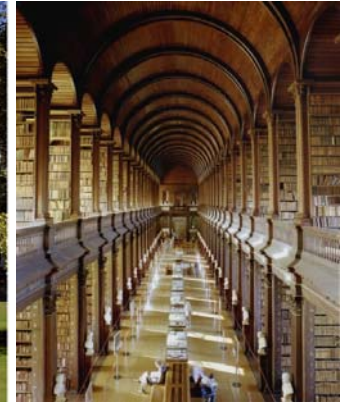
Andrew Miller (President)
Margaret Kemeny (Past-President)
Rainer Straub (President-Elect)
Rodney Johnson (Secretary-Treasurer)
Mary Coussons-Read
Firdaus Dhabhar
Monika Fleshner
Michael Irwin
Mark Opp
Virginia Sanders
Raz Yirmiya

Scientific Council

Andrew Miller (Chair, President)
Margaret Kemeny (Past-President)
Rainer Straub (President-Elect)
Rodney Johnson (Secretary-Treasurer)
Michael Antoni
Lisa E Goehler
Deborah Hodgson
Susan Lutgendorf
Steven Maier
Paul Mills
Jan Moynihan
Mark Opp

Next Year's Meeting

17th Annual Meeting of The Psychoneuroimmunology Research Society
Dublin, Ireland
Trinity College Dublin Conference Center
June 2-5, 2010



“Psychoneuroimmunology: Crossing disciplines to combat disease”

General Information

REGISTRATION & INFORMATION CENTER

Name badges and meeting bags will be distributed at the registration desk in the Foyer of the Main Conference Center on the 3rd Floor. The registration & information center will be open during the following hours:

Wednesday, June 3: Noon - 6:00 p.m.
Thursday, June 4: 8:00 a.m. – 5:00 p.m.
Friday, June 5: 8:00 a.m. – 5:00 p.m.
Saturday, June 6: 8:00 a.m. – 5:00 p.m.

ACCOMPANYING PERSONS

Individuals (guests) accompanying registrants are welcome to attend the Opening Reception and Banquet as long as they have registered. Guest tickets for both events can be purchased at the Information Center.

Guests are not permitted in either the meeting rooms or poster rooms.

CELLULAR PHONES

As a courtesy to others, please turn off mobile devices during all sessions.

INSTRUCTIONS TO PRESENTERS

Chairs

Chairs of the sessions should be in the designated room 10 minutes before the session starts in order to assist the speakers. In the event of a talk cancellation, the order and timing of the session is at the discretion of the chairs, but every effort should be made to keep the session on schedule for individuals attending specific talks within the session.

Speakers

Speakers should go to the designated room 10 minutes before the session starts to meet the moderators and to upload talks onto the laptop computers.

Computer presentation guidelines

To minimize the need for connecting multiple computers to the projectors, a laptop is provided. Talks can be uploaded via a flashdrive or CD. Both PC and Mac laptops are available in the event that your presentation will work with only one type of operating system. Unless our computers do not work, please do not use your own personal laptop. It is assumed that all presentations will use PowerPoint software. Please contact the Information Center if you are using a different program.

Poster Presenters

The Poster Sessions will be held in the Coppertop III on the 3rd Floor. The two Poster Sessions are organized by Poster Number (not by alphabetical order). Poster Session 1 will be from 5:30 – 7:30 p.m. on Friday, June 5th. Poster Session 2 will be on Saturday, June 6th, from 5:00 – 7:00 p.m. All posters can be mounted during the morning of your respective session. It is preferred that your poster be setup at least 1 hour before the session begins. Pins for mounting the posters will be provided. Look for your poster number in this Program Book or on a list that will be posted in the rooms. Please remove your posters at the end of the session. Remaining posters may be discarded if they are not taken down prior to the second Poster Session or the end of the meeting.

Data Blitz

30 minutes before each Poster Session, there will be a short oral presentation of a subset of posters on display. The Data Blitz talks will take place in Peaks 4 and 5 on the 3rd Floor of the Conference Center. All Data Blitz participants will give a 3-minute oral presentation with a maximum of 2 slides. Given their brevity, please upload all files in advance before the 30-minute Blitz begins. After your presentations, please re-join everyone in the poster rooms.

Norman Cousins Award Lecture



The Norman Cousins Award is the highest honor given by the PsychoNeuroImmunology Research Society to an individual for outstanding contributions to research in psychoneuroimmunology. Norman Cousins was an articulate spokesman and advocate for Psychoneuroimmunology, whose support and generosity has facilitated the career development of many investigators in this interdisciplinary field of endeavor. To contribute to the advancement of knowledge in psychoneuroimmunology, Ellen Cousins, Norman's wife, created the Norman Cousins Memorial Fund, and the California Wellness Foundation provided the endowment for the Norman Cousins Memorial Award and Lecture to be delivered as a highlight of the annual meeting of the PsychoNeuroImmunology Research Society.

Previous Award Lecturers:

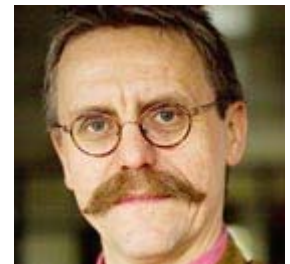
- 1991 – Robert Ader
- 1993 – George F. Solomon
- 1994 – Jean E. Merrill
- 1996 – Hugo O. Besedovsky
- 1997 – John F. Sheridan
- 1998 – Janice K. Kiecolt-Glaser
- 1999 – Cobi Heijnen
- 2000 – Robert Dantzer
- 2001 – Christopher Coe
- 2002 – Steven Maier
- 2003 – Keith Kelley
- 2004 – Ronald Glaser
- 2005 – Nicholas Cohen
- 2006 – Linda Watkins
- 2007 – Michael Irwin
- 2008 – Andrew Miller

Norman Cousins Award Lecture 2009

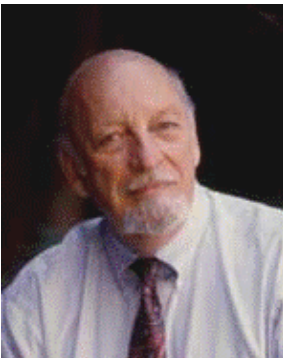
*The Learned Immune Response:
Pavlov and Beyond*

Manfred Schedlowski, M.D.

Division of Medical Psychology and
Behavioral Immunobiology
University of Duisburg-Essen, Germany



Robert Ader New Investigator Award



In honor of Dr. Robert Ader, a pioneer in the field of psychoneuroimmunology, the PsychoNeuroImmunology Research Society presents the Robert Ader New Investigator Award. This prestigious award is presented to an outstanding new research scientist who has made exciting basic science or clinical contributions to the field of PNI. The award honors Dr. Ader's innovation and creativity as a scientist and recognizes his contributions to the instantiation of PNI as a meaningful endeavor dedicated to the betterment of health and the prevention of disease.

Previous recipients of the Ader award:

- 2001 – Firdaus Dhabhar
- 2002 – Annemieke Kavelaars
- 2003 – Kurt Ackerman
- 2004 – Lucille Capuron
- 2005 – Susan Lutgendorf
- 2006 – Marian Kohut
- 2007 – Julienne Bower
- 2008 – Suzenne Segerstrom
- 2009 – Jonathan Godbout

2009 Robert Ader New Investigator Award

Microglial cell hyperactivity in aging

Jonathan Godbout, Ph.D.

Assistant Professor
Dept. of Molecular Virology, Immunology and
Medical Genetics
The Ohio State University



PNIRS Senior Faculty-Trainee Colloquium

Supported by a Conference Grant from the National Cancer Institute

Peak 9	Peak 10	Peak 7/8	Peak 11	Peak 12
Faculty: Virginia Sanders & Julian Thayer	Faculty: Carmine Pariante & Raz Yirmiya	Faculty: Margaret Kemeny & Susan Segerstrom	Faculty: Janice Kiecolt- Glaser & Ed Suarez	Faculty: Michael Irwin & Mark Opp
Lorna Gleeson Trinity College Dublin Ireland	Ying An The Ohio State University USA	Krystal Buchanan The Ohio State University USA	Jayne Abraham University of Illinois at Urbana - Champaign USA	Kate Edwards University of California, San Diego USA
Mark Hanke The Ohio State University USA	Livia Carvalho Kings College London UK	Jean-Philippe Gouin The Ohio State University USA	Jennifer Felger Rockefeller University USA	Cornelia Kiank University of California, Los Angeles USA
Dana Kilroy Trinity College Dublin Ireland	Justin Eddy Loyola University Chicago USA	Katherine Nautiyal Columbia University USA	Shamini Jain University of California, San Diego USA	KaMala Thomas University of California, Los Angeles USA
Hua Zhang University of Missouri - Kansas City USA	Mallory Frazier Texas A&M University USA	Anlys Olivera Emory University USA	Ariela Karasov University of Wisconsin - Madison USA	Alison Wagner The University of North Carolina at Chapel Hill USA
Zachary Zimomra Kent State University USA	Morgan Moon University of Illinois at Urbana - Champaign USA	Mercedes Szpunar University of Rochester USA	Marianne Kreither University of Colorado at Denver USA	Angela Wynne The Ohio State University USA

Congratulations to the 2009 Trainee Scholars!

Program At A Glance

Time	Wednesday June 3	Thursday June 4	Friday June 5	Saturday June 6
7:30— 8:30		Breakfast	Breakfast	Breakfast
8:30— 9:00		Presidential Symposium <i>Cytokines and Neuroplasticity</i>	Symposium 2 <i>Glucocorticoid Resistance: At the Interface between Psychological Events, Depression and Inflammation</i>	NCCAM Symposium <i>Complementary and Alternative Medicine Approaches to Health and Wellness</i>
9:00— 9:30				
9:30— 10:00				
10:00— 10:30				
10:30— 11:00		Coffee Break	Coffee Break	Coffee Break
11:00— 11:30		Oral Session 1 <i>Inflammation, Stress and Depression in Clinical Populations</i>	Oral Session 2 <i>Immunologic and Genetic Mechanisms in PNI</i>	Oral Session 3 <i>PNI at the Translational Interface</i>
11:30— 12:00 noon				
12:00 noon— 12:30	Registration Open			
12:30— 1:00		Lunch	Lunch	Lunch
1:00— 1:30		<i>Trainee Roundtable with NIH Staff; Council Meeting</i>	<i>BBI Editorial Board Meeting</i>	<i>Junior Faculty-Trainee Roundtable</i>
1:30— 2:00				
2:00— 2:30				
2:30— 3:00	Educational Short Course <i>Inflammation and its Discontents</i>	Symposium 1 <i>T and B Lymphocytes at the interface of Brain-Immune Interactions</i>	NCI Symposium <i>PNI and Cancer: Mechanism of Psychosocial Effects on Disease Development</i>	Oral Session 4 including the Ader Award Lecture <i>PNI, Plasticity, and Mechanisms of Cytokine-Induced Sickness</i>
3:00— 3:30				
3:30— 4:00				
4:00— 4:30		Coffee Break	Coffee Break	Coffee Break
4:30— 5:00			Cousins Memorial Lecture	Data Blitz Session 1
5:00— 5:30			Business Meeting	Poster Session 2
5:30— 6:00		Break		
6:00— 6:30	Break	Welcome Reception	Poster Session 1; Finance Committee Mtg.	
6:30— 7:00				
7:00— 7:30				
7:30— 8:00			Break	Closing Banquet
8:00— 8:30	Senior Faculty-Trainee Mentoring Colloquium		Trainee Reception	
8:30— 9:00 or later				

Wednesday, June 3

- 12:00 REGISTRATION OPEN**
Foyer—Conference Center—3rd Floor
- 3:00 – 6:00 EDUCATIONAL SHORT COURSE: Inflammation and its Discontents**
Peaks 11 & 12—2nd Floor
- *The immunology of inflammation*
Monika Fleshner, Ph.D., University of Colorado Boulder
 - *Inflammation and cancer*
Firdaus S. Dhabhar, Ph.D., Stanford University
 - *The role of inflammation in cardiovascular disease*
Paul J. Mills, Ph.D., University of California, San Diego
 - *Inflammation, stress, and depression*
Charles L. Raison, M.D., Emory University
- 6:00 – 7:30 BREAK**
Pizza and Refreshments for Trainee Scholars in Dr. Miller's Suite
- 7:30 – 9:00 SENIOR FACULTY-TRAINEE MENTORING COLLOQUIUM**
Peaks 2, 3, 7 & 8, 11, 12—2nd Floor

Thursday, June 4

- 7:30 – 8:30 BREAKFAST (Included in Registration Fee)**
Foyer—Conference Center—3rd Floor
- 8:30 – 10:30 PRESIDENTIAL SYMPOSIUM: Cytokines and Neuroplasticity**
Peaks 4 & 5—Conference Center—3rd Floor
- 8:30: *Peripheral immune cells control the state of mind, providing a new perspective on psychoneuroimmunology*
Michal Schwartz, Ph.D., Weizmann Institute, Israel
- 9:00: *Inhibition of interleukin-1 beta signaling blocks the antineurogenic and anhedonic actions of chronic stress*
Ronald Duman, Ph.D., Yale University
- 9:30: *Sympathetic nervous system activation and sterile inflammation: Impact on inflammatory proteins and vascular plasticity*
Monika Fleshner, Ph.D., University of Colorado at Boulder
- 10:00: *Interleukin-1: A central regulator of behavioral and neural plasticity*
Raz Yirmiya, Ph.D., The Hebrew University, Jerusalem.
- 10:30 – 11:00 COFFEE BREAK**
- 11:00 – 12:30 ORAL SESSION 1: Inflammation, Stress and Depression in Clinical Populations**
Chair: Ed Suarez
Peaks 4 & 5—Conference Center—3rd Floor
- 11:00: **ADVERSE CHILDHOOD EXPERIENCES PREDICT ADULT RISK FACTORS FOR AGE-RELATED DISEASE: DEPRESSION, INFLAMMATION, AND CLUSTERING OF METABOLIC RISK MARKERS**
A. Danese, T. E. Moffitt, H. Harrington, B. J. Milne, G. Polanczyk, C. M. Pariante, R. Poulton and A. Caspi

- 11:15: ASSOCIATIONS OF VERY HIGH C-REACTIVE PROTEIN CONCENTRATION WITH PSYCHOSOCIAL AND CARDIOVASCULAR RISK FACTORS IN AN AGEING POPULATION
M. Hamer and Y. Chida
- 11:30: DEPRESSIVE SYMPTOMS PREDICT EXAGGERATED INFLAMMATORY RESPONSES TO AN *IN VIVO* IMMUNE CHALLENGE AMONG PREGNANT WOMEN
L. M. Christian, A. Franco, J. D. Iams, J. Sheridan and R. Glaser
- 11:45: ACUTE PSYCHOSOCIAL STRESS INDUCES SHORT-TERM CATECHOLAMINE RESISTANCE OF TNF-ALPHA, BUT NOT OF IL-6 PRODUCTION IN HEALTHY YOUNG MEN
N. Rohleder, J. M. Wolf and C. Kirschbaum
- 12 noon: RELATIONSHIP OF MONOCYTE CELLULAR EXPRESSION OF IL-6 AND SLEEP ARCHITECTURE
K. S. Thomas, S. Motivala, R. Olmstead and M. R. Irwin
- 12:15: PATIENTS WITH POSTTRAUMATIC STRESS DISORDER SHOW DISTINCTIVE FEATURES IN SIGNAL TRANSDUCTION PATHWAYS CENTRAL TO THE ENDOCRINE-IMMUNE INTERPLAY
J. M. Wolf, N. Rohleder, L. Joksimovic, G. E. Miller and C. Kirschbaum

12:30 – 2:00 LUNCH (Included in Registration Fee)

Trainee Roundtable with NIH Staff

Breckenridge Ballroom—1st Floor (There will be reserved seating for the Roundtable Discussion Groups)

Council Meeting

Mercury Boardroom—Building 4

2:00 – 4:00 SYMPOSIUM 1: T and B Lymphocytes at the Interface of Brain-Immune Interactions

Co-Chairs: Steve Zalcman and Alexander Kusnecov

Peaks 4 & 5—Conference Center—3rd Floor

- 2:00: *Brain to immune system: Do not overreact! Immunosuppressive neuropeptides to the rescue*
Doina Ganea, Ph.D., Temple University
- 2:25: *Mechanisms by which norepinephrine increases the Th2-dependent IgE response to promote lung inflammation*
Virginia Sanders, Ph.D., The Ohio State University
- 2:50: *Impact of T cell superantigens on brain and behavior*
Alexander W. Kusnecov, Ph.D., Rutgers University
- 3:15: *Role of T cells in cognition and neural plasticity*
Jonathan Kipnis, Ph.D., University of Virginia
- 3:40: *Discussant*
Steve Zalcman, Ph.D., University of Medicine and Dentistry of New Jersey

4:00 – 4:30 COFFEE BREAK

4:30 – 5:30 2009 NORMAN COUSINS MEMORIAL LECTURE

Peaks 4 & 5—Conference Center—3rd Floor

- *The Learned Immune Response: Pavlov and Beyond*
Manfred Schedlowski, M.D., University of Duisburg-Essen, Germany

5:30 – 6:00 BREAK

6:00 – 8:00 WELCOME RECEPTION

Imperial Ballroom—4th Floor

Friday, June 5

- 7:30 – 8:30 BREAKFAST (Included in Registration Fee)**
Foyer—Conference Center—3rd Floor
- 8:30 – 10:30 SYMPOSIUM 2: Glucocorticoid Resistance: At the Interface between Psychosocial Events, Depression and Inflammation**
Co-Chairs: Carmine Pariante and Steve Cole
Peaks 4 & 5—Conference Center—3rd Floor
- 8:30: *Glucocorticoid resistance in major depression: Clinical relevance and modulation by antidepressants*
Carmine M. Pariante, M.D., King's College of London
- 8:55: *Brain molecular mechanisms of glucocorticoid resistance*
Thaddeus Pace, Ph.D., Emory University
- 9:20: *Polymorphisms in the glucocorticoid receptor gene: Consequences for gene function, neuroendocrine responses to stress and mood disorder vulnerability Genetic regulation of glucocorticoid receptor sensitivity*
Stephan Claes, M.D., Ph.D., University of Leuven, Belgium
- 9:45: *Genomic approaches to glucocorticoid resistance*
Steve Cole, Ph.D., UCLA
- 10:10: *Discussant*
Andrew H. Miller, M.D., Emory University
- 10:30 – 11:00 COFFEE BREAK**
- 11:00 – 12:30 ORAL SESSION 2: Immunologic and Genetic Mechanisms in PNI**
Chair: Virginia Sanders
Peaks 4 & 5—Conference Center—3rd Floor
- 11:00: EPIGENETIC MECHANISM OF IMMUNE DYSREGULATION
H. Mathews and L. Janusek
- 11:15: PROLONGED RESTRAINT AFFECTS MICROBIAL RICHNESS IN THE INTESTINES AND ENHANCES COLONIZATION BY THE MURINE PATHOGEN *CITROBACTER RODENTIUM*
M. T. Bailey, S. E. Dowd, J. D. Galley and M. Lyte
- 11:30: IRON BIOLOGY AND ANEMIA: UNAPPRECIATED MEDIATORS IN PNI PATHWAYS
C. L. Coe and G. R. Lubach
- 11:45: INTERFERON-GAMMA, SONIC HEDGEHOG SIGNALING AND GRANULAR NEURON PRECURSOR PROLIFERATION
J. Wang, L. Sun and Z. Tian
- 12 noon: BRAIN DENDRITIC CELLS IN ISCHEMIC STROKE.
J. C. Felger, T. Abe, U. W. Kaunzner, J. Gal-Toth, A. Gottfried-Blackmore, B. S. McEwen, C. Iadecola and K. Bulloch
- 12:15: EFFECTS OF *LYCIUM BARBARUM* ON BASAL AND LPS-INDUCED CYTOKINE PRODUCTION.
D. M. Nance, H. Amagase and G. Luczy-Bachman
- 12:30 – 2:00 LUNCH ON OWN**
BBI Editorial Board Meeting
- 2:00 – 4:00 NCI SYMPOSIUM: PNI and Cancer: Mechanisms of Psychosocial Effects on Disease Development**
Co-Chairs: Mike Antoni & Firdaus Dhabhar
Peaks 4 & 5—Conference Center—3rd Floor
- 2:00: *Bi-directional effects of stress on susceptibility to skin cancer*
Firdaus Dhabhar, Ph.D., Stanford University

- 2:30: *Stress management effects on biobehavioral processes in breast cancer*
Michael Antoni, Ph.D., University of Miami
- 3:00: *Biobehavioral influences on angiogenesis and invasion in ovarian cancer*
Susan Lutgendorf, Ph.D., University of Iowa
- 3:30: *A clinically feasible approach to reduce postoperative immune perturbations and increase recurrence-free survival in cancer patients*
Shamgar Ben-Eliyahu, Ph.D., Tel Aviv University, Israel.

4:00 – 4:30 COFFE BREAK

4:30 – 5:00 DATA BLITZ SESSION 1
Peaks 4 & 5—Conference Center—3rd Floor

5:00 – 5:30 BUSINESS MEETING

5:30 – 7:30 POSTER SESSION 1
Coppertop III—3rd Floor

Finance Committee Meeting
Mercury Boardroom—Building 4

7:30 – 8:00 BREAK

8:00 TRAINEE RECEPTION
Coppertop II—2nd Floor

Saturday, June 6

7:30 – 8:30 BREAKFAST (INCLUDED IN REGISTRATION FEE)
Foyer—Conference Center—3rd Floor

8:30 – 10:30 NCCAM SYMPOSIUM: Complementary and Alternative Medicine Approaches to Health and Wellness

Chair: Michael Irwin
Peaks 4 & 5—Conference Center—3rd Floor

- 8:30: *Immunological correlates of yoga practice*
Janice Kiecolt-Glaser, Ph.D., The Ohio State University, College of Medicine
- 8:55: *Meditation, consternation and inflammation: The effect of compassion-focused mind training on physiological and behavioral responses to psychosocial stress*
Charles Raison, M.D., Emory University
- 9:20: *Curcumin inhibits tumor growth and angiogenesis in ovarian carcinoma by targeting the nuclear factor- κ B Pathway*
Anil Sood, M.D., MD Anderson Cancer Center
- 9:45: *Mindfulness, stress, and immunity in HIV*
David Creswell, Ph.D. Carnegie Mellon University
- 10:10: *Discussant*
Michael R. Irwin, M.D., UCLA

10:30 – 11:00 COFFEE BREAK

11:00 – 12:30 ORAL SESSION 3: PNI at the Translational Interface
Chair: Susan Segerstrom
Peaks 4 & 5—Conference Center—3rd Floor

- 11:00: CANCER CHEMOTHERAPY AGENTS INDUCE SICKNESS AND BRAIN ACTIVATION PATTERNS THAT ARE SIMILAR TO IMMUNE CHALLENGES IN RATS
L. E. Goehler and R. P. Gaykema
- 11:15: CHRONIC STRESS ENHANCES DISTANT METASTASIS FROM PRIMARY BREAST CANCER
E. Sloan, S. Yu, J. Arevalo and S. Cole
- 11:30: BIOBEHAVIORAL MARKERS IN CAREGIVERS OF BLOOD OR MARROW TRANSPLANT (BMT) RECIPIENTS: PRELIMINARY OBSERVATIONS
M. L. Laudenslager, C. Natvig, R. Gryzwa, J. Spradley, K. Kilbourn, S. K. Mikulich-Gilbertson and T. Simoneau
- 11:45: BASELINE CARDIOVASCULAR REACTIVITY PREDICTS SIGNIFICANTLY LOWER PRODUCTION OF HIV ENTRY INHIBITING β -CHEMOKINES AT 24-MONTH FOLLOW-UP
L. Temoshok, S. J. Synowski, R. L. Wald and A. Garzino-Demo
- 12 noon: DISTINCTIVE RELATIONSHIPS BETWEEN INTERLEUKIN-6, ITS SOLUBLE RECEPTOR, AND BONE HEALTH IN AGING MEN AND WOMEN
A. O. Karasov, B. A. Fischer, C. L. Coe, N. C. Binkley and C. D. Ryff
- 12:15: SUBJECTIVE HEALTH IS SENSITIVE TO RESTRICTED SLEEP AND RELATES TO INCREASED LEVELS OF IL-6
M. Lekander, A. Andréasson, T. Åkerstedt and J. Axelsson

12:30 – 2:00 LUNCH (INCLUDED IN REGISTRATION FEE)

Junior Faculty-Trainee Roundtable

Breckenridge Balroom—1st Floor (There will be reserved seating for the Roundtable Discussion Groups)

2:00 – 4:00 ORAL SESSION 4: PNI, Plasticity, and Mechanisms of Cytokine-Induced Sickness

Co-chairs: John Johnson and Ning Quan

Peaks 4 & 5—Conference Center—3rd Floor

- 2:00: MICROGLIAL CELL HYPERACTIVITY IN AGING
J. Godbout, Ader New Investigator Award Lecture
- 2:30: LEARNING-INDUCED INCREASES IN IMMUNE AND PLASTICITY-RELATED GENES: MODULATION BY CYTOKINES AND EARLY-LIFE INFECTION.
S. D. Bilbo
- 2:45: PRENATAL EXPOSURE TO LIPOPOLYSACCHARIDE ALTERS FEBRILE RESPONSE TO BACTERIA IN ADULT WISTAR RATS
T. Nakamura and D. M. Hodgson
- 3:00: DEPRESSIVE-LIKE BEHAVIORS INDUCED BY LIPOPOLYSACCHARIDE ARE ASSOCIATED WITH INCREASED BRAIN KYNURENINE METABOLISM
J. C. O'Connor, M. A. Lawson, R. Dantzer and K. W. Kelley
- 3:15: PROINFLAMMATORY CYTOKINES MEDIATE ACUTE STRESS-INDUCED LOSS OF INTESTINAL BARRIER FUNCTION IN THE TERMINAL ILEUM WHICH ENHANCES TRYPTOPHAN CATABOLISM IN BALB/C MICE
C. Kiank, S. Voss, A. Starke, J. Zeden, G. Domanska, G. Fusch, C. Schuett and Y. Taché
- 3:30: IMMUNOTOXIC DEPLETION OF HYPOTHALAMIC NORADRENERGIC/ADRENERGIC INPUT AMELIORATES THE EFFECTS OF PERIPHERAL LPS CHALLENGE ON SICKNESS BEHAVIOR
R. P. Gaykema, G. C. Thacker, N. J. Shapiro and L. E. Goehler
- 3:45: LOCATION-SPECIFIC ACTIVATION OF THE PVN BY CASEIN-INDUCED LOCAL INFLAMMATION
K. C. Buchanan, N. Belevych and N. Quan

4:00 – 4:30 COFFE BREAK

4:30 – 5:00 DATA BLITZ SESSION 2

Peaks 4 & 5—Conference Center—3rd Floor

5:00 – 7:00 **POSTER SESSION 2**
Coppertop III—3rd Floor

7:00 **CLOSING BANQUET (Included in Registration Fee)**
Cocktails, Dinner and Dancing
Breckenridge Ballroom—1st Floor

Poster Session 1

Friday, June 5, 5:30 – 7:30 p.m.
In Order by Poster Number

■ Denotes Participation in Data Blitz Session 1

- 1 ■ DIETARY SUPPLEMENTATION WITH RESVERATROL ATTENUATES LIPOPOLYSACCHARIDE INDUCED BEHAVIORAL AND COGNITIVE DEFICITS AND HIPPOCAMPAL IL-1 β MRNA EXPRESSION IN AGED MICE
J. Abraham and R. W. Johnson
- 2 ■ DIRECT ACTION OF INTERLEUKIN-1 ELICITS DISTINCT EFFECTS FROM MICROGLIA, ASTROCYTES, AND BRAIN ENDOTHELIAL CELLS
Y. An and N. Quan
- 3 THE EFFECTS OF VOLUNTARY WHEEL RUNNING ON INFECTION-INDUCED MEMORY DEFICITS AND HIPPOCAMPAL BDNF MRNA IN AGING RATS.
R. M. Barrientos, T. R. Chapman, J. Ahrendsen, N. Y. Crysdale, M. G. Frank, S. Campeau, H. E. Day, L. R. Watkins, S. L. Patterson and S. F. Maier
- 4 ALPHA-1-ADRENERGIC RECEPTORS ARE A RELEASING SIGNAL FOR ENDOGENOUS EXTRACELLULAR HEAT SHOCK PROTEIN 72 IN INTESTINAL EPITHELIAL CELLS
L. A. Beninson and M. Fleshner
- 5 METHAMPHETAMINE SENSITIZATION ATTENUATES THE FEBRILE AND NEUROINFLAMMATORY RESPONSE TO A SUBSEQUENT PERIPHERAL IMMUNE STIMULUS
J. B. Buchanan, N. L. Sparkman and R. W. Johnson
- 6 IMMUNE CELLS PRODUCE CATECHOLAMINES DURING ARTHRITIS: NEW ASPECTS OF NEURO-IMMUNOLOGICAL RESPONSE
S. Capellino, K. Weber, C. Wolff, A. Fassold and R. H. Straub
- 7 EPINEPHRINE CAUSES MOBILIZATION OF CYTOTOXIC LEUKOCYTES IN VIVO AND THEIR DETACHMENT FROM CULTURED ENDOTHELIUM IN VITRO
S. Dimitrov, J. Born and T. Lange
- 8 TEMPORAL CYTOKINE EXPRESSION PATTERNS IN SERUM AND BRAIN FOLLOWING CHRONIC OR ACUTE TREATMENT WITH LIPOPOLYSACCHARIDE
M. Erickson and W. Banks
- 9 ■ PRIOR EXPOSURE TO SOCIAL STRESS SENSITIZES VIRUS-INDUCED CYTOKINE EXPRESSION DURING ACUTE THEILER'S VIRUS INFECTION
M. A. Frazier, E. G. Vichaya, E. E. Young, C. J. Welsh and M. W. Meagher
- 10 ■ NORADRENALINE RE-UPTAKE INHIBITION INFLUENCES NEUROINFLAMMATORY AND DEGENERATIVE CHANGES ASSOCIATED WITH THE EXCITOTOXIN KAINIC ACID
L. C. Gleeson, T. J. Connor and A. Harkin

- 11 BRAIN RESPONSES TO INTRAPERITONEAL AND SUBCUTANEOUS TUMORS IN RATS
L. E. Goehler, R. P. Gaykema and B. Mravec
- 12 ■ ANXIETY-LIKE BEHAVIOR, NEURONAL ACTIVATION AND INFLAMMATION INDUCED BY SOCIAL STRESS IS DECREASED BY BETA-ADRENERGIC RECEPTOR ANTAGONISM
M. L. Hanke, L. Stiner, N. Powell, M. T. Bailey, J. P. Godbout and J. F. Sheridan
- 13 A MURINE MODEL OF ACUTE AND CHRONIC BRONCHOPULMONARY INFECTION WITH *MYCOBACTERIUM TUBERCULOSIS*: DELAYED AND PERSISTENT ACTIVATION OF SEROTONERGIC NEURONS WITHIN THE BRAINSTEM RAPHE COMPLEX
J. H. Hollis, K. Goosen, H. Orozco, A. Wilkinson, S. L. Lightman, R. Hernández-Pando, G. A. Rook and C. A. Lowry
- 14 EFFECTS OF REPEATED CANNABIDIOL ADMINISTRATION ON SPLENIC LYMPHOCYTE SUBSETS DISTRIBUTION AND NATURAL KILLER CELLS CYTOTOXICITY IN RATS
B. M. Ignatowska-Jankowska, M. Jankowski, W. Glac and A. H. Swiergiel
- 15 STRESS REGULATION OF CYTOKINES IN THE HYPOTHALAMUS
R. Jankord, R. Zhang and J. P. Herman
- 16 ■ THE BETA2-ADRENOCEPTOR AGONIST SALMETEROL INHIBITS THROMBIN-INDUCED INFLAMMATION IN PRIMARY GLIAL CELLS: A ROLE FOR PKA AND EPAC ACTIVATION BY CAMP
D. Kilroy and T. J. Connor
- 17 INTRACRANIAL SELF-STIMULATION (ICSS) MEASUREMENT OF ANHEDONIA AFTER INFLAMMATION IN MICE
D. M. Lamkin, T. G. Beltz, S. K. Lutgendorf and A. K. Johnson
- 18 HIV-1 TAT PROTEIN INDUCES SICKNESS BEHAVIOR FOLLOWED BY DEVELOPMENT OF DEPRESSIVE-LIKE BEHAVIOR
M. A. Lawson, K. W. Kelley and R. Dantzer
- 19 MULTIPLE TRANSCRIPTION START SITE CLUSTERS OF MOUSE IL-1R1 GENE
Q. Li, L. Zhu, H. Zhang, Q. Chen and N. QUAN
- 20 SIGNIFICANT REDUCTION OF EAE SYMPTOMS IN ENDOTHELIAL IL-1R1 KNOCKDOWN MICE
Q. Li, H. Zhang, Q. Chen and N. Quan
- 21 CYTOKINE-INDUCED DEPRESSION: EFFECTS OF INTERLEUKIN-1 BETA AND CORTICOTROPIN-RELEASING FACTOR ANTAGONISM ON BIOCHEMICAL AND BEHAVIORAL INDICATORS OF "DEPRESSION" IN THE RAT
J. M. Loftis, A. Murphy-Crews, D. J. Menasco, M. S. Huckans and M. Strater
- 22 THE IMPACT OF STRESSOR EXPOSURE ON INNATE IMMUNITY: A GENE EXPRESSION ANALYSIS
T. Maslanik, I. Bernstein-Hanley, B. Helwig and M. Fleshner
- 23 EFFECTS OF *IN VITRO* ADMINISTRATION OF IL-1BETA ON PC-12 CELLS
K. A. McLinden, A. J. Tarr, G. W. Boehm and G. Akkaraju
- 24 TEMPERAMENT-ASSOCIATED DIFFERENCES IN IMMUNE RESPONSES BETWEEN NEOPHOBIC AND NEOPHILIC RATS.
K. C. Michael, R. H. Bonneau and S. A. Cavigelli
- 25 ■ MICE LACKING THE INFLAMMASOME COMPONENT CASPASE-1 ARE RESISTANT TO CENTRAL LIPOPOLYSACCHARIDE-INDUCED DEPRESSIVE-LIKE BEHAVIOR
M. L. Moon, R. H. McCusker, M. A. Lawson, R. Dantzer and K. W. Kelley
- 26 DETERMINING THE TISSUE SOURCE OF HSP72: AN APPROACH TO UNDERSTANDING ITS ENDOGENOUS FUNCTIONS
K. Naegeli, T. Maslanik and M. Fleshner

- 27 ■ BRAIN MAST CELLS AFFECT NEUROGENESIS TO IMPACT EMOTIONALITY.
K. M. Nautiyal, A. Iyer and R. Silver
- 28 NEUROIMMUNE SENSITIVE LRP-1 CONTROLS THE BRAIN-TO-BLOOD EFFLUX OF MOUSE PRION AT THE BLOOD-BRAIN BARRIER.
M. L. Niehoff, W. A. Banks, A. Urayama and C. Soto
- 29 A SYSTEMIC LPS CHALLENGE DOES NOT ALTER CENTRAL BETA2-ADRENOCEPTOR EXPRESSION OR RESENSITIVENESS
K. M. Ryan, A. Harkin and T. J. Connor
- 30 DIETARY SOLUBLE FIBER ALTERS TH1/TH2 BALANCE IN C57BL/6J MICE IMPROVING LPS-INDUCED FEVER AND ANOREXIA
C. L. Sherry, S. S. Kim, R. N. Dilger, B. M. Chung, L. L. Bauer, R. I. Tapping, G. C. Fahey, Jr., K. A. Tappenden and G. G. Freund
- 31 TIMING OF PRENATAL INFLUENZA INFECTION MATTERS: BRAIN DEVELOPMENT AFTER MID- AND LATE-GESTATION VIRUS EXPOSURE IN RHESUS MONKEYS
S. J. Short, C. L. Coe, G. R. Lubach, M. Styner and J. H. Gilmore
- 32 AGE AFFECTS SENSITIVITY TO LPS-INDUCED SICKNESS BEHAVIOR IN A SPECIES-TYPICAL BEHAVIOR
A. J. Tarr, K. A. McLinden, D. Kranjac and G. W. Boehm
- 33 ■ SELECTIVE PRESENCE OF PROINFLAMMATORY MEDIATORS IN THE HIPPOCAMPUS OF HIV-1 TRANSGENIC RATS.
A. F. Wagner, L. J. Jannach, R. L. Bigler and D. T. Lysle
- 34 EPIGENETIC TRANSMISSION OF ANXIETY-LIKE BEHAVIOUR TO SECOND GENERATION OFFSPRING FOLLOWING NEONATAL LPS EXPOSURE
A. K. Walker, G. Hawkins, M. Hunter and D. M. Hodgson
- 35 EXPOSURE TO LIPOPOLYSACCHARIDE DURING EARLY LIFE IMPAIRS SEXUAL DEVELOPMENT AND BEHAVIOUR IN THE WISTAR RAT.
A. K. Walker, S. A. Hiles and D. M. Hodgson
- 36 THE MECHANISMS BY WHICH PERIPHERALLY ADMINISTERED ENDOTOXIN (LPS) ALTERS BEHAVIORAL, NEUROCHEMICAL, AND ENDOCRINE RESPONSES IN RATS.
M. Wiczorek and A. J. Dunn
- 37 ASSOCIATIONS OF SYSTEMIC *INTERLEUKIN-6* ON AGE-INDUCED NEURAL ATROPHY AND ITS MITIGATION BY CALORIC RESTRICTION IN RHESUS MONKEYS
A. A. Willette, B. B. Bendlin, D. G. McLaren, E. Canu, E. K. Kastman, G. Xu, C. L. Coe and S. C. Johnson
- 38 ■ DECREASED MICROGLIAL FRACTALKINE RECEPTOR (CX3CR1) EXPRESSION IS ASSOCIATED WITH MICROGLIAL ACTIVATION
A. M. Wynne, Y. Huang, C. J. Henry, A. Cleland and J. P. Godbout
- 39 ACUTE HYPOXIA CAUSES ANHEDONIA AND WEIGHT LOSS IN MICE, WHICH IS ABSENT AFTER A SECOND HYPOXIC EXPOSURE.
J. M. York, A. W. McDaniel, V. A. Peters, D. N. Lavin and G. G. Freund
- 40 ■ AGGRAVATED ANXIETY-LIKE BEHAVIOR BY IFN-ALPHA (IFN-A) IN LUPUS-PRONE MICE ACCOMPANIED WITH ENHANCED CEREBRAL EXPRESSION OF IFN-STIMULATED GENES
H. Zhang and J. Wang
- 41 ■ CATECHOLAMINE REGULATION OF INFLAMMATORY CYTOKINES IN MICROGLIA
Z. R. Zimomra, J. D. Johnson, M. Chema and T. Darlington
- 42 STRESS-INDUCED INCREASES IN BACTERIAL KILLING ARE P38 DEPENDENT
R. Allen, D. A. Padgett, J. F. Sheridan and M. T. Bailey

- 43 EFFECTS OF PROTON RADIATION ON IMMUNE AND SNS RESPONSE
F. Baqai, D. S. Gridley, E. Bayeta, M. Andres, A. Y. Makinde, X. Luo-Owen, S. S. Rightnar and M. J. Pecaut
- 44 ■ UBS109, A NOVEL CURCUMIN ANALOG, IS A POTENT INHIBITOR OF NUCLEAR FACTOR-KAPPA B ACTIVITY IN MOUSE RAW264.7 MACROPHAGES
A. Olivera, F. Hu, A. H. Miller and T. W. Pace
- 45 CHARACTERIZATION OF TOXIN-INDUCED GLUCOCORTICOID-RESISTANCE IN AN ANIMAL MODEL
A. S. Tait, M. N. Silverman, K. M. Candando, E. R. Ball, E. Belyavskaya and E. M. Sternberg
- 46 SALIVARY CORTISOL RESPONSES TO MENTAL STRESS ARE ASSOCIATED WITH CORONARY ARTERY CALCIFICATION
M. Hamer, K. O'Donnell and A. Steptoe
- 47 SLEEP DISTURBANCES IN EARLY GESTATION ARE ASSOCIATED WITH ELEVATED CONCENTRATIONS OF CYTOKINES ACROSS PREGNANCY
M. Okun, J. Catov, J. M. Roberts and T. D. Patrick
- 48 INTERACTION WITH FELLOW STUDENTS PREDICTS BETTER MUCOSAL IMMUNITY DURING FINAL EXAMS IN THE FIRST YEAR OF UNIVERSITY
A. J. Wawrzyniak and M. C. Whiteman
- 49 NORADRENALINE AND THE BETA2-ADRENOCEPTOR AGONIST SALBUTAMOL SUPPRESS INNATE, BUT NOT T-CELL-DERIVED, IFN-GAMMA PRODUCTION FROM MOUSE SPLEEN CELLS
N. M. Curtin, K. H. Mills and T. J. Connor
- 50 LIPOPOLYSACCHARIDE-INDUCED EXPRESSION OF INDOLEAMINE 2,3-DIOXYGENASE IN MURINE ORGANOTYPIC HIPPOCAMPAL SLICE CULTURES IS BLOCKED BY AN INHIBITOR OF P38 MITOGEN-ACTIVATED PROTEIN KINASE
X. Fu, R. Dantzer and K. W. Kelley
- 51 METHAMPHETAMINE ADMINISTRATION CAUSES INCREASED NEUROINFLAMMATION ACCOMPANIED BY PERIPHERAL IMMUNOSUPPRESSION IN MICE
J. M. Loftis, M. S. Huckans and A. Williams
- 52 STRAIN DIFFERENCES IN RESTRAINT STRESS INDUCED BRAIN IL-1, IL-6, COX2
V. M. Porterfield, Z. R. Zimomra and J. D. Johnson
- 53 BETA-ADRENERGIC RECEPTOR (BETA-AR) SIGNALING DIFFERS BETWEEN THE HUMAN BREAST CANCER CELL LINE MB-231 AND ITS BRAIN-METASTASIZING VARIANT MB-231BR
K. S. Madden, M. J. Szpunar and E. B. Brown
- 54 ■ HETEROGENEITY OF β -ADRENERGIC RECEPTOR (β -AR) SIGNAL TRANSDUCTION AND VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) PRODUCTION BY BREAST CANCER CELL LINES
M. J. Szpunar, K. S. Madden and E. B. Brown
- 55 THE INFLUENCE OF ACCELERATED BIOLOGIC AGING, CHRONIC STRESS, AND INFLAMMATORY RESPONSE ON OUTCOMES FOLLOWING TRAUMA
E. G. NeSmith, J. D. Catravas, A. L. Marsland, S. A. Alexander, M. L. Hawkins and R. S. Medeiros
- 56 PERSONALITY AND PLACEBO RESPONSES
K. Kelly, B. Baker and E. Kauffman

Poster Session 2

Saturday, June 6, 5:00 – 7:00 p.m.

In Order by Poster Number

■ Denotes Participation in Data Blitz Session 2

- 1 MOLECULAR MECHANISMS OF SRC ACTIVATION IN CHRONIC STRESS-INDUCED CANCER GROWTH
G. N. Armaiz-Pena, G. J. Villares, L. Y. Han, Y. G. Lin, A. M. Sanguino, M. T. Deavers, G. E. Gallick, M. Bar-Eli, G. Lopez-Berestein, S. W. Cole, S. K. Lutgendorf and A. K. Sood
- 2 DO CYTOKINES TGF-ALPHA AND NEUREGULIN-1 SUPPRESS CIRCADIAN CLOCK OUTPUT? A MODEL FOR CANCER-RELATED FATIGUE
M. Harrington, M. Olsen, L. Casiraghi and D. Guild
- 3 ■ EFFECTS OF BIOFIELD VS. MOCK HEALING ON FATIGUE, DEPRESSION, CYTOKINES, AND CORTISOL VARIABILITY IN BREAST CANCER SURVIVORS
S. Jain, D. Pavlik, J. Distefan and P. J. Mills
- 4 STRESS, IMMUNITY AND CANCER: EPIGENETIC MECHANISMS
L. W. Janusek and H. L. Mathews
- 5 COGNITIVE BEHAVIORAL STRESS MANAGEMENT AMONG WOMEN AT ELEVATED RISK FOR BREAST CANCER.
B. A. McGregor, R. M. Ceballos, E. D. Dolan, S. T. Medic and D. V. Albano
- 6 IL-10 GENETIC VARIANTS AND HEPATITIS C PATIENTS' SYMPTOMS OF DEPRESSION AND FATIGUE BEFORE AND DURING INTERFERON-ALPHA TREATMENT
S. J. Bull, P. Heuzo-Diaz, E. B. Binder, J. Cubells, G. Ranjith, C. Maddock, M. Hotopf, S. Norris, E. Cassidy, K. Aitchison, A. Cleare, A. Miller and C. M. Pariante
- 7 ■ COULD COX-2 INHIBITORS AND BETA-BLOCKERS IMPROVE POSTOPERATIVE SURVIVAL RATES IN CANCER PATIENTS?
L. Sorski, A. Glasner, E. Rosenne, M. Benish, B. Levi, A. Hoffman and S. Ben-Eliyahu
- 8 EFFECTS OF MASSAGE ON AML TREATMENT-RELATED SYMPTOMS AND HEALTH-RELATED QOL
A. G. Taylor, A. E. Snyder and C. M. Bourguignon
- 9 SERUM STNF-R1 AND IL-6 ARE ASSOCIATED WITH SEVERITY OF SYMPTOM BURDEN CAUSED BY CONCURRENT CHEMORADIATION THERAPY FOR PATIENTS WITH LUNG AND GASTROINTESTINAL CANCERS
X. Wang, V. Johnson, L. A. Williams, L. Mao, Z. Liao, P. Liu and C. Cleeland
- 10 ACUTE AND LONG TERM ADAPTATION OF THYROTROPIN (TSH) AND PROLACTIN TO RESTRICTED SLEEP AND RECOVERY
J. Axelsson, K. Brismar, T. Akerstedt and M. Lekander
- 11 ADAPTATION OF A TRADITIONAL BEHAVIORAL ASSAY OF LEARNING AND MEMORY TO NEONATAL PIGLETS
R. N. Dilger and R. W. Johnson
- 12 MODULATION OF HPA-AXIS RESPONSIVENESS BY LABORATORY STRESS OR SHIPMENT OF MICE ALTERS EXPERIMENTAL DATA
S. Drude, J. Olfe, A. Geissler, G. Domanska, C. Schuett and C. Kiank
- 13 ■ DIFFERENTIAL EPIGENETIC EFFECTS OF SHORT AND LONG TERM GLUCOCORTICOID TREATMENT ON NATURAL KILLER CELL EFFECTOR GENES
J. L. Eddy, K. N. Krukowski, T. L. Konley, K. Loster, L. Witek-Janusek and H. L. Mathews

- 14 MULTIPLE STRESS-RELATED MECHANISMS MEDIATE *IN VIVO* SUPPRESSION OF IL-12 SERUM LEVELS IN RATS
L. Sominsky, S. Shemer, M. Benish and S. Ben-Eliyahu
- 15 CHRONIC CIRCADIAN DESYNCHRONIZATION AND CHRONIC PARTIAL SLEEP DEPRIVATION EXACERBATES THE INFLAMMATION AND DELAYS RECOVERY IN A MOUSE MODEL OF COLITIS.
F. W. Turek, F. Preuss, A. Keshavarzian and Y. Tang
- 16 CHRONIC SOCIAL DISRUPTION STRESS FACILITATES ZYMOSAN-INDUCED MECHANICAL ALLODYNIA
E. G. Vichaya, E. E. Young and M. W. Meagher
- 17 OBESITY AND INFLAMMATION: EFFECTS OF SHORT-TERM FASTING ON IL-6 AND RELATIONSHIP TO DIURNAL CORTISOL
S. Brannon, W. Gozansky, W. Donahoo, E. Melanson, C. Cage and M. Coussons-Read
- 18 ■ MATRIX METALLOPROTEINASE (MMP) RESPONSE TO EXERCISE AND TRAINING IN HYPERTENSION
K. M. Edwards, B. Sheu, B. G. Woods, S. Hong, A. H. Penn, G. W. Schmid-Schonbein and P. J. Mills
- 19 NEUTROPHIL MEMBRANE BLEB AND PSEUDOPOD FORMATION IN HYPERTENSION
K. M. Edwards, B. Sheu, S. Hong, A. H. Penn, G. W. Schmid-Schonbein and P. J. Mills
- 20 THE EFFECT OF A HIGH FAT DIET ON BURROWING BEHAVIOR IN MICE OVER A 12 WEEK PERIOD.
M. M. Kaczmarczyk, D. Lavin, M. Miller and G. Freund
- 21 ■ LIPOPOLYSACCHARIDE INDUCES MARKERS OF INFLAMMATION IN PERIVASCULAR FAT IN MALE FISCHER 344 RATS: EVIDENCE FOR THE “OUTSIDE-IN” VASCULAR INFLAMMATORY HYPOTHESIS
K. D. Marshall, P. Strong, T. Maslanik and M. Fleshner
- 22 EFFECTS OF VOLUNTARY EXERCISE ON ACUTE STRESS RESPONSES IN WHITE ADIPOSE TISSUE
K. J. Speaker, B. N. Greenwood and M. Fleshner
- 23 ■ ANTIDEPRESSANTS, BUT NOT ANTIPSYCHOTICS, INHIBITS GLUCOCORTICOID RECEPTOR FUNCTION IN VITRO - INVOLVEMENT OF P38 MAPK
L. Carvalho, B. Garner and C. M. Pariante
- 24 PREGNANCY-SPECIFIC STRESS AND SUPPORT AFFECT INFLAMMATORY CYTOKINES AND BIRTH OUTCOME IN LATINAS
M. Coussons-Read, M. Lobel, M. Kreither, S. Hale, C. Brandt and C. Cage
- 25 ■ MARITAL QUALITY AND PLASMA LEVELS OF OXYTOCIN AND VASOPRESSIN
J. Gouin, S. Carter, H. P. Nazarloo, R. Glaser, W. Malarkey, T. Loving, J. Stowell and J. Kiecolt-Glaser
- 26 ■ HIGHER ACCULTURATION AND LOWER PREGNANCY-SPECIFIC STRESS IS CORRELATED WITH LOWER INCIDENCE OF PREGNANCY COMPLICATIONS IN LATINAS
M. Kreither, C. Cage, S. Cole, C. Brandt, M. Lobel and M. E. Coussons-Read
- 27 THE $\alpha 7$ NICOTINIC ACETYLCHOLINE RECEPTOR AND STRESS RESPONSE: MATERNAL GENOTYPE DETERMINES OFFSPRING PHENOTYPE.
M. L. Sinkus, M. Z. Wamboldt, A. Barton, T. E. Fingerlin, M. L. Laudenslager and S. Leonard
- 28 CORTISOL AND EPINEPHRINE CONTROL OPPOSING DIURNAL RHYTHMS IN T-CELL SUBSETS
S. Dimitrov, J. Born and T. Lange
- 29 OLDER INDIVIDUALS EXHIBIT ALTERED GENE EXPRESSION IN WOUNDED MUCOSA: A MECHANISM FOR AGE-IMPAIRED HEALING?
C. G. Engeland, H. Diab and P. T. Maruch
- 30 DETERMINANTS OF INFLAMMATION IN A NATIONAL SAMPLE: THE MIDUS STUDY
E. Friedman

- 31 THE ASSOCIATION BETWEEN DISTRESS AND SALIVARY CORTISOL IN CAREGIVERS OF HOSPICE PATIENTS
K. Kilbourn, J. Kutner, K. DeRoche, D. Anderson, A. Costenaro, S. Madore and M. Laudenslager
- 32 PREGNANCY-RELATED STRESS INFLUENCES MATERNAL CORTICOTROPIN-RELEASING FACTOR AND ESTRIOL CONCENTRATIONS AFFECTING BIRTH OUTCOME
C. R. Cage, M. Kreither, M. Coussons-Read, S. Cole, C. Brandt and M. Lobel
- 33 DECREASES IN SOLUBLE CD40 LIGAND ARE ASSOCIATED WITH IMPROVEMENTS IN SEVERITY OF INSOMNIA IN HIV INFECTED PATIENTS: A PILOT STUDY
E. C. Suarez, H. Goforth, T. Omunawa and A. Krystal
- 34 COMBAT STRESS INJURIES: TOWARD A PSYCHONEUROIMMUNOLOGICAL MODEL FOR RESEARCH, TREATMENT, AND PREVENTION
C. R. Figley, N. Hall and W. P. Nash, MD
- 35 SALIVARY BIOMARKERS IN LAW ENFORCEMENT OFFICERS ENGAGED IN STRESSFUL VIRTUAL SIMULATED TRAINING SCENARIOS
M. Groer, R. Murphy, K. Salomon, D. Diamond, J. Van Eepoel, C. Bykowski and K. White
- 36 PREDICTING CRP LEVELS IN YOUNG- AND MIDDLE-AGED WOMEN EXPERIENCING INTIMATE PARTNER VIOLENCE
S. J. Woods, R. J. Hall, K. E. Foster and G. G. Page
- 37 ACUTE PAIN AND SKIN BARRIER WOUND RECOVERY: THE ROLE OF DEPRESSED MOOD AND ANXIETY
J. E. Graham, S. Song, R. Glaser, W. B. Malarkey and J. K. Kiecolt-Glaser
- 38 THE ROLE OF INFLAMMATION IN OBSESSIVE-COMPULSIVE DISORDER: CAN SWEAT TELL US SOMETHING ABOUT IT?
A. H. Marques, R. K. Muniz, T. M. Phillips, I. C. Pimentel, M. A. Joaquim, C. Cappi, V. Fossaluzza, J. Diniz, C. Belotto, M. Hoexter, C. C. D'Alcanta, A. M. Mathis, S. Borcato, I. Moraes, Q. Cordeiro, H. G. Ana, S. G. Roseli, S. N. Marni, M. C. Euripedes and E. M. Sternberg
- 39 CHRONIC PSYCHOLOGICAL STRESS IN MICE: INTERFERENCE OF IMPULSIVE OVERREACTION WITH DEPRESSION-LIKE BEHAVIORAL ALTERATIONS
D. Muschter, G. Domanska, W. Otten, C. Schuett and C. Kiank
- 40 DYSREGULATED SECRETION OF SRAGE IN SCHIZOPHRENIC PATIENTS
G. Ponath, C. Hohoff, C. Freitag, F. Kästner, P. Krakowitzky, K. Domschke, K. Kölkebeck, P. Ohrmann, T. Suslow, C. von Eiff, F. Kipp, J. Deckert, J. Steiner and M. Rothermundt
- 41 ANXIETY AND DEPRESSION IN ADOLESCENTS WITH ATOPIC DERMATITIS
M. J. Slattery, S. Hetzel and M. J. Essex
- 42 None
- 43 GLOBAL ACETYLATION PATTERNS AND IMMUNE DYSREGULATION ASSOCIATED WITH PSYCHOLOGICAL STRESS
K. Krukowski, J. Eddy, T. Konley, K. Loster, L. Witek-Janusek and H. Mathews
- 44 LONG-DURATION REVERSAL OF NEUROPATHIC PAIN VIA SUSTAINED RELEASE OF SPINAL INTERLEUKIN-10 IS MEDIATED BY ADENOSINE 2A RECEPTOR ACTIVATION
L. C. Loram, E. M. Sloane, J. A. Harrison, P. W. Sholar, F. R. Taylor, M. R. Hutchinson, S. F. Maier, J. Rieger and L. R. Watkins

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(as of June 2, 2009)

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