



PNIRS

PsychoNeuroImmunology
Research Society



2024 Annual Meeting June 24–27 Halifax, NS Canada

Diversity in PNI Research

#PNIRS2024



PNIRS 2024 Annual Meeting

— Diversity in PNI Research —

June 24 - 27 | Halifax, Nova Scotia Canada

Halifax Convention Centre

www.PNIRS.org

Message from the President

On behalf of the PNIRS leadership, it is my sincere pleasure to welcome you to the 31st meeting of the **Psychoneuroimmunology Research Society** in Halifax, Nova Scotia!

The Scientific Affairs Committee has designed an outstanding scientific program to fit this year's conference theme: **Diversity in PNI Research**. This theme is two-pronged. It refers to both the need to encapsulate the diversity of the human population and health in our study designs and statistical analyses, and the diversity that occurs within PNI researchers themselves (gender identity, ethnic/racial, cultural, etc.). Let us better understand the first, and recognize and celebrate the second!



The opening **3-hour Educational Short Course** is directly in line with the conference theme. The aim for the Educational Short Course this year is to highlight four excellent young PIs in PNI-related fields. Aside from a discussion of interdisciplinary ideas and diverse approaches in PNI research, the session will foster dynamic interactions and a discussion of various career paths with both trainees and PIs. The session will culminate in roundtable discussions led by members of the PNIRS Training Committee – these discussions will focus on cultural differences in science and scientific communication, and will aim to highlight opportunities, perspectives, and pitfalls in international research careers (e.g., US, Canada, France, Japan, Sweden).

The **Presidential Symposium** also aligns directly with the theme of this meeting. It features three outstanding speakers (**Julian Thayer, Jason Flatt, Alyssa Gamaldo**) with talks focused on psychophysiological consequences of unfair treatment, LGBTQIA+ and psychoneurological health disparities, and racial/ethnic cognitive health disparities in PNI research. After the talks, a broader discussion of how best to incorporate and encapsulate **Diversity in PNI Research** will ensue.

Our award talks include **Julienne Bower** who will give the 2024 Norman Cousins Memorial Lecture “PNI Meets Cancer Survivorship: The Story of Cancer-related Fatigue”; **Luba Sominsky** who will deliver the Robert Ader Lecture “The Psychoneuroimmunology of Female Health – A Story of Vulnerability and Resilience”; and **Michael Meaney** who will present our keynote Ronald Glaser Frontiers in Psychoneuroimmunology Lecture entitled “Translational Transcriptomics: Sequencing the Truth from Model System and Human Cohort Studies of Mood Disorders”. Closing the meeting, **Jennifer Felger** will give the George Solomon Memorial Lecture “Harnessing Inflammation’s Effects on Dopaminergic Reward Pathways for Novel Therapeutic Strategies in Depression”.

This year for the first time, all oral sessions and symposia will be presented in concurrent sessions. As a result, this meeting will showcase >60 talks, plus another 20 two-minute talks to be presented by trainees during the poster blitz session, and >80 posters. It is my hope that these additional opportunities to present at the podium, combined with having more options of talks to attend, will enrich the scientific experience of this meeting for everyone.

We will have **six exciting oral sessions** focused on: stress and inflammation; dementia, aging, and schizophrenia; early life adversity; cancer and endotoxemia; mental health; and sleep and adolescence. In addition, **six member-sponsored symposia** will focus on topics of: dietary diversity and age; microglial regulation of neural development; promoting mental health in China; neurotrophic capacity of glia; early immune predictors for neurodevelopment; and metabolism, neuroinflammation, and Alzheimer’s Disease.

There are many individuals to thank. I am deeply grateful for all of the hard work and dedication put in by the various PNIRS committee chairs and members – thank you for volunteering your time in this manner and working so diligently for the Society. This meeting would not be possible with the tireless work of our management team – thank you **Jess, Meg, and Amanda**! Special thanks to outgoing Past President **Jeff Woods**, under whose guidance the Society’s first ever 5-year Strategic Plan was formulated. Additional thanks are extended to outgoing Board of Directors members **Ruth Barrientos, Jennifer Felger, and Sophie Laye**. Very special thanks also go out to **Elsevier, Inc., Susan Solomon, Michael Irwin, and Keith Kelley** for their generous financial support of our meeting.

It is my great pleasure to welcome in our newly elected officers including incoming President-Elect **Ruth Barrientos** and our new Board Members **Valeria Mondelli, Sarah Spencer** and **Julie Lasselin** who will assume their positions at the close of this meeting.

Please be sure to fill out the survey after the meeting, so that our future conferences may continue to grow and serve your professional needs as best as possible.

It is my extreme honor to welcome you to Halifax. I look forward to seeing you at the meeting!

A handwritten signature in black ink, appearing to read "Chris Engeland". The signature is fluid and cursive, with a large, stylized initial "C".

Christopher Engeland

PNIRS President & Chair, Scientific Affairs Committee

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Meeting Location

[Halifax Convention Centre](#), 1650 Argyle St, Halifax, NS B3J 0E6, Canada | Phone: +1 902-421-1302

Located in the geographic and cultural heart of downtown Halifax, the Halifax Convention Centre is surrounded by multiple hotels, walking distance to countless restaurants, and near theatre, live music, pubs, and shops. Right where you want to be! [Click here](#) for a virtual tour.

While exploring Halifax, take advantage of the “[Show Your Badge](#)” program, the Halifax conference delegate appreciation program. Simply show your badge at participating local businesses, and earn special offers. From local food tours to souvenirs, to local experiences, you’ll save on the best the city has to offer!

Sponsor

We gratefully appreciate the support of **Elsevier, Inc.** for sponsoring the *Brain, Behavior, and Immunity* Editorial Board luncheon, sponsoring the first **Scholarship for Researchers from Underrepresented Countries** and supporting the activities of PNIRS.



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About PNIRS

MISSION

To advance immune-brain research through interdisciplinary collaboration, diverse community support, and scientific dissemination to improve human health and behavior.

VISION

To be a global leader in advancing the understanding of immune-brain interactions to improve human health and behavior. We strive to foster a collaborative, inclusive, and innovative community of basic and clinical researchers, where the latest scientific findings are disseminated to train and educate the next generation of experts in the field.

Executive Committee

Christopher Engeland, PhD, President
The Pennsylvania State University

Michael Bailey, PhD, Secretary-Treasurer
The Ohio State University

Jeff Woods, PhD, Past-President
University of Illinois

Jess Widing
Executive Director

Lucile Capuron, PhD, President-Elect
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Meg Gorham
Associate Executive Director

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*National Research Institute for Agriculture,
Food and the Environment*

Jennifer Felger, PhD, MSc
Emory University

Leah Pyter, PhD
The Ohio State University

Ebrahim Haroon, MD
Emory University

Carmine Pariante, MD, PhD, FRCPsych
Ex-Officio Member
Editor-in-Chief, *Brain, Behavior, and
Immunity*
King's College London

Mark Hutchinson, PhD, MSc
University of Adelaide

Amanda Kentner, PhD
*Massachusetts College of Pharmacy
and Health Sciences*

PNIRS Central Office

6728 Old McLean Village Drive | McLean VA 22101 USA

pnirs@pnirs.org | www.pnirs.org

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PNIRS Committees

Communications Committee

Caroline Smith, Chair
 Jessica Bolton
 Evan Bordt
 Haixia Zheng
 Iris Ka-Yi Chat, Trainee Member
 Danielle Santana Coelho, Trainee Member
 Estherina Trachtenberg, Trainee Member

Constitution and Bylaws Committee

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 Christopher Engeland, President
 Lucile Capuron, President-Elect

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 Bart Ford
 Lois Harden
 Deborah Hodgson
 Mark Hutchinson
 Roger McIntosh
 Melissa Rosenkranz
 Luba Sominsky
 Sarah Spencer
 Cate Givens, Trainee Member

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 Ebrahim Haroon
 Keely Muscatell
 Leah Pyter
 Jonathan Savitz
 Catherine Walsh, Trainee Member

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 Carmine Pariente
 Melissa Rosenkranz
 Jonathan Savitz
 Sarah Spencer
 Eric Wohleb

Scientific Affairs Committee

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 Amanda Kentner, Board Member
 Laura K. Fonken
 Rod Johnson
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 Valeria Mondelli
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 Jean-Christophe Delpech
 Bart Ford
 Lina Hansson, Trainee Member
 Liat Sorski, Trainee Member

General Meeting Information

Registration Desk

The registration desk is located in **Level 5 Foyer** of the Halifax Convention Centre. Please check in to receive your name badge which is required at all times in order to access sessions and events. The registration desk will be open during the following hours:

Monday, June 24	8:00 pm – 5:30 pm	Wednesday, June 26	8:00 am – 2:30 pm
Tuesday, June 25	8:00 am – 5:00 pm	Thursday, June 27	8:00 am – 5:00 pm

Meeting Code of Conduct

The PNIRS Annual Meeting aims to provide a forum for the exchange of ideas in a collaborative and collegial environment. All delegates, speakers, sponsors and volunteers at the Conference are required to abide by the following Code of Conduct.

- All individuals have the right to expect they will be treated with respect regardless of gender, sexual orientation, disability, physical appearance, body size, race, nationality, or religion.
- PNIRS will not tolerate harassment of participants in any form. Harassment and sexist, racist, or exclusionary comments or jokes are not appropriate. Harassment includes sustained disruption of talks or other events, inappropriate physical contact, sexual attention or innuendo, deliberate intimidation, stalking, and photography or recording of an individual without consent. It also includes offensive comments related to gender, sexual orientation, disability, physical appearance, body size, race, or religion.
- All communication should be appropriate for a professional audience including people of many different backgrounds. Sexual language and imagery is not appropriate.
- Alcoholic beverages may be provided at some PNIRS events. Should excessive alcohol consumption result in behaviour that is not respectful, PNIRS reserves the right to ask the attendee to leave the PNIRS sponsored event.
- PNIRS aims to ensure that conferences are characterised by a collegial, collaborative, supportive environment. At all times, commentary and critique should be of a constructive and respectful nature.
- Any participant who wishes to report a violation of this policy is asked to speak, in confidence, to any of the local organizing committee (LOC) members or management team member.
- We value your attendance. That is why we expect all participants to follow these rules at all conference venues or related social events.

PNIRS Commitment to Equity and Diversity

The primary mission of PNIRS is to foster advancements in the field of psychoneuroimmunology by providing a forum for communication, education, training, and collaboration among a diverse community of scientists from around the globe. We recognize that this goal is impossible without a strong commitment to equity, diversity, and inclusion (EDI). EDI is vital to the success of psychoneuroimmunology and of the PNIRS. Our society has contributed to decades of scientific advancement, and a great deal of this research has been aimed at understanding the biological underpinnings of health disparities in under-represented and minority populations. Furthermore, psychoneuroimmunology is an immensely complex field that cannot be understood from only one viewpoint. The impact of our efforts increases exponentially by the inclusion of a diverse array of backgrounds, experiences, and perspectives. Therefore, we continue to take deliberate action towards a more equitable, diverse, and inclusive field.

Session Chairs

Sessions Chairs should be in the designated room at least 15 minutes before the session starts in order to assist the speakers. Every effort will be made to keep the session on schedule.

General Meeting Information, cont.

Symposium and Oral Session Speakers

Speakers should be in the designated room at least 15 minutes before the session starts. Please introduce yourself to the Chair of your session and strictly adhere to your allocated time. All slide presentations should be uploaded at least 15 minutes prior to the session start time.

Poster Blitz

A Poster Blitz will feature Trainee poster presenters in a series of very brief talks, each covering just a bite-sized bit of research on Tuesday, June 25, 3:30 – 4:30 pm. It will offer a fast-paced overview of some of the most exciting research presented at this year's poster sessions on Wednesday and Thursday.

Poster Presenters

The Poster Sessions will be held in the **Ballroom B3**. Push pins for mounting the posters will be provided. Poster size is limited to 95 inches wide x 34 inches tall. Look for your poster number in this Program Book on pages 32 – 41. Please remove your poster promptly following your poster session, remaining posters will be discarded.

Poster Session 1: Wednesday, June 26, 1:00 – 2:30 pm

You may begin to hang your posters at 8:00 am on Wednesday, June 26. Please remove your posters at the conclusion of the poster session.

Poster Session 2: Thursday, June 27, 1:30 – 3:00 pm

You may begin to hang your posters at 8:00 am on Thursday, June 27. Please remove your posters at the conclusion of the poster session.

Welcome Reception

The Welcome Reception is on Monday, June 24 from 6:00 – 8:00 pm at [Halifax Citadel National Historic Site](#), 5425 Sackville St, Halifax, a 10-minute walk from the Convention Centre and a perfect way to connect with colleagues, speakers and friends, old and new (*attendees are responsible for their own transportation*).

Trainee Social

The Trainee Social is on Tuesday, June 25 from 7:00 – 9:00 pm at [Alexander Keith's Nova Scotia Brewery](#), 1496 Lower Water St #312, Halifax, a 10-minute walk from the Convention Centre (*attendees are responsible for their own transportation*). All trainees are encouraged to attend. Conference name badge will be required for participation and drink tickets will be provided at the venue.

Harbor Cruise

Embark on a maritime adventure on Wednesday, June 26 with our Halifax Harbor Cruise, and capture the vibrant spirit and rich history of Nova Scotia's capital. You will experience a perfect blend of scenic beauty, historical insights, and coastal charm. Drinks will be available for purchase, please feel free to bring your own snacks. *Please meet by 3:00 pm at Cable Wharf, 1751 Lower Water Street, which is a 10 minute walk from the Halifax Convention Centre. The cruise sets sails at 3:15 pm sharp, and returns to the pier by 5:15 pm. All registered attendees are welcome to attend!*

Early Career Researcher Social

Back by popular demand, PNIRS will host a relaxed social networking opportunity for early career researchers on Wednesday, June 26 at 6:00pm at [The Old Triangle Irish Alehouse](#), 5136 Prince Street, a 5-minute walk from the Convention Centre! Attendees will be responsible for the purchase of any food and drinks.

General Meeting Information, cont.

Guests

Guests accompanying registrants are welcome to attend the Opening Reception, Harbour Cruise and Banquet as long as they have purchased a guest ticket in advance, please see the PNIRS registration desk if you would like to purchase a ticket on-site.

Nursing Mothers Room

PNIRS has arranged for dedicated space designed to provide comfort and privacy for nursing mothers attending the Annual Meeting. The room will be available from 8:00 am - 5:00 pm each meeting day in **Room 504**.

Phones and Wi-Fi

As a courtesy to presenters, speakers, and attendees, please switch cell phones to silent mode during events. Please leave the session if you must answer a call. WiFi will be available on the network labeled **Halifax Convention Centre** and the password is **pnirs24**.

Lost and Found

If you find articles left behind by other conference attendees, please bring items to the PNIRS registration desk for safe-keeping.

Certificates of Attendance and Participation

Please e-mail pnirs@pnirs.org to request a certificate. It will be e-mailed to you after the meeting.

Photo Release

By registering for the PNIRS Annual Meeting, attendees consent to be photographed during the course of the event, with the understanding that these images will be used in PNIRS documents and publications only. If anyone prefers to not have their photo used by PNIRS, please contact pnirs@pnirs.org.

Live-Streaming/Recording Prohibited

The use of live-streaming devices and other recording devices during the PNIRS Meeting is prohibited.

Exploring Halifax!

We hope you have time to explore the beauty of Halifax, Nova Scotia. Please [click here](#) to make the most of your visit before, during and after the meeting.

Be sure to take advantage of the Halifax "Show Your Badge" conference delegate appreciation program. Simply show your badge at participating local businesses, and earn special offers. From local food tours to souvenirs, to local experiences, you'll save on the best the city has to offer!

Award Lectures

The 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 the highlight of the Annual Meeting.

2024 Norman Cousins Award Lecture

PNI Meets Cancer Survivorship: The Story of Cancer-Related Fatigue

Julienne E. Bower, PhD

University of California, Los Angeles
Los Angeles, CA USA

The Robert Ader New Investigator Award



In honor of Dr. Robert Ader, a pioneer in the field of psychoneuroimmunology, the 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.

2024 Robert Ader New Investigator Award Lecture

The Psychoneuroimmunology of Female Health - A Story of Vulnerability and Resilience

Luba Sominsky, PhD

Deakin University
Geelong, Australia

Award Lectures

The Ronald Glaser Frontiers in PNI Lecture



The **Ronald Glaser Frontiers in Psychoneuroimmunology Lecture**, formerly the **Frontiers in Psychoneuroimmunology Lecture**, is supported in part by generous donations to the Ronald Glaser Fund. The Ronald Glaser Fund was established in 2017 to honor Ron for all his contributions to the field of psychoneuroimmunology. As a pioneer in our field, Ron made contributions that have advanced psychoneuroimmunology in many ways. His efforts provided exemplary support for colleagues, trainees and patients around the world with stress-associated illnesses. The “Frontiers” lecture will serve as recognition of Ron’s influence across a broad spectrum of biology and medicine and honor those contributions. To make a donation, please [click here](#).

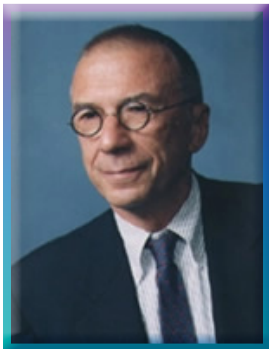
2024 Ronald Glaser Frontiers in Psychoneuroimmunology Lecture

Translational Transcriptomics: Sequing the Truth from Model System and Human Cohort Studies of Mood Disorders

Michael J. Meaney, PhD

McGill University
Montréal, QC Canada

The George Solomon Memorial Lecture



The **George Solomon Memorial Lecture** was established in 2014 and is named for a most prominent figure in the history of PNI. George Solomon was truly a visionary; very early in his career, he came to believe that certain diseases, such as autoimmune diseases, were modified by psychological factors. His formal investigations into the connections between the mind and body, as well as their implications for health and disease date back to his first published reports in the early 1960’s. Throughout his illustrious career, Dr. Solomon was a strong leader of our field, an outspoken advocate for our science, and a warm and generous collaborator, mentor and friend. This lecture has been endowed by his wife, Susan Keran Solomon, to honor the history of PNI and the Society, and to provide an annual forum for discussion of the important interconnections between

psychological and physical processes for health and illness.

2024 George Solomon Memorial Lecture

Harnessing Inflammation’s Effect on Dopaminergic Reward Pathways for Novel Therapeutic Strategies in Depression

Jennifer Felger, PhD

Emory University
Atlanta, GA USA

Awards

The BBI Impact Award



Professor Keith W. Kelley, spouse Sara and daughter Megan established the **Brain, Behavior, and Immunity Impact Award**. The goal is to promote submission and publication of high-quality, cutting-edge research in *Brain, Behavior, and Immunity* and to increase visibility and participation in the Psychoneuroimmunology Research Society. The winner is the corresponding author of the paper with the most citations from those articles published three and four years prior to the award. The Kelley Family provides an annual gift for PNIRS to present to the winner of the Brain, Behavior, and Immunity Impact Award at the PNIRS Annual Meeting.

2024 BBI Impact Award

Predictors of COVID-19 Vaccine Hesitancy in the UK Household Longitudinal Study

Vittal Katikireddi, MBChB, PhD

University of Glasgow
Glasgow, Scotland

PNIRS Scholarship for Researchers from Underrepresented Countries



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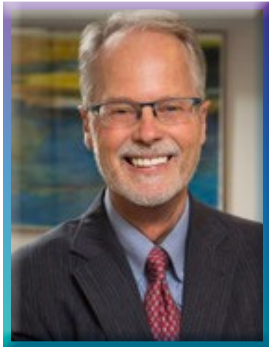
The PNIRS Equity, Diversity and Inclusion (EDI) Committee announces the **Scholarship for Researchers from Underrepresented Countries**. Through financial support provided by Elsevier, funds will be provide to support the attendance of participant(s) from underrepresented countries at the 2024 PNIRS Annual Meeting. Registrants who submitted an abstract and reside in an underrepresented country were considered.

Fabiana Corsi-Zuelli

University of São Paulo
Ribeirão Preto, Brazil

Awards

Michael Irwin Equity and Diversity Travel Awards



PNIRS is committed to increasing the number of academics/researchers from underrepresented groups and supporting research excellence dedicated to issues of equity, diversity, and inclusion. In support of this commitment, PNIRS has established the Michael Irwin Equity and Diversity Travel Awards that are made possible by a generous donation from Professor Michael Irwin, Cousins Distinguished Professor of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at University of California, Los Angeles and the Cousins Center for Psychoneuroimmunology at the University of California, Los Angeles Semel Institute for Neuroscience.

The goal of these awards is to facilitate greater awareness about the public health issues related to diverse communities, and to support and encourage psychoneuroimmunology research that is dedicated to having a significant impact on diverse and underrepresented communities.

Michelle A. Chen

Northwestern University

Patrick Blondin Tsafack

Université Laval

Estherina Trachtenberg

Tel-Aviv university

Chelsea Kelland

University of California, Davis

Sudan Prasad Neupane

University of Oslo

Fadya Mroue-Ruiz

Georgia State University

Yonaida Valentine

The Ohio State University

Alyshia Davis

University of Cincinnati

Mary Slayo

*Royal Melbourne Institute of Technology
University*

Kate Kuhlman

University of California, Irvine

Roger McIntosh

University of Miami

Erica Vieira

University of Toronto

Awards

PNIRS Trainee Scholar Travel Awards



The intent of the **PNIRS Trainee Scholar Travel Awards** is to facilitate attendance by trainee members at the PNIRS Annual Meeting. Awards will vary annually and are to be used to contribute to the trainees' cost of attendance at the PNIRS Annual Meeting.

Elizabeth Antici

University of California, Irvine

Robin Blades

University of California, Los Angeles

Madison Garvin

Georgia State University

Estelle Higgins

*Center for Healthy Minds, University of Wisconsin
– Madison*

J Richard Korecki

University of California, Los Angeles

Jonathan VanRyzin

University of North Carolina at Chapel Hill

Kendra Wilson

The Ohio State University

Schedule at a Glance - Diversity in PNIRS

See program schedule for room assignments.

	Monday, June 24	Tuesday, June 25	Wednesday, June 26	Thursday, June 27
8:00–8:30 AM	Board of Directors Meeting/Breakfast	Oral Session 1 1. Stress and Inflammation 2. Dementia, Aging, and Schizophrenia	Presidential Symposium Diversity in Research	Member Sponsored Symposia 5 & 6 5. Early Immune Predictors to Identify Offspring of At-Risk for Neurodevelopmental Sequelae 6. Metabolic Dysfunction, Neuroinflammation, and Alzheimer's Disease
8:30–9:00 AM				
9:00–9:30 AM				
9:30–10:00 AM				
10:00–10:30 AM	Educational Short Course Diversity in PNI Related Research, Methods, and Career Paths	Coffee break	Coffee break	Coffee break
10:30–11:00 AM		Member Sponsored Symposia 3 & 4 3. Integrative Strategies and Immunomodulatory Mechanisms of Alternative Treatments for Depression in China 4. Exploring the Neurotrophic Capacity of Glia in Health and Disease	Coffee break	Oral Session 3 5. Mental health 6. Sleep and Adolescence
11:00–11:30 AM				
11:30 AM–12:00 PM				
12:00–12:30 PM		Lunch on your own (BBI Editorial Board Lunch – by invitation)	Lunch Provided	Lunch on your own PNIRS <small>Asia-Pacific</small> and <small>Ibero-America</small> Meeting
12:30–1:00 PM				
1:00–1:30 PM	Lunch on your own	Poster Session 1	Poster Session 2	
1:30–2:00 PM	Welcome Christopher Engeland			Oral Session 2 3. Early Life Adversity 4. Cancer and Endotoxemia
2:00–2:30 PM		Norman Cousins Award Lecture Julienne Bower	Free Time	
2:30–3:00 PM	Coffee break		Optional Harbor Cruise (3:15 – 5:15 PM)	
3:00–3:30 PM		Poster Blitz		Free time
3:30–4:00 PM	Member Sponsored Symposia 1 & 2 1. Dietary Diversity and What it Means for Old Age 2. Microglial Regulation of Sex-Specific Neural Development		Robert Ader Award Lecture Luba Sominsky	
4:00–4:30 PM		Coffee break		Speed Mentoring
4:30–5:00 PM	Welcome Reception Halifax Citadel National Historic Site		Trainee Mixer Alexander Keith's Nova Scotia Brewery	
5:00–5:30 PM				
5:30–6:00 PM				
6:00–6:30 PM	Welcome Reception Halifax Citadel National Historic Site	Speed Mentoring	Early Career Researchers Social (post-docs through pre-tenure faculty) The Old Triangle Irish Alehouse	Closing Banquet Halifax Convention Centre
6:30–7:00 PM				
7:00–7:30 PM				
7:30–8:00 PM				
8:00–8:30 PM				
8:30–9:00 PM				
9:00–9:30 PM				
9:30–10:00 PM				

Monday, June 24, 2024

8:00 AM – 5:30 PM

Registration
Level 5 Foyer

8:00 AM – 10:00 AM

PNIRS Board of Directors Meeting
Room 501

10:00 AM – 1:00 PM

Educational Short Course: Diversity in PNI Related Research, Methods, and Career Paths
Ballroom B2

Chairs: Christoph Rummel, PhD, Justus-Liebig-Universität Gießen; Christopher Engeland, PhD, The Pennsylvania State University; Michael Bailey, PhD, The Ohio State University; Adrienne Antonson, PhD, University of Illinois at Urbana-Champaign; Bart Ford, PhD, Oklahoma State University; Lina Hansson, PhD, Stockholm University, Karolinska Institutet (Members of the PNIRS Training Committee)



Electroencephalographic Signature of Amyloid-beta Pathology in Alzheimer's Disease
Jonathan Brouillette, PhD, Associate Professor, Department of Pharmacology and Physiology, Université de Montréal

One to two decades before the clinical diagnosis of Alzheimer's disease, a progressive accumulation of amyloid-beta protein begins to be observed in the brain. In this presentation, we will discuss the deleterious effects of amyloid-beta on sleep, cognition, and neurodegeneration using animal models of Alzheimer's disease.



Immune-to-Brain Signaling: Prostaglandin E2 Translates Immune Signals into Hypothalamic Neural Activity

Wataru Inoue, PhD, Associate Professor, Department of Physiology and Pharmacology, Western University

Activation of the hypothalamic-pituitary-adrenal (HPA) axis is a hallmark of systemic inflammation. In turn, the ensuing elevation of circulating glucocorticoids negatively regulates inflammation, forming an important feedback loop between the immune and the central nervous system. Studies in the last decades have established that this immune-induced HPA axis activation is in large part mediated by prostaglandin E2 (PGE2) produced in the brain, in response to systemic immune challenges. To initiate the hormonal cascade of the HPA axis, the actions of PGE2 in the brain ultimately translate into the excitation of hypothalamic neuroendocrine neurons that release corticotropin releasing hormone (CRH). My first experiment as an undergraduate student (back in Japan) was to study PGE2 synthesis in the brain during systemic inflammation. As a principal investigator (in Canada), our group now looped back to study how PGE2 changes synaptic transmission and local network state in the hypothalamus to drive the HPA axis activation.



Sick for Science: Using Experimental Endotoxemia to Understand Sickness Behavior in Humans

Julie Lasselin, PhD, Associate Professor, Department of Clinical Neuroscience at Karolinska Institutet and Department of Psychology at Stockholm University

Over the past 30 years, experimental endotoxemia has been used in humans to understand the behavioral changes and feelings that occur during infections, collectively called "sickness behavior". In this interactive talk, I will provide an overview of the various aspects of sickness behavior in humans that have been characterized using the model of experimental endotoxemia. I will also discuss the limitations and future perspectives of this model in the field of psychoneuroimmunology.



Immune and Endocrine Interactions in Depression: A Translational Perspective
Mandy Bekhbat, PhD, MSc, Senior Associate, Department of Psychiatry and Behavioral Sciences, Emory University

The impact of inflammation on the brain and behavior is influenced by endocrine processes such as energy metabolism or psychosocial stress. In this talk I will highlight immune-metabolic as well as stress-immune interactions as mechanisms of and potential therapeutic targets for depressive symptoms. I will also discuss my career path in translational PNI research, which has spanned studies in both humans and rodent models using complementary investigative approaches.

1:00 – 2:00 PM

Lunch on Your Own – local options

2:00 – 2:30 PM

PNIRS 2024 Annual Meeting Welcome

Ballroom B1

Christopher England, PhD, The Pennsylvania State University, PNIRS President

2:30 – 3:30 PM

Norman Cousins Memorial Lecture: *PNI Meets Cancer Survivorship: The Story of Cancer-Related Fatigue*

Ballroom B1

Julienne E. Bower, PhD, Professor of Psychology and Psychiatry/Biobehavioral Sciences; Associate Director, Cousins Center for Psychoneuroimmunology, Semel Institute for Neuroscience and Human Behavior, University of California, Los Angeles
Chair: Kate Kuhlman, PhD

Nominators: Michael Irwin, PhD, Susan Lutgendorf, PhD, FAAS, Andrew H. Miller, MD, Keely A. Muscatell, PhD

Fatigue is a common symptom of many chronic diseases, including cancer, with debilitating effects on quality of life and survival. Drawing from basic research in PNI, my research has examined the role of inflammation in cancer-related fatigue, the molecular and neural underpinnings of these effects, host factors that increase risk for fatigue, and effective treatments. This talk will provide a selective overview of this body of research and consider implications for fatigue in other disorders.

3:30 – 4:00 PM

Coffee Break

Ballroom Salon

4:00 – 5:30 PM

Member Sponsored Symposia 1 & 2

Symposium 1: *Dietary Diversity and What it Means for Old Age*

Ballroom B1

Chair: Sarah Spencer, PhD, RMIT University

This member-sponsored symposium will highlight three speakers from our international European Union Joint Program on Neurodegenerative disease-funded consortium, Effects of early-Stress On Lipid mediators and Inflammation for early Detection of neurodegeneration “SOLID”. This consortium is made up of 7 Partner Investigators (PIs) and 6 other External Collaborator team leaders. Three of the PIs to showcase our research. Alzheimer’s Disease (AD), dementia, and cognitive dysfunction affect more than 50 million people worldwide. With our aging population the absolute numbers of those affected will explode in coming years. 95% of AD is sporadic and the aetiology is unknown and not adequately explained by genetics. So, what makes some of us susceptible and some vulnerable? This symposium will address how differences in dietary background can lead to early neuroinflammation in some individuals and this inflammatory background then dictates the risk of AD, dementia and cognitive dysfunction. In addition to the science, our symposium will also demonstrate novel collaborative approaches to attracting funding from international sources. It will also highlight an important success story in the networking opportunities afforded by engagement with PNIRS. This SOLID collaboration was forged from introductions made at the Brighton PNIRS meeting in 2016 between 3 of the PIs that has led to long-term collaborations, broader collaborative networks, shared funding, co-tutelle PhD agreements, shared publications, and lasting friendships.



Our SOLID consortium of 7 PIs incorporates diversity in country of origin (7), country of workplace (6), primary language (6), immigrant status (3), gender (4 female, 3 male), research direction (clinical, pre-clinical, rodents, brain slices, cells, bioinformatics), career stage (4 Professors, 2 Associate Professors, 1 Dr). The team also supports a diversity of graduate students (at least 30 from at least 15 countries).



N-3 Polyunsaturated Fatty Acid (PUFA)-Derived Lipid Mediators and Adipokines: From White Adipose Tissue to Modulation of Brain Inflammation
Christoph Rummel, PhD, Justus Liebig University Gießen



Mechanisms That Underlie the Behavioral Effects of Dietary Polyunsaturated Fatty Acids (PUFAs): Implications for Alzheimer's Disease
Sophie Laye, PhD, Université de Bordeaux



Metabolic Hormone Dynamics in Preclinical Alzheimer's Disease: Exploring Potential Preventive Strategies
Frederic Calon, PhD, Laval University

Symposium 2: Microglial Regulation of Sex-Specific Neural Development

Ballroom B2

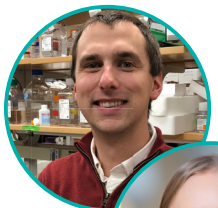
Chair: Annie Ciernia, PhD, University of British Columbia

As the primary innate immune cells of the brain, microglia can potently modulate neural activity. Stressors during early life have sex-specific effects on microglial development – ultimately increasing risk for psychiatric disorders. Recent studies highlight a role for microglia in both the etiology and pathology of developmental and psychiatric disorders. Specifically, microglia are a key cellular mediator between environmental risk factors for disease and clinical pathology. However, there is a missing gap in understanding the molecular mediators that regulate microglial activity to provide insights for developing therapeutic interventions targeting neuroinflammation. This session will show how environmental insults (immune, microbial, stress) at different developmental stages affect microglia, leading to impaired neural circuit function and altered behavior, often in a sex-biased manner. Our symposium will demonstrate that aberrant developmental phenotypes can be rescued by modifying the microbiome or manipulating microglia either genetically or pharmacologically. The session will span impacts across the lifespan, with Dr. Bordt examining the impact of in utero inflammation and early-life stress on lifelong changes in microglial development and behaviour. Dr. Ciernia will explore the link between the microbiome and microglial development following early postnatal gut inflammation and how this leads to altered sex hormone regulation and behaviour in males. Dr. Bolton will highlight the neuron- and sex-specific effects of early-life adversity on microglial dynamics and synaptic pruning in the developing brain. Together, the three speakers will highlight new findings demonstrating the importance of sex as a mediator of neuro-immune interactions important for regulating behaviour in both health and disease.



Sex-Biased Fetal Gut, Placental, and Microglial Development in Response to Maternal Inflammation

Evan Bordt, PhD, Lurie Center for Autism, Department of Pediatrics, Massachusetts General Hospital, Harvard Medical School



Early Life Microbiome Driven Inflammation Impairs Sex-Specific Microglial Development and Hormone Regulation

Annie Ciernia, PhD, University of British Columbia



Early-Life Adversity Alters Microglial Function in a Neuron- and Sex-Specific Manner in the Developing Brain

Jessica Bolton, PhD, Center for Neuroinflammation and Cardiometabolic Diseases, Neuroscience Institute, Georgia State University

6:00 – 8:00 PM

Welcome Reception

Halifax Citadel National Historic Site, 5425 Sackville St, Halifax

Just a 10-minute walk from the Convention Centre, take in a bit of Halifax history as you join us for a perfect way to connect with colleagues, speakers and friends, old and new.



Halifax Citadel National Historic Site

Tuesday, June 25, 2024

8:00 AM – 5:00 PM

Registration
Level 5 Foyer

8:30 – 10:00 AM

Concurrent Oral Session 1

1. Stress and Inflammation

Ballroom B2

Chairs: Keely Muscatell, PhD, University of North Carolina, Chapel Hill & Jonas Hagenberg, Max Planck Institute of Psychiatry

- 8:30–8:45 AM *Racial Differences in Associations between Adversity and Inflammation: Findings from the Einstein Aging Study*
Dakota D. Witzel, PhD; Christopher G. Engeland, PhD; Saran Ashley-Douglas, BA; Robert L. Tennyson, PhD, The Pennsylvania State University; George M. Slavich, PhD, University of California, Los Angeles; Jennifer E. Graham-Engeland, PhD, The Pennsylvania State University
- 8:45–9:00 AM *Neural Mechanisms of Mindfulness: Reduced Threat Reactivity Mediates Mindfulness Intervention Effects on Genomic Markers of Inflammation*
Robin Blades, Health Psychology; Naomi Eisenberger, PhD; Steve Cole, PhD; Chloe Boyle, PhD; Tyrus Korecki, MA; Julianne Bower, PhD, University of California, Los Angeles
- 9:00–9:15 AM *Identifying Modifiable Behavioral Moderators of Stress on Depression and Inflammation: Focus on Exercise and Sleep in Women With Breast Cancer*
J Richard Korecki, MA, University of California, Los Angeles; Patricia Ganz, MD, Fielding School of Public Health; Michael Irwin, MD, Cousins Center for Psychoneuroimmunology, Semel Institute for Neuroscience; Steve Cole, PhD, University of California, Los Angeles School of Medicine; Julianne Bower, PhD, University of California, Los Angeles
- 9:15–9:30 AM *Brain and Cortisol Responses to Psychosocial Stress are Associated With Provoked Airway Inflammation in Th17-related Pathways in Asthma*
Estelle Higgins, BA, Center for Healthy Minds, University of Wisconsin-Madison; William Busse, MD; Stephane Esnault, PhD, MS; Danika Klaus, BS, Department of Medicine, University of Wisconsin School of Medicine and Public Health – Madison; Corrina Frye, BS, Waisman Center, University of Wisconsin-Madison; Melissa Rosenkranz, PhD, Center for Healthy Minds, University of Wisconsin-Madison
- 9:30–9:45 AM *Elucidation of the Molecular Signal Linking Psychological Trauma to T-lymphocyte Interleukin 17A (IL-17A) Production*
Tamara Natour, BS; Tatlock Lauten, BS; Emily Reed, BS; Adam Case, PhD, Texas A&M University
- 9:45–10:00 AM *Investigating the Link of Bacterial Translocation and Behavioral Changes in a Mouse Restraint Stress Model*
Chiko Shimbori, PhD; Narjis Kraimi, PhD; Jun Lu, NA; Giada De Palma, PhD; Stephen M Collins, MD, PhD; Premysl Bercik, MD, PhD, McMaster University

2. Dementia, Aging, and Schizophrenia

Ballroom B1

Chairs: Ruth Barrientos, PhD, The Ohio State University & Mary Slayo, RMIT University

- 8:30–8:45 AM *Polarized Responses of an In Vitro Human Blood-Brain Barrier Model to Human Serum: Effects of Donor Age and Alzheimer's Dementia Status*
Takashi Fujimoto, MD, PhD, Nagasaki University; Lindsey Williams, BS, University of Washington; Kristen Baumann, BS, VA Puget Sound Healthcare System; May Reed, MD, University of Washington; William Banks, MD; Michelle Erickson, PhD, VA Puget Sound Healthcare System

- 8:45-9:00 AM *Circulating Brain-Derived Exosomes as Biosignatures in Late-Life Depression and Alzheimer's Dementia*
Erica Vieira, PhD, University of Toronto; Etienne Sibille, PhD, CAMH and University of Toronto; Sanjeev Kumar, MD, PhD, Centre for Addiction and Mental Health; Breno Diniz, MD, PhD, UConn Center on Aging; Tarek Rajji, MD, PhD, Centre for Addiction and Mental Health
- 9:00-9:15 AM *Burden, Grief, and Depression in Dementia Spousal Caregivers: The Roles of Inflammation and Attachment Security*
Daniel Argueta, BA; Sarah Roberts, BA; Kelly Brice, PhD; Lydia Wu-Chung, MA; Vincent Lai, BA; Jensine Paoletti-Hatcher, PhD; Bryan Denny, PhD, Rice University; Charles Green, PhD, McGovern Medical School; Luis D. Medina, PhD, University of Houston; Paul Schulz, MD, McGovern Medical School; Jennifer Stinson, PhD, Cambridge Health Alliance; Cobi Heijnen, PhD; Christopher Fagundes, PhD, Rice University
- 9:15-9:30 AM *Consumption of Refined-ingredient Diets Impair Long-term Memory Independent of Macronutrient Composition in Aged Rats*
Michael Butler, PhD; Andrew Sanchez, BS; Stephanie Muscat, PhD; Bryan Alvarez, BS; Jade Blackwell, MS; Sabrina Mackey-Alfonso, BS; Ruth Barrientos, PhD, The Ohio State University
- 9:30-9:45 AM *Cytokine Profiles and Relations With Schizophrenia's Severity in Psychiatric Emergency: The Signature Biobank*
Enzo Cipriani, MSc, University of Montreal; Cécile Le Page, PhD; Eugénie Samson-Daoust, MSc; Charles-Edouard Giguère, MSc; Signature Consortium, PhD, Centre de Recherche de l'Institut Universitaire en Santé Mentale de Montréal; Philippe Kerr, MSc; Robert-Paul Juster, PhD, University of Montreal
- 9:45-10:00 AM *Fishing for Complements: Emerging Associations Between the Complement System and Schizophrenia*
Clare Beasley, PhD; Sangeetha Kasturi, BSc; Ninon Freidel, BSc; Li Shao, PhD, University of British Columbia

10:00 - 10:30 AM

Coffee Break
Ballroom Salon

10:30 AM - 12:00 PM

Member Sponsored Symposia 3 & 4

Symposium 3: Integrative Strategies and Immunomodulatory Mechanisms of Alternative Treatments to Promote Mental Health in China

Ballroom B2

Chairs: Keith W Kelley, PhD, University of Illinois at Urbana-Champaign & Weiwen Wong, PhD, Chinese Academy of Sciences

Stress and depression have long been linked, a common worldwide health issue. The efficacy of current mainstream treatments is limited, reflecting unmet and urgent medical needs. For example, first-line clinical antidepressants have low efficacy and a delayed onset of action. This problem is at least partly due to the view that depression is a homogeneous disorder in which treatments are aimed at single target. However, it is now clear that many psychiatric disorders are highly heterogeneous disease. This emphasizes the necessity to elucidate the complex mechanisms underlying the heterogeneity of functional domains and networks by using integrative therapeutic strategies. A growing body of evidence indicates that the immune system plays a critical role in both the development and treatment of depression. As such, modulation of the immune system to improve mental health is now recognized as an important treatment strategy and has led to a new field of study known as immunopsychiatry. However, the critical molecules and pathways that are involved in the underlying mechanisms are still far from understood. A holistic view of disease and alternative interventional strategies have been widely used for investigating the mechanisms and developing treatments for mental disorders in China. For example, Traditional Chinese Medicine derived from herbal and marine animals, meditation and behavioral interventions are increasingly successfully used to treat disease and are of substantial value in the clinic. The systematic role of body-mind interactions in mental disorders are being actively investigated. Psychoneuroimmune mechanisms are most certainly involved, although many of them remain to be identified. To address recent developments in traditional Chinese Medicine, this symposium will feature



three presentations by leading scholars. They will highlight recent progress from three perspectives: natural marine medicine, Chinese herbal medicine in depression and a novel treatment approach encompassing human factors research and empathy training for stressed policemen and firefighters.



Psychoneuroimmunological Mechanisms of Natural Marine Medicines for the Treatment of Depression

Cai Song, MD, PhD, Neuroscience, BGI Research, Hangzhou and No. 7 People's Hospital, Dongguan, China



Rapid Anti-depressant Properties of the Multiherbal Medicine Yueju: From Defining Phenotype Advantages to Discovering Novel Neurotransmission and Neuroimmune Mechanisms

Gang Chen, PhD, Jinan University



Human Factors Research in Empathy Training

Caroline G.L. Cao, PhD, University of Illinois at Urbana-Champaign, Department of Industrial and Enterprise Systems Engineering and Carle College of Medicine

Symposium 4: Exploring the Neurotrophic Capacity of Glia in Health and Disease

Ballroom B1

Chair: Shawn Hayley, PhD, Carleton University

Neurotrophic growth factors have long been known to be important for neuroplasticity and can have a beneficial role in neuropsychiatric and neurodegenerative illness. In addition to neuronal sources, accumulating evidence indicates that neuroglial cells that include microglia and astrocytes can also produce neurotrophins. It also appears that glial cells possess neurotrophic signaling receptors, which may shape their responses to a variety of stimuli. Yet, there has been a paucity of attention devoted to understanding the specific role of glial cells (and their states) in modulating neurotrophic outcomes that could be relevant for a variety of mental illnesses. This symposium speakers will present data showing the novel and important neurotrophic influence that microglia and astrocytes can have in a variety of pathological contexts, including exposure to risk factors for disease. Indeed, it is our contention that these neuroglial cells are fundamental in linking neuroimmune and neuroplastic processes relevant for stress and inflammatory pathology.



Outcomes of Stress and the Diet on Microglial Interactions With Neurons and Synapses

Marie-Eve Tremblay, PhD, University of Victoria



Examining the Neurotrophic Potential of Microglia and Astrocytes in Antidepressant Treatment

Eric Wohleb, PhD, University of Cincinnati



Assessing the Role of the Truncated Tropomyosin Kinase B Receptor in Glial Cells: Feeding and Susceptibility to Stress

Shawn Hayley, PhD, Carleton University

12:00 – 1:30 PM

Lunch on Your Own – local options

12:00 – 1:30 PM

BBI Editorial Board Lunch (*invitation only*)
Room 501 & 502

1:30 – 3:00 PM

Concurrent Oral Session 2

3. Early Life Adversity

Ballroom B2

Chairs: Jennifer Felger, PhD, Emory University & Elizabeth Antici University of California, Irvine

- 1:30–1:45 PM *Stress and Inflammatory Biology among Adolescents*
Kate Kuhlman, PhD; Ece Tan, BS, University of California, Irvine; Steve Cole, PhD, University of California, Los Angeles; Uma Rao, MBBS, University of California, Irvine
- 1:45–2:00 PM *Socioeconomic Disadvantage and Inflammation: The Moderating Roles of a Secure Base and Maternal Hostility*
Michelle A. Chen, PhD; Vicky J. H. Chung, BA; Jungwon Kim, BA; Hee Moon, BA; Edith Chen, PhD; Gregory E. Miller, PhD, Northwestern University
- 2:00–2:15 PM *Maternal Prenatal Depressive Symptoms are Associated With Infant NF- κ B and IRF Transcription Factor Activity*
Gabrielle Rinne, MA, CPhil; Steve Cole, PhD; Christine Dunkel Schetter, PhD, University of California, Los Angeles
- 2:15–2:30 PM *Adolescent Social Isolation Induces Microglial Phagocytosis and Astrocyte Atrophy in the Nucleus Accumbens and Promotes Adult Social Behavior Dysfunction in Rats*
Jonathan VanRyzin, PhD; Kathryn Reissner, PhD, University of North Carolina at Chapel Hill
- 2:30–2:45 PM *Microglial Pro-inflammatory Signaling Influences Male Parvalbumin Interneuron Development in the Hippocampus*
Julia Dziabis; Irene Jonathan; Benjamin Horvath; Grace Zhang; Caroline Smith, PhD; Michael Patton, PhD; Dang Nguyen; Mahika Jammula; Benjamin Devlin; S. Monroe; Staci Bilbo, PhD, Duke University
- 2:45–3:00 PM *Maternal Immune Activation during Gestation Modulates Offspring Immune Profiles in a Non-Human Primate Model*
Chelsea Kelland, PhD Candidate; Ana-Maria Iosif, PhD; Steven Rollins, MS; Melissa Bauman, PhD; Judy Van de Water, PhD, University of California, Davis

4. Cancer and Endotoxemia

Ballroom B1

Chairs: Erik Knight, PhD, University of Colorado Boulder & Patrick Tsafack, Université Laval

- 1:30–1:45 PM *Potential Underlying Mechanisms of Social Isolation Impact on Cancer-Related Mortality in Socially Isolated Rats*
Estherina Trachtenberg, MSc; Keren Ruzal, MSc, Tel-Aviv University; Itai Ricon-Becker, PhD; Steve W. Cole, PhD, University of California, Los Angeles; Inbal Ben-Ami Bartal, PhD; Shamgar Ben-Eliyahu, PhD, Tel-Aviv University
- 1:45–2:00 PM *Exploring the Relationship between mtDNA Content and Cancer-related Fatigue-like Behavior in a Murine Model*
Luis Vega; Avery Gillett; Grace Hall, BS; Marlee Anderson; Elisabeth Vichaya, PhD, Baylor University
- 2:00–2:15 PM *Systemic Inflammation Mediates the Depression-survival Effect among Head and Neck Cancer Patients*
Sandra Sephton, PhD, Brigham Young University; Iask Beck, BS, University of Louisville; Rachel Ricks, MPH, Brigham Young University; Elizabeth Cash, PhD, University of Louisville

- 2:15-2:30 PM *Stress Management and Relaxation Training for AgEing Gradually (SMART-AGE): Effects on T and B-cell Hypermetabolism in Distressed Older Women Undergoing Breast Cancer Treatment*
Michael Antoni, PhD; Emily Walsh, MS; Molly Ream, MS; Rachel Plotke, BS; Paula Popok, BS; Millan Kanaya, BS; Sarah Webster, BS; Dolores Perdomo, PhD; Daniela Frasca, PhD; Bonnie Blomberg, PhD, University of Miami
- 2:30-2:45 PM *Identifying Sick People While Sick Yourself: A Study of Identification of Facial Cues and Walking Patterns of Sick Individuals During Experimental Endotoxemia*
Lina S Hansson, MSc, Karolinska Institutet, Stockholm University; Arnaud Tognetti, PhD, Karolinska Institutet; Elahe Tavakoli, MSc; Julia Stache, MSc, Stockholm University; Mikael Kakeeto, MD, Region Stockholm; Johan Melin, BM, Karolinska Institutet; Sofia Bredin, MD, Region Stockholm; Rasmus Skarp, MSc, Stockholm University; Catarina Lensmar, MD, PhD, Karolinska Institutet, Region Stockholm; Rosa Demand, BSc, Stockholm University; Mats J Olsson, PhD, Karolinska Institutet; Daniel B Wilhelms, MD, PhD; Rani Toll John, MD, PhD, Linköping University, Region Östergötland; Karin Jensen, PhD, Karolinska Institutet; Mats Lekander, PhD; Julie Lasselin, PhD, Stockholm University, Karolinska Institutet
- 2:45-3:00 PM *Care for Me or Let Me Be: A Randomized Control Trial Testing the Effect of Healthcare Provider's Behavior on Sickness Outcomes Using Experimental Endotoxemia*
Julie Lasselin, PhD; Lina S Hansson, MSc, Stockholm University, Karolinska Institutet; Arnaud Tognetti, PhD, Karolinska Institutet; Elahe Tavakoli, MSc; Julia Stache, MSc, Stockholm University; Mikael Kakeeto, MD, Region Stockholm; Johan Melin, BM, Karolinska Institutet; Sofia Bredin, MD, Region Stockholm; Maria Lalouni, PhD, Karolinska Institutet; Rasmus Skarp, MSc, Stockholm University; Catarina Lensmar, MD, PhD, Region Stockholm, Karolinska Institutet; Rosa Demand, BSc, Stockholm University; Mats J Olsson, PhD, Karolinska Institutet; Daniel B Wilhelms, MD, PhD; Rani Toll John, MD, PhD, Linköping University, Region Östergötland; Karin Jensen, PhD, Karolinska Institutet; Mats Lekander, PhD, Stockholm University, Karolinska Institutet

3:00 - 3:30 PM

Coffee Break
Ballroom Salon

3:30 - 4:30 PM

Poster Blitz
Ballroom B1

Chair: Lina S. Hansson, PhD, MSc, Karolinska Institutet, Stockholm University

1. *Transcriptional Profiles of Astrocytes and Microglia are Altered Following Adolescent Cancer and Chemotherapy Exposure*
Alyshia Davis, BS; Justin Bollinger, PhD; Claire Cantelon, BS; Eric Wohleb, PhD; Teresa Reyes, PhD, University of Cincinnati
2. *Influenza A Virus During Pregnancy Disrupts Maternal Immunity and Fetal Neocortical Development in a Dose- And Time-Dependent Manner*
Ashley Otero, BS; Meghan Connolly, MS; Rafael Gonzalez-Ricon, MS, University of Illinois Urbana-Champaign; Selena Wang, BS, Indiana University; Izan Chalen, MS; Jacob Allen, PhD; Adrienne Antonson, PhD, University of Illinois Urbana-Champaign
3. *Identification of Oxytocin-Antigen Mimetic Protein in Lactobacillus and its Validation in an Animal Model of Autism*
Emilie Lahaye, PhD student; Marion Nicol, PhD, Inserm U1239; Philippe Chan, PhD; Arnaud Arabo, PhD; Julie Maucotel, Enginner; Axelle Houssier, Technicien, HERACLES; Nicolas Chartrel, PhD; Serguei Fetissov, PhD, MD, Inserm U1239

4. *Hemoglobin Regulates T-Lymphocyte Function After Psychological Trauma*
Emily Reed, BS; Valeria Silva, BS; Tatlock Lauten, BS; Tamara Natour, BS; Adam Case, PhD, Texas A&M University
5. *Inflammation and Reward Processing: A Meta-Analysis*
Iris Ka-Yi Chat, MA, Temple University; Phoebe Lam, PhD, Carnegie Mellon University; Auburn Stephenson, MA; Madeline Pike, MA, Temple University; Robin Nusslock, PhD, Northwestern University; Lauren Alloy, PhD, Temple University
6. *Predicting Psychosocial Intervention Response from Baseline Gene Expression*
Itay Ricon-Becker, PhD, University of California, Los Angeles; Taylor West, PhD; Barbara Fredrickson, PhD, University of North Carolina at Chapel Hill; Deanna Kaplan, PhD, Emory University; Matthias Mehl, PhD, University of Arizona; Charles Raison, PhD, University of Wisconsin-Madison; Steve Cole, PhD, University of California, Los Angeles
7. *Investigating Mammary Tumor-Induced Effects on Brain Endothelial Cells*
Lindsay Strehle, MS; Ángela del Águila, PhD; Heithem El-Hodiri, PhD; Andy Fischer, PhD; Leah Pyter, PhD, The Ohio State University
8. *Immunophenotypic Differences in Peripheral Blood Mononuclear Cells of Individuals With Persistent and Remitting Depression Following Bariatric Surgery*
Rebecca Milton, MRes; Anna McLaughlin, PhD; Melisa Kose, MSc; Zuzanna Zajkowska, PhD; Giulia Lombardo, PhD; Naghmeh Nikkheslat, PhD; Esperanza Perucha, PhD; Valeria Mondelli, PhD, MD, Kings College London
9. *Adverse Childhood Experiences Moderate Longitudinal Changes in Leptin but Not Adiponectin*
Sara Matovic, MSc, Concordia University; Christoph Rummel, PhD; Elena Neumann, PhD, Justus-Liebig University Gießen; Jean-Philippe Gouin, PhD, Concordia University
10. *The Impact of Psychological Stress and Stress-Related Disorders in Treatment Outcome of Periodontitis: A Systematic Review and Meta-Analysis*
Erik K Mauland; Sudan Prasad Neupane, MD, PhD, Oral Health Center for Western Norway, University of Oslo
11. *Dementia Fluid Biomarkers Are Enriched in Human Cervical Lymph Node Fine Needle Aspirates and Their Level is Selectively Age-Dependent*
Adam Al-Diwani, MA, BMBCh, DPhil; Nicholas M Provine, PhD, University of Oxford; Andrew Murchison, BMBCh, Oxford University Hospitals; Rhiannon Laban, PhD; Owen Swann, PhD, UK Dementia Research Institute; Ivan Koychev, BMBS, PhD, University of Oxford; Fintan Sheerin, BMBS, Oxford University Hospitals; Amanda Heslegrave, PhD, UK Dementia Research Institute; Henrik Zetterberg, PhD, UK Dementia Research Institute and University of Gothenburg; Paul Klenerman, BMBCh, DPhil, University of Oxford; Sarosh Irani, BMBCh, DPhil, University of Oxford and Mayo Clinic
12. *Abnormal Pioneer Colonization May Drive Immune Dysregulation in Prenatally Stressed Offspring*
Audrey Duff, PhD; Miranda Hilt, BS; Heather Blin, BS; Michael Bailey, PhD, Nationwide Children's Hospital
13. *Single Cell PBMC Analysis Of 13 Patients With Depression Shows Cell Type Specific Changes Dependent on Inflammation*
Jonas Hagenberg, MSc; Benjamin Classen, BSc; Janine Knauer-Arloth, PhD, Max Planck Institute of Psychiatry

14. *Effects of Gut Hyperpermeability, Early Life Stress, and Human ASD Fecal Microbial Transfer on Social Behavior in Zonulin Transgenic Mice*
Krishna Gajjar, BA, Clark University; Nikki Yip, BS, Tufts University; Caitlin Ravichandran, PhD; Lauren Burgett, BS; Takumi Konno, MD, PhD; Haley Moya, BS; Kaitlin Sherman, BS; Ayesha Zahrah, BS; Ha Nguyen, MS; Theres Alexander, BS; Sarah Kadzielski, MD; Alessio Fasano, MD; Marcy Kingsbury, PhD, Massachusetts General Hospital, Harvard Medical School
15. *Using Brain Microglial Autofluorescence as an Index of Inflammaging*
Mary Slayo, PhD; Kylie Quinn, PhD; Blanca Del Rosal, PhD; Sarah Spencer, PhD, RMIT University
16. *Associations of Interleukin-6 With Cognitive Functions Among Older Adults: Results from the Einstein Aging Study*
Molly A. Wright, BS, The Pennsylvania State University; Erin E. Harrington, PhD, University of Wyoming; Jennifer E. Graham-Engeland, PhD; Martin J. Sliwinski, PhD, The Pennsylvania State University; Richard B. Lipton, MD; Mindy J. Katz, MPH, Albert Einstein College of Medicine; Christopher G. Engeland, PhD, The Pennsylvania State University
17. *The Influence of TLR4 Mediated Neuroinflammation and the Complement System on HFD-Evoked Memory Impairments in an AD Mouse Model*
Sabrina Mackey-Alfonso, MS; Jade Blackwell, MS; Ruth Barrientos, PhD, The Ohio State University
18. WITHDRAWN
19. *T-Lymphocyte Beta Adrenergic Neurotransmission Regulates T_H17 Inflammation during Psychological Trauma*
Tatlock Lauten, BS; Safwan Elkhatab, PhD; Tamara Natour, BS; Emily Reed, BS; Adam Case, BS, Texas A&M University
20. *Circulating Inflammation May Be Central to Gut Microbiota-Mediated Neuroinflammation and Low Emotionality after Chemotherapy*
Yonaida Valentine, MS, The Ohio State University; Audrey Duff, PhD, Nationwide Children's Hospital; Lindsay Strehle, MS; Lauren Otto, PhD; Melina Seng, MS, The Ohio State University; Michael Bailey, PhD, Nationwide Children's Hospital; Leah Pyter, PhD, The Ohio State University

4:30 – 5:00 PM



Robert Ader Lecture: The Psychoneuroimmunology of Female Health – A Story of Vulnerability and Resilience
Ballroom B1

Luba Sominsky, PhD, Senior Scientist, Barwon Health; Senior Research Fellow, Deakin University, Geelong, Australia

Chair: Sarah Spencer, PhD

Nominator: Sarah J. Spencer, PhD, Deborah Hodgson, PhD, Quentin J Pittman, PhD, Mark R Hutchinson, BSc, PhD

Despite the widespread evidence of sex differences in health and disease, most of the cells, animals and humans studied in biomedical research, including in the PNI field, have been males. In my talk, I will highlight the need to address this disparity and share my research trajectory in the space of female health, from reproductive to mental health, its vulnerability and resilience to early life and adult challenges including exposure to stress, immune dysfunction and poor dietary intake, in both preclinical models and human population-based research. I will particularly focus on my current research endeavours focused at improving our understanding of PNI mechanisms of perinatal mental health and its neurodevelopmental consequences, with an ultimate goal to inform prevention and intervention efforts, and improve the health of women, their children and families.

5:30 – 7:00 PM**Speed Mentoring****Ballroom Salon**

A short Professional Development talk will be followed by an informal opportunity to chat with a number of PNI scientists for short periods of time (~5 different people for 10 minutes). All are welcome to attend to mentor or be mentored. Drinks and light snacks will be provided throughout the event.

7:00 – 9:00 PM**Trainee Mixer****Alexander Keith's Nova Scotia Brewery, 1496 Lower Water St #312, Halifax**

A 10-minute walk from the Convention Centre (*attendees are responsible for their own transportation*), join fellow trainees to unwind and connect, all trainees are encouraged to attend! Conference name badge will be required for participation and drink tickets will be provided at the venue. *Upon arriving, look for signs for the Atlantic Beer Institute | BH-314.*



Wednesday, June 26, 2024

8:00 AM – 2:30 PM

Registration*Level 5 Foyer*

8:30 – 10:30 AM

Presidential Symposium: *Diversity in Research**Ballroom B1*

Chair: Christopher Engeland, PhD, PNIRS President

***Psychophysiological Responses to Unfair Treatment***

Julian Thayer, PhD, Distinguished University Professor of Psychological Science, Department of Psychological Science, University of California, Irvine

African Americans have the highest rates of hypertension-related disease of any other ethnic group in the United States. Importantly, racism and discrimination have been linked to these higher rates of morbidity and mortality. Discrimination is deleterious not only to those that are the recipients of this unfair treatment but also to the partners and family members of those affected as well to those that perpetrate this bias. In this talk I identify a unique pattern of psychophysiological response to unfair treatment we have called the “cardiovascular conundrum”. This pattern is characterized by greater heart rate variability and greater total peripheral resistance in African Americans compared to their European American counterparts. I will review the evidence supporting the existence of this pattern and propose several physiological and psychological concomitants. I will also propose a number of factors that might help to mitigate the deleterious effects associated with it. Whereas the context of the current review is on Black/White disparities we further report that this pattern may be present in others exposed to unfair treatment. Ultimately, the systemic factors that perpetuate these inequalities will require that we first acknowledge and then face the challenges they present if we are to address the health disparities in our country.

***LGBTQIA+ Populations and Psychoneurological Health Disparities***

Jason D. Flatt, PhD, MPH, Assistant Professor, School of Public Health, Department of Social & Behavioral Health, University of Nevada, Las Vegas

Over 3 million or more adults aged 60 + live in the U.S. who identify as lesbian, gay, bisexual, transgender, queer, intersex or another identity (LGBTQIA+). Less is known about psychoneurological health and related concerns for the LGBTQIA+ community. In this talk, I will discuss risk for neurodegenerative diseases and related psychological health outcomes among LGBTQIA+ adults from multiple studies. Our research has found disparities in several psychoneurological health and healthcare outcomes, such as Alzheimer's and Parkinson's disease, depression, post-traumatic stress disorder, and related concerns for the LGBTQIA+ community. We will also discuss why it is so important to collect data on sexual orientation and gender identity (SOGI), and how historical and current experiences of LGBTQIA+ community are relevant for researchers and health professionals.

***Understanding Racial/Ethnic Cognitive Health Disparities from the Psychoneuroimmunology Perspective***

Alyssa Gamaldo-Roddy, PhD, Professor, College of Behavioral, Social and Health Sciences, Clemson University

Racial and ethnic differences have been observed in cognitive performance and risk for cognitive impairment, particularly Alzheimer's disease and related dementias (AD/ADRD). Specifically, Black/African Americans are twice as likely, and Latinos are 1.5 times more likely than non-Hispanic white adults to be diagnosed with AD/ADRD and more likely to have delayed clinical care for AD/ADRD symptomology. To adequately address these observed cognitive health disparities, it is pertinent to leverage the area of psychoneuroimmunology in understanding the interactions among psychosocial, contextual, and biomarker factors that influence cognitive health disparities. Moreover, it is also important to recognize that racial groups are heterogeneous in lived experiences, behaviors, health patterns and outcomes. Thus, it is warranted to identify social determinants of cognitive health within racial and/or ethnic groups to understand the disparate cognitive patterns observed within and across groups. This presentation will highlight conceptual frameworks and empirical evidence that support further incorporation of the area psychoneuroimmunology in understanding cognitive health disparities.

10:30 – 11:00 AM**Coffee Break***Ballroom B3***11:00 AM – 12:00 PM****Ronald Glaser Frontiers in Psychoneuroimmunology Lecture: Translational Transcriptomics: Sequencing the Truth from Model System and Human Cohort Studies of Mood Disorders***Ballroom B1*

Michael J. Meaney, PhD, McGill University

Chair: Christopher Engeland, PhD, PNIRS President

RNA sequencing analyses using model systems define tissue-specific transcriptomic profiles under basal conditions and in response to clinically-relevant environmental conditions (e.g., chronic stress). There is also increasing data available from post-mortem analyses with human data sets, most notably the Genotype-Tissue Expression (GTEx) project as well as from Transcriptome-Wide Association Studies with clinical populations. This lecture will present a novel bioinformatic approach that leverages these advances together with diverse human cohort data sets to enhance our understanding of tissue-specific gene networks and biological pathways that underlie mood disorders.

**12:00 – 1:00 PM****Lunch Provided***Ballroom B2***1:00 – 2:30 PM****Poster Session 1 – please see page 33 for a listing of posters***Ballroom B3***3:00 – 5:15 PM****Harbor Cruise – optional social event***Cable Wharf, 1751 Lower Water Street*The cruise sets sails at 3:15 pm *sharp*, and returns to the pier by 5:15 pm.**6:00 – 8:00 PM****Early Career Researchers Social***The Old Triangle Irish Alehouse, 5136 Prince Street*

Join fellow early career researchers for a relaxed social networking opportunity! Space has been reserved, but attendees are expected to purchase their own drinks & food. The purpose of this event is to give early career investigators a chance to chat about the job search / application / interview process, the transition to a faculty or independent research position, and experiences starting up your own lab or research program. In other words, connect with your fellow early career psychoneuroimmunology researchers over a few drinks!

Thursday, June 27, 2024

8:00 AM – 5:00 PM

Registration
Level 5 Foyer

8:30 – 10:00 AM

Member Sponsored Symposia 5 & 6**Symposium 5: Early Immune Predictors to Identify Offspring of At-Risk for Neurodevelopmental Sequelae***Ballroom B2*

Chairs: Marisa Spann, PhD, MPH, Columbia University & Andrea Edlow, MD, MSc, Harvard Medical School

The Developmental Origins of Health and Disease hypothesis posits that exposure to adverse maternal or early-life environments can significantly impact the health trajectory of offspring. Wide-ranging maternal exposures, from obesity, to stress or substance use, to viral infection, can all result in maternal immune activation. Maternal immune activation, in turn, may impact the placenta and developing fetal brain, increasing risk for child psychopathology including autism spectrum disorder, cognitive dysfunction, attention deficit hyperactivity disorder, and mood and anxiety disorders. This symposium will examine three promising biomarkers to characterize the impact of immune activation on offspring. The first presentation will focus on the placenta, the interface between the maternal and fetal environments, which has been implicated in developmental programming including effects on the developing fetal brain. The second will consider the lactational environment, which has also been demonstrated to shape neonatal and infant brain development. Finally, the third will examine neuroimaging measures of brain development, providing a direct view of inflammatory markers and their consequences on brain development and connectivity. Common themes across the symposium will include the importance of biomarker accessibility, validation, and translatability.

Relationship Between Human Milk IL-6 and Brain Development

Brittany Howell, PhD, Virginia Tech

The Placenta–Brain Axis and Placental Biomarkers of Neurodevelopmental Outcome

Andrea Edlow, MD, MSc, Harvard Medical School

Developmental Trajectories of Myo-inositol Across Infancy Via In Vivo Magnetic Resonance Spectroscopy

Marisa Spann, PhD, MPH, Columbia University

Symposium 6: Metabolic Dysfunction, Neuroinflammation, and Alzheimer's Disease*Ballroom B1*

Chairs: William Banks, MD, Veterans Affairs/University of Washington

Metabolic dysfunction and neuroinflammation are now being targeted in the treatment of Alzheimer's disease (AD). Impaired brain insulin signaling has recently been established as a key component of AD. While the development of peripheral insulin resistance is well-described, the development of brain insulin dysfunction is poorly understood. There is evidence that the blood–brain barrier (BBB), the brain insulin receptor, and neuroinflammation are involved. While the link between insulin signaling and inflammation is well described in the periphery, a similar relationship in the brain has only begun to be explored. This symposium will bring together international scientists, many new to PNIRS, at varying stages in their careers, from diverse research fields and backgrounds, presenting data gathered from human-derived cells, mice, and humans. Dr. Wenqiang Chen (Joslin Diabetes Research Center, USA) will discuss the role of microglia insulin signaling and the impact on neuroinflammation. Dr. Elizabeth Rhea (University of Washington, USA) will discuss the impact brain and peripheral insulin receptor signaling has on the response to an inflammatory challenge, including the permeability of



the BBB. Finally, Dr. Gregory Ruegsegger (University of Wisconsin–River Falls) will present pre-clinical and clinical research on the beneficial effects of exercise on brain insulin signaling and neuroinflammation in the setting of metabolic syndrome. The symposium will be chaired by Dr. William Banks (VA Puget Sound, Seattle, WA), a pioneer in the field of brain-body communication, including neuroendocrinology and neuroimmune interactions, with a focus on the BBB. Taken together, this symposium will highlight a novel link between brain insulin signaling, metabolism, and neuroinflammation.

Insulin Resistance in Microglia Exacerbates AD Neuropathology through Impaired Brain Metabolism and Neuroinflammation
Wenqiang Chen, PhD, Joslin Diabetes Center

Role of the Brain Insulin Receptor during an Inflammatory Challenge
Elizabeth Rhea, PhD, VA Puget Sound, University of Washington

Influence of Exercise on Insulin Signaling and Inflammation in the Insulin Resistant Brain
Gregory Ruegsegger, PhD, Mayo Clinic

10:00 – 10:30 AM

Coffee Break
Ballroom B3

10:30 AM – 12:00 PM

Concurrent Oral Session 3

5. Mental Health
Ballroom B2

Chairs: Kyle Murdock, PhD, The Pennsylvania State University & Iris Chat, Temple University

- | | |
|----------------|---|
| 10:30–10:45 AM | <p><i>A Direction for New Depression Therapies: The Key Role of Inflammation and Immune System Dysregulation</i>
Krzysztof Pietruczuk, PhD; Katarzyna Ruckemann-Dziurdzińska, PhD; Ewa Bryl, MD, PhD; Jacek Witkowski, MD, PhD, Medical University of Gdansk</p> |
| 10:45–11:00 AM | <p><i>Salience Network Resting State Functional Connectivity During Airway Inflammation in Asthma: A Feature of Mental Health Resilience?</i>
Melissa Rosenkranz, PhD, University of Wisconsin–Madison</p> |
| 11:00–11:15 AM | <p><i>Peripheral Blood Cellular Immunophenotype in Suicidal Ideation, Suicide Attempt, and Suicide: A Systematic Review and Meta-Analysis</i>
Federico M Daray, MD, PhD; Luciana Carla Chiapella, PhD; Leandro Nicolás Grendas Grendas, PhD; Romina Isabel Álvarez Casiani, PhD; Alejandro Olaviaga, MD; Josefina Robetto, MD; Cintia Romina Prokopez, PhD, University of Buenos Aires; Eugenio Antonio Carrera Silva, PhD, Instituto de Medicina Experimental (IMEX), Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Academia Nacional de Medicina; Andrea Emilse Errasti, PhD, University of Buenos Aires; Sudan Prasad Neupane, MD, PhD, Center for Western Norway/University of Oslo</p> |
| 11:15–11:30 AM | <p><i>Systematic Review Examining the Efficacy of Anti-Inflammatory Treatment on Anhedonia and Depressive Symptom Severity in Individuals With Major Depressive Disorder and an Inflammatory Phenotype</i>
Naoise Mac Giollabhui, PhD; Richard Liu, PhD, Massachusetts General Hospital; Annelise Madison, PhD, The Ohio State University; Andrew Miller, MD, Emory University; Emma Lenoël Quang, HSD; Melis Lydston, MSc, Massachusetts General Hospital</p> |

11:30–11:45 AM *The Role of CD4+ Effector Memory T-Cells in Cytomegalovirus-associated Brain Changes and Depression: A Dual-Sample Analysis*
Haixia Zheng, PhD, Laureate Institute for Brain Research; Bart Ford, PhD, Oklahoma State University; Ebrahim Haroon, MD, Emory University; Wesley Thompson, PhD; Chun Chieh Fan, MD, PhD, Laureate Institute for Brain Research; T. Kent Teague, PhD, University of Oklahoma; Martin Paulus, MD; Jonathan Savitz, PhD, Laureate Institute for Brain Research; Steve Cole, PhD, University of California, Los Angeles

11:45 AM–12:00 PM *Prebiotic Galactooligosaccharide Reduces Anxiety-Like Behavior: Examining a Role for Bacterial Tryptophan Metabolites and Reduced Microglial Activity*
Michael Bailey, PhD, Nationwide Children's Hospital; Kyle Spencer, MS, The Ohio State University; Heather Blin, BS, Nationwide Children's Hospital; Helen Chen, PhD; Branden Verosky, BS; Tamar Gur, MD, PhD, The Ohio State University; Audrey Duff, PhD, Nationwide Children's Hospital; Ewy Mathe, PhD, National Center for Advancing Translational Science

6. Sleep and Adolescence

Ballroom B1

Chairs: Julie Lasselin, PhD, Karolinska Institutet and Stockholm University & Estherina Trachtenberg, Tel Aviv University

10:30–10:45 AM *Sex Differences in Pain and Fatigue Severity in Long COVID – The Role of Sleep Disturbances*
Valeska Kunisch, CandMed; Rammy Dang, MS, Beth Israel Deaconess Medical Center; Larissa Engert, PhD, Beth Israel Deaconess Medical Center, Harvard Medical School; Surya Daniel, BA, Beth Israel Deaconess Medical Center; Navil Sethna, MD, Children's Hospital Boston, Harvard Medical School; Janet Mullington, PhD, Beth Israel Deaconess Medical Center, Harvard Medical School; Monika Haack, PhD, Harvard Medical School

10:45–11:00 AM *Probable REM Sleep Behavior Disorder and Sleep Duration among Parkinson's Disease Patients are Associated With Epigenetic Markers of Inflammation, Age Acceleration, and the Gut Microbiome*
Cynthia Kusters, MD, PhD; Keren Zhang, MPH; Yang Cheng, MPH; Aline Duarte Folle, PhD; Jeff Bronstein, MD; Adrienne Keener, MD; Kimberly Paul, MPH, PhD; Beate Ritz, MD, PhD, University of California, Los Angeles

11:00–11:15 AM *Targeting Inflammation in Response to Experimental Sleep Restriction With Low-Dose Acetylsalicylic Acid in Humans*
Larissa Engert, PhD, Harvard Medical School, Beth Israel Deaconess Medical Center; Carola Ledderose, PhD, University of California, San Diego; Careen Biniamin, BS; Paola Birriel, BS; Olivia Buraks, BS; Bryan Chatterton, BS; Rammy Dang, MS; Surya Daniel, BS; Annika Eske, BS; Taylor Reed, BS; Ava Tang, BS, Beth Israel Deaconess Medical Center; Suzanne Bertisch, MD, Harvard Medical School, Brigham and Women's Hospital; Janet Mullington, PhD, Harvard Medical School, Beth Israel Deaconess Medical Center; Wolfgang Junger, PhD, University of California, San Diego; Monika Haack, PhD, Harvard Medical School, Beth Israel Deaconess Medical Center

11:15–11:30 AM *A [11C]PBR28 PET Study on the Associations Between Sleep Dimensions and Neuroinflammation*
Leonie Balter, PhD, Stockholm University, Karolinska Institutet; Jonatan Gustavsson, MA; Per Stenkrona, PhD; Andrea Varrone, PhD; Anton Forsberg, PhD; Erik Gustavsson, PhD; Cedrique Mouyobo, PhD; Grégoria Kalpouzou, PhD; Goran Papenberg, PhD, Karolinska Institutet

11:30–11:45 AM *Low Emotional Clarity and High Inflammatory Signaling Jointly Predict Specific Symptoms of Depression Among Adolescents*
Auburn Stephenson, MA; Iris Chat, MA; Allyson Bisgay, BA, Temple University;
Christopher Coe, PhD; Lyn Abramson, PhD, University of Wisconsin–Madison; Lauren Alloy, PhD, Temple University

11:45 AM–12:00 PM *Race Specific Relationships Between GPS-Tracked Exposure to Areas With High Rates of Violent Crime, Cortisol, Inflammation, and Changes in Hippocampal Volume Over Time in Adolescents*
Kendra Wilson, MS, The Ohio State University; Charles Ferris, PhD, McGill University;
Ping Bai, MS; Savana Jurgens, MS; Kathryn Jenkins, BA; Bethany Boettner, PhD; Jodi Ford, PhD; Dylan Wagner, PhD; Christopher Browning, PhD; Baldwin Way, PhD, The Ohio State University

12:00 – 1:30 PM

Lunch on Your Own – *local options*

12:00 – 1:30 PM

PNIRS *Asia-Pacific* and PNIRS *Ibero-America* Meeting
Room 501 & 502

Chair: Keith W. Kelley, PhD, Professor Emeritus of Immunophysiology, University of Illinois
Please pick up your lunch form Ballroom B2, then proceed to the the Room 501 & 502.

PNIRS *Asia-Pacific* & PNIRS *Ibero-America* Annual Meeting

Halifax, Canada Wednesday, June 26, 2024 12:00–13:00

Archived at: <https://pnirs.memberclicks.net/pnirs-asia-pacific>

12:00	Keith W. Kelley, PNIRS <i>Asia-Pacific</i> Annual Report
12:15	Adrienne Antonson & Ruth Barrientos, PNIRS <i>Ibero-America</i> Annual Report
12:25	Round-Table Discussion with Scholars from Mainland China
13:00	Adjourn

1:30 – 3:00 PM

Poster Session 2 – please see page 38 for a listing of posters
Ballroom B3

3:00 – 3:45 PM

Award Ceremony & Business Meeting
Ballroom B1

Join us to celebrate our award winners and hear from Dr. Roger Ho, our 2023 BBI Impact Award recipient. Stay for the PNIRS year in review and learn how you can support our future success.

3:45 – 4:45 pm

George Solomon Lecture: *Harnessing Inflammation's Effect on Dopaminergic Reward Pathways for Novel Therapeutic Strategies in Depression*
Ballroom B1

Jennifer Felger, PhD, Director of the Laboratory, Emory Behavioral Immunology Program; Psychiatry & Behavioral Sciences, Emory University School of Medicine

Chair: Andrew Miller, MD, Emory University

Inflammation is one pathophysiologic pathway thought to contribute to symptom severity and treatment resistance in patients with depression and other psychiatric illnesses. A rich clinical and translational literature suggests this is due in part to inflammation's effects on neurotransmitters like dopamine. Growing evidence also shows relationships between elevated inflammatory biomarkers, which are found in a significant proportion of patients, and low functional and structural connectivity in circuits related to interoception, threat and



emotion processing, and particularly, motivation and motor activity. Accordingly, depressed patients with higher inflammation responded to dopaminergic therapy with both acute and sustained increases in functional connectivity within corticostriatal reward and motor circuits in association with improved symptoms of anhedonia and reduced motivation. Inflammation-related circuit deficits and their responses to dopaminergic therapy were also related to perceived and early life stress, circulating biomarkers of metabolic disturbance, and intracellular mechanisms of peripheral immune cell activation. Together, this work opens new avenues for dopaminergic therapies in patients with high inflammation, while providing a platform of immune, brain and behavioral targets for much-needed translational work to reduce inflammation or its sources through pharmacological or biobehavioral interventions.

6:00 – 10:00 PM

Closing Banquet

Ballroom B3

Join us for a fun and unforgettable evening at our conference closing banquet! We'll have a DJ spinning great tunes and the exciting announcement of the 2025 Norman Cousins and Robert Ader New Investigator Awards. Don't miss out on the chance to enjoy delicious food, great music, and wonderful company.

Poster Session 1

Wednesday, June 26, 1:00–2:30 PM

Poster 1

Inflammation and Reward Processing: A Meta-analysis

Iris Ka-Yi Chat, MA, Temple University; Phoebe Lam, PhD, Carnegie Mellon University; Auburn Stephenson, MA; Madeline Pike, MA, Temple University; Robin Nusslock, PhD, Northwestern University; Lauren Alloy, PhD, Temple University

Poster 2

Vaccination Status and Odds of Persistent COVID-19 Symptoms: Findings from the Canadian COVID19 Experiences Survey

Peter Hall, PhD; Gang Meng, PhD; Anne Queah, PhD; Thomas Agar, MSc; Geoffrey Fong, PhD, University of Waterloo

Poster 3

Identification of Oxytocin–Antigen Mimetic Protein in Lactobacillus and its Validation in an Animal Model of Autism

Emilie Lahaye, PhD student; Marion Nicol, PhD, Inserm U1239; Philippe Chan, PhD; Arnaud Arabo, PhD; Julie Maucotel, Engineer; Axelle Houssier, Technicien, HERACLES; Nicolas Chartrel, PhD; Serguei Fetissov, PhD, MD, Inserm U1239

Poster 4

Transcriptional Profiles of Astrocytes and Microglia are Altered Following Adolescent Cancer and Chemotherapy Exposure

Alyshia Davis, BS; Justin Bollinger, PhD; Claire Cantelon, BS; Eric Wohleb, PhD; Teresa Reyes, PhD, University of Cincinnati

Poster 5

Immunophenotypic Differences in Peripheral Blood Mononuclear Cells of Individuals With Persistent and Remitting Depression Following Bariatric Surgery

Rebecca Milton, MRes; Anna McLaughlin, PhD; Melisa Kose, MSc; Zuzanna Zajkowska, PhD; Giulia Lombardo, PhD; Naghmeh Nikkheslat, PhD; Esperanza Perucha, PhD; Valeria Mondelli, PhD, MD, Kings College London

Poster 6

Hemoglobin Regulates T-Lymphocyte Function After Psychological Trauma

Emily Reed, BS; Valeria Silva, BS; Tatlock Lauten, BS; Tamara Natour, BS; Adam Case, PhD, Texas A&M University

Poster 7

Molecular Mechanisms Underlying Early Life Adversity–Provoked Microglial Dysfunction in The Paraventricular Nucleus of The Hypothalamus

Fadya Mroue–Ruiz, BSc; Logan Ouellette, BSc; Madison Garvin, BSc; Nneka Otuonye, High School; Michelle Sequeira, PhD; Jessica Bolton, PhD, Georgia State University

Poster 8

Adverse Childhood Experiences Moderate Longitudinal Changes in Leptin but Not Adiponectin

Sara Matovic, MSc, Concordia University; Christoph Rummel, PhD; Elena Neumann, PhD, Justus–Liebig University Gießen; Jean–Philippe Gouin, PhD, Concordia University

Poster 9

Change in Post–Traumatic Stress Altered by Baseline Pain, Depression, and Fatigue Symptom Cluster Depending on Systemic Inflammation

Jeanette M. Bennett, PhD, UNC Charlotte; Carissa W. Tomas, PhD; Sydney C. Timmer–Murillo, PhD; Kelley Jazinski–Chambers, BA, Medical College of Wisconsin; Christine L. Larson, PhD, University of Wisconsin–Milwaukee; Terri A. deRoos–Cassini, PhD, Medical College of Wisconsin

Poster 10

Concordance of Inflammatory Reactivity to Acute Psychosocial Stress in Plasma and Saliva

Elizabeth Antici, BA, University of California, Irvine

Poster 11

Regulating Under Social Stress: Coping, Cortisol, and Cytokine Reactivity

Mona Al-Bizri, BS, MS; Meghan Quinn, PhD, William & Mary

Poster 12

Sex and age dependent effects on the sickness response to an LPS challenge in mice

Nikolay Filipov, PhD; Brice Hudson, BS; Helaina Danielle Ludwig, MS, University of Georgia; Likas Veltmaat, BS, Augusta University; Jessica Carpenter, PhD; Rachel Dockman, BS; Trevor Kalinowski, BS, University of Georgia

Poster 13

Predicting Psychosocial Intervention Response from Baseline Gene Expression

Itay Ricon-Becker, PhD, University of California, Los Angeles; Taylor West, PhD; Barbara Fredrickson, PhD, University of North Carolina at Chapel Hill; Deanna Kaplan, PhD, Emory University; Matthias Mehl, PhD, University of Arizona; Charles Raison, PhD, University of Wisconsin-Madison; Steve Cole, PhD, University of California, Los Angeles

Poster 14

Childhood Maltreatment Modulates Role of Immune-Related Gene Expression in Reward Processing Among Adolescents

Mai-Lan Tran, BA; Kate Kuhlman, PhD, University of California, Irvine; Steve Cole, PhD, University of California, Los Angeles; Uma Rao, MBBS, University of California, Irvine

Poster 15

Exposure to a Restraint Stressor (RST) Decreases Intestinal Duox2 in Female C57BL/6 Mice

Miranda Hilt, BS; Heather Blaine, BS; Audrey Duff, PhD, Abigail Wexner Research Institute, Nationwide Children's Hospital; Ivan Valishev, BS; Maria Elisa Caetano-Silva, PhD; Jacob Allen, PhD, University of Illinois at Urbana-Champaign; Michael Bailey, PhD, Abigail Wexner Research Institute, Nationwide Children's Hospital

Poster 16

Peri-Hippocampal MCs in Neonatal Post-Mortem Human Tissue

Kaliroi Engel, BS; Margaret McCarthy, PhD, University of Maryland, Baltimore

Poster 17

Influenza A Virus During Pregnancy Disrupts Maternal Immunity and Fetal Neocortical Development in a Dose- and Time-Dependent Manner

Ashley Otero, BS; Meghan Connolly, MS; Rafael Gonzalez-Ricon, MS, University of Illinois Urbana-Champaign; Selena Wang, BS, Indiana University; Izan Chalen, MS; Jacob Allen, PhD; Adrienne Antonson, PhD, University of Illinois Urbana-Champaign

Poster 18

Neuroimmune Signaling of Fear in Asthma-PTSD: A Potential Role of Subfornical Organ (SFO) Microglia and SFO to Infralimbic (IL) Cortex Circuit

Renu Sah, PhD; Emily Allgire, PhD, University of Cincinnati; Jaclyn McAlees, PhD, Cincinnati Children's Hospital Medical Center; Rebecca Ahlbrand, BA, University of Cincinnati; Ian Lewkowich, PhD, Cincinnati Children's Hospital Medical Center

Poster 19

Tracking the Tropism of Coronavirus Infection in a Mouse Model of Mild Disease; Potential Viral Persistence

Catherine LaCourse, BS; Robert Yolken, MD; Lorraine Jones-Brando, PhD, Johns Hopkins University

Poster 20

Epigenetic Priming by Stress and a Sarin Analog in Response to LPS in a Mouse Model of Gulf War Illness

Aya Sasaki, PhD, University of Toronto; David Ashbrook, PhD, University of Tennessee Health Sciences Centre; Sanoji Wijanayake, PhD, University of Winnipeg; Patrick McGowan, PhD, University of Toronto

Poster 21

The Impact of Psychological Stress and Stress-Related Disorders in Treatment Outcome of Periodontitis: A Systematic Review and Meta-Analysis

Erik K Mauland, Dental Specialist, Department of Periodontology, University of Oslo, Oslo, Norway Oral Health Centre of Expertise, Rogaland, Norway; Sudan Prasad Neupane, MD, PhD, Specialist Oral Health Center for Western Norway/University of Oslo

Poster 22

Low-Grade Inflammation and Sleep Loss Induce Coordinated Motivational Changes That Facilitate Recovery: An Experimental Two-Hit Stress Model

John Axelsson, PhD; Mats Lekander, PhD; Julie Lasselin, PhD; Leonie Balter, PhD, Stockholm University, Karolinska Institutet

Poster 23

Nocturnal Hypoxemia in Long COVID: An Observational Prospective Case-Control Study

Haoqi Sun, PhD; Rammy Dang, MSc; Robert J Thomas, MD; Brandon Westover, MD, PhD; Monika Haack, PhD, Beth Israel Deaconess Medical Center and Harvard Medical School; Janet Mullington, PhD, Beth Israel Deaconess Medical Center, Harvard Medical School

Poster 24

The Developmental Timing and Frequency of Residential Mobility, Inflammation, and Susceptibility to the Common Cold

Yeon Sik Jang, MA, MPP; Jessica Chiang, PhD, Georgetown University

Poster 25

Vigilance and Inflammation in Older African American Adults

Kristin Davis, PhD; Katherine Knauff, PhD; Samuele Zilioli, PhD, Wayne State University

Poster 26

Investigating Mammary Tumor-Induced Effects on Brain Endothelial Cells

Lindsay Strehle, MS; Ángela del Águila, PhD; Heithem El-Hodiri, PhD; Andy Fischer, PhD; Leah Pyter, PhD, The Ohio State University

Poster 27

‘Cognotoxemia?’ Investigating the Relationship between Endotoxemia, Cognitive Functioning, and Gender in Healthy Adults

Sally McDonnell, BA, University of Colorado Boulder; Jennifer E. Graham-Engeland, PhD; Martin J. Sliwinski, PhD; Christopher G. Engeland, PhD, The Pennsylvania State University; Erik Knight, PhD, University of Colorado Boulder

Poster 28

Oral Administration of Bovine Lactoferrin Modulates Pulmonary Macrophage and Lymphocyte Populations in a Model of Chronic Restraint Stress

Mariazell Yépez-Ortega, PhD Student, Instituto Politécnico Nacional; Erick José Zárate-Ayón, Master in Science; Judith Pacheco-Yépez, PhD; Nadia Mabel Pérez-Vielma, PhD, Instituto Politécnico Nacional; Aldo Arturo Reséndiz-Albor, PhD, ESM- Instituto Politécnico Nacional; Uri Axel García-Sánchez, Medical Doctor Student; Daniela Alexandra Palomares-Fernández, Medical Doctor Student, ESM-Instituto Politécnico Nacional; Ivonne Maciel Arciniega-Martínez, PhD, ESM-Instituto Politécnico Nacional

Poster 29

Immunomodulatory Effect of the Administration of Bovine Lactoferrin on the Levels of Immunoglobulins Present in Tracheobronchial Lavage

Mariazell Yépez-Ortega, PhD Student, Instituto Politécnico Nacional; Belen Mendoza-Arroyo, PhD student; Judith Pacheco-Yépez, PhD; Aldo Arturo Reséndiz-Albor, PhD, Escuela Superior de Medicina IPN; Nadia Pérez-Vielma, PhD, 4Centro Interdisciplinario de Ciencias de la Salud CICS, IPN

Poster 30

Effects of the Influenza Vaccine on Sickness Symptoms, Mood, and Social Connection: Preliminary Results from a Randomized, Double-Blind, Placebo-Controlled Experiment

Keely Muscatell, PhD; Mallory Feldman, MS; Natalie Antenucci, BS; Megan Cardenas, BS, University of North Carolina at Chapel Hill; Tatum Jolink, PhD, University of Michigan; Taylor West, PhD, University of North Carolina at Chapel Hill

Poster 31

Evening Cortisol Levels Are Prognostic for Survival in Pilot Data From Head and Neck Cancer Patients

Isak Beck, BS, University of Louisville; Rachel F Ricks, MPH; Sandra Sephton, PhD, Brigham Young University; Elizabeth Cash, PhD, University of Louisville

Poster 32

Obesity-Associated Memory Impairment and Neuroinflammation Precede Widespread Peripheral Perturbations in Aged Rats

Stephanie Muscat, PhD; Michael Butler, PhD, The Ohio State University; Akriti Shresthra, BS; Maria Caetano-Silva, PhD, University of Illinois at Urbana-Champaign; Brigitte Gonzalez Olmo, PhD; Sabrina Mackey-Alfonso, BS; Menaz Bettles, BS, The Ohio State University; Nashali Massa, BS, Mayo Clinic in Arizona; Robert McCusker, PhD; Jacob Allen, PhD, University of Illinois at Urbana-Champaign; Ruth Barrientos, PhD, The Ohio State University

Poster 33

Female Vulnerability to Inflammation-Induced Depressive Mood and Decreased Reward Responsivity as a Function of Menopausal Status

Chloe Boyle, PhD; Joshua Hyong-Jin Cho, MD, PHD; Naomi Eisenberger, PhD; Richard Olmstead, PhD; Elizabeth Breen, PhD; Michael Irwin, MD, University of California, Los Angeles

Poster 34

Association of Beta-Adrenergic Receptor Mediated Inflammation Control of Peripheral Monocytes and Neurobehavioral Response to Unfair Treatment Varies as a Function of HIV+ Status

Roger McIntosh, PhD; Priya Sharma, PhD; Kia Howard, BS; Timothy McCormack, BA; Barry Hurwitz, PhD; Suresh Pallikkuth, PhD, University of Miami

Poster 35

Political Orientation as a Determinant of Vaccination Outcomes During the COVID-19 Pandemic in a Canadian National Sample

Alkarim Billawala, BSc; Geoffrey Fong, PhD; Mark Oremus, PhD; Anne Quah, PhD; Thomas Agar, MA; Marie Jolicoeur-Becotte, BSc; Peter Hall, PhD, University of Waterloo

Poster 36

Brain Structure and Low-Grade Inflammation in Early Psychosis, Unaffected Siblings, and Community-Based Controls

Fabiana Corsi-Zuelli, PhD, University of São Paulo, Ribeirão Preto Medical School; Fabio Souza Duran, BSc, University of São Paulo; Camila Marcelino Loureiro, PhD; Rosana Shuhama, PhD, University of São Paulo, Ribeirão Preto Medical School; Antônio Carlos dos Santos, PhD, Ribeirão Preto Medical School; Paulo Rossi Menezes, PhD, University of São Paulo; Paulo Louzada-Junior, PhD, University of São Paulo, Ribeirão Preto Medical School; Geraldo Busatto, PhD, University of São Paulo; Cristina Marta Del-Ben, PhD, University of São Paulo, Ribeirão Preto Medical School, Brazil

Poster 37

Intellectual Decline With Illness Onset Is Related to Elevated Peripheral Inflammation in Schizophrenia

Thomas Weickert, PhD; Seethalakshmi Ramanathan, MD, SUNY Upstate Medical University; Rhoshel Lenroot, MD, University of New Mexico; Dennis Liu, MD, Lyell McEwin Hospital; Samantha Ballas, BA, SUNY Upstate Medical University; Ryan Balzan, PhD, Flinders University; Maryanne O'Donnell, MD, Prince of Wales Hospital; Cherrie Galletly, MD, University of Adelaide; Cynthia Weickert, PhD, SUNY Upstate Medical University

Poster 38

Microglia Mediate Inflammation-Induced Sleep Alterations Through IL-10 Signaling

Grant Mannino, BA: Neuroscience and Psychology; Tabitha Green, PhD; Mark Opp, PhD; Rachel Rowe, PhD, University of Colorado Boulder

Poster 39

IV Kineret Reduces Pain Sensitivity (and Enhances Underlying Endorphin Release) During an Experimental Pain Challenge in Humans

Alan Prossin, MBBS, UTHHealth; Robert Dantzer, DVM, PhD, The University of Texas MD Anderson Cancer Center; Charles Cox, MD; Julie Holihan, MD, UTHHealth

Poster 40

Exploring Potential Mechanisms of Post-Operative Cognitive Dysfunction in Young 3xTg-AD mice

Jade Blackwell, MS, The Ohio State University



Poster Session 2

Thursday, June 27, 1:30–3:00 PM

Poster 1

Dementia Fluid Biomarkers Are Enriched in Human Cervical Lymph Node Fine Needle Aspirates and Their Level Is Selectively Age-Dependent

Adam Al-Diwani, MA, BMBCh, DPhil; Nicholas M. Provine, PhD, University of Oxford; Andrew Murchison, BMBCh, Oxford University Hospitals; Rhiannon Laban, PhD; Owen Swann, PhD, UK Dementia Research Institute; Ivan Koychev, BMBS, PhD, University of Oxford; Fintan Sheerin, BMBS, Oxford University Hospitals; Amanda Heslegrave, PhD, UK Dementia Research Institute; Henrik Zetterberg, PhD, UK Dementia Research Institute, University of Gothenburg; Paul Klenerman, BMBCh, DPhil, University of Oxford; Sarosh Irani, BMBCh, DPhil, University of Oxford, Mayo Clinic

Poster 2

Using Brain Microglial Autofluorescence as an Index of Inflammaging

Mary Slayo, PhD; Kylie Quinn, PhD; Blanca Del Rosal, PhD; Sarah Spencer, PhD, RMIT University

Poster 3

Repetitive Transcranial Magnetic Stimulation (rTMS) for Post-COVID19 Condition: A Sham-Controlled Case Series

Marie Jolicoeur-Becotte, B.Sc.; Ashish Saragadam, B.Sc.; Mariella Santagata, B.Sc., University of Waterloo; Mohammad Sakib, PhD, McMaster University; Amer Burhan, M.B.BS, Ontario Shores Centre for Mental Health Sciences; Lena Kozyr, M.Sc.; Peter Hall, PhD, University of Waterloo

Poster 4

Effects of Enterobacterial CLPB Protein Immunization on Feeding and Locomotor Behavior and Gut Microbiota Composition in Mice With Activity-Based Anorexia

Benjamin Thomas, Master, Inserm U1239; Nadia Andrea Andreani, PhD, Kiel University; Emilie Lahaye, PhD student, Inserm U1239; Jean-Luc Do Rego, PhD; Jean-Claude Do Rego, PhD, University of Rouen Normandie, INSERM US51; John F. Baines, PhD, Kiel University; Serguei Fetissov, PhD, MD, Inserm U1239

Poster 5

Uncovering the Role of Persistent Lipocalin-2 in Sepsis Survivors

Shany Yang, BS; Jennifer Meng, BS, University of Michigan; Holland Hubert, BS, Spelman College; Joanna Spencer-Segal, MD, PhD, University of Michigan

Poster 6

T-Lymphocyte Beta Adrenergic Neurotransmission Regulates T_{H17} Inflammation during Psychological Trauma

Tatlock Lauten, BS; Safwan Elkhatab, PhD; Tamara Natour, BS; Emily Reed, BS; Adam Case, BS, Texas A&M University

Poster 7

Inflammation and Depressive Symptoms among Women With Diabetes and HIV from the MACS/WIHS Combined Cohort Study: Pilot Study Findings

Nicole Perez, PhD, New York University; Ning He, MSW, New York University; Jason Fletcher, PhD; Gail D'Eramo Melkus, EdD, New York University; David Hanna, PhD; Anjali Sharma, MD, MS; Kathryn Anastos, MD, Albert Einstein College of Medicine; Brad Aouizerat, MS, PhD, New York University

Poster 8

The Influence of TLR4 Mediated Neuroinflammation and the Complement System on HFD-Evoked Memory Impairments in an AD Mouse Model

Sabrina Mackey-Alfonso, MS; Jade Blackwell, MS; Ruth Barrientos, PhD, The Ohio State University

Poster 9

Inverse Associations Between Plasma Docosahexaenoic Acid and pTau181 in the Preclinical Stages of Alzheimer's Disease

Patrick Blondin Tsafack, MSc, Université Laval, Institut sur la Nutrition et les Aliments Fonctionnels; Helena Denis, PhD, Université Laval; Chuck Chen, PhD, University of Toronto; Cyntia Tremblay, MSc; Vincent Emond, PhD, Université Laval; Henrik Zetterbeg, PhD, University of Gothenburg; Sophie Layé, PhD, Université de Bordeaux, Institut sur la Nutrition et les Aliments Fonctionnels; Richard P. Bazinet, PhD, University of Toronto, Centre de recherche de l'institut universitaire de gériatrie de Montréal; Frédéric Calon, PhD, Université Laval, Institut sur la Nutrition et les Aliments Fonctionnels

Poster 10

Indoleamine 2,3-Dioxygenase 1 (IDO1) Enzyme and Non-Enzyme-Dependent Regulation of Murine Behavior and Body Composition

Robert McCusker, PhD, University of Illinois; Zoe MacDowell Kaswan, PhD, Yale University; Elisa Caetano-Silva, PhD; Akriti Shrestha, MS, University of Illinois; Derek Wainwright, PhD, Loyola University Chicago; Jacob Allen, PhD, University of Illinois

Poster 11

Circulating Inflammation May Be Central To Gut Microbiota-Mediated Neuroinflammation and Low Emotionality After Chemotherapy

Yonaida Valentine, MS, The Ohio State University; Audrey Duff, PhD, Nationwide Children's Hospital; Lindsay Strehle, MS; Lauren Otto, PhD; Melina Seng, MS, The Ohio State University; Michael Bailey, PhD, Nationwide Children's Hospital; Leah Pyter, PhD, The Ohio State University

Poster 12

Social Disruption Stress Modifies Intestinal Epithelial and Lymphocyte Compartments Through β -Adrenergic-Dependent Pathways

Ivan Valishev, BS; Maria Elisa Caetano-Silva, PhD; Casey Lim, BS; Akriti Shrestha, MS; Mikaela Kasperek, BS; Chia Hao Lin, MS, University of Illinois at Urbana-Champaign; Miranda Hilt, BS; Michael Bailey, PhD, Nationwide Children's Hospital; Jacob Allen, PhD, University of Illinois at Urbana-Champaign

Poster 13

Effects of Gut Hyperpermeability, Early Life Stress, and Human ASD Fecal Microbial Transfer on Social Behavior in Zonulin Transgenic Mice

Krishna Gajjar, BA, Clark University; Nikki Yip, BS, Tufts University; Caitlin Ravichandran, PhD; Lauren Burgett, BS; Takumi Konno, MD, PhD; Haley Moya, BS; Kaitlin Sherman, BS; Ayesha Zahrah, BS; Ha Nguyen, MS; Theres Alexander, BS; Sarah Kadzielski, MD; Alessio Fasano, MD; Marcy Kingsbury, PhD, Massachusetts General Hospital, Harvard Medical School

Poster 14

Vulnerability of GABAergic Interneuron Markers and Brain-Derived Neurotrophic Factor to LPS-Induced Inflammation

Sara Rezaei, Masters, University of Toronto; Thomas Prévot, PhD; Erica Vieira, PhD, Campbell Family Mental Health Research Institute at Centre of Addiction and Mental Health, University of Toronto; Etienne Sibille, PhD, University of Toronto, Campbell Family Mental Health Research Institute at Centre of Addiction and Mental Health

Poster 15

Single Cell PBMC Analysis of 13 Patients With Depression Shows Cell Type Specific Changes Dependent on Inflammation

Jonas Hagenberg, MSc; Benjamin Classen, BSc; Janine Knauer-Arloth, PhD, Max Planck Institute of Psychiatry

Poster 16

Effects of Fasting Status on Plasma Concentrations of Inflammatory and Neurodegenerative Biomarkers and Hormones in Older Adults

Christopher G. Engeland, PhD; Molly A Wright, MS, The Pennsylvania State University; Erik L Knight, PhD, University of Colorado at Boulder; Robert L Tennyson, PhD; Seyedeh-Leila Mousavi, MS; Orfeu M Buxton, PhD; Jennifer E Graham-Engeland, PhD, The Pennsylvania State University

Poster 17

Investigating Immune Alterations in Association With Depression Risk and Remission in Adolescents

Naghmeh Nikkheslat, PhD; Shane Solanky, PhD; Zuzanna Zajkowska, PhD, King's College London; Pedro Manfro, MD; Laila Souza, MSc; Rivka Pereira, MSc; Fernanda Rohrsetzer, MSc; Jader Piccin, PhD; Anna Viduani, MSc, Universidade Federal do Rio Grande do Sul; Brandon A. Kohrt, MD, PhD, The George Washington University; Helen L. Fisher, PhD, King's College London; Christian Kieling, MD, PhD, Universidade Federal do Rio Grande do Sul; Paola DiMeglio, PhD; Valeria Mondelli, MD, PhD, King's College London

Poster 18

Sex Differences among Bereaved Males and Females: How Cognitive Inhibition may relate to Stimulated Inflammatory Responses

Eyitayo C. Adebayo, BS; Marwa El-Ashry, BS; Kyle W. Murdock, PhD, The Pennsylvania State University; Angie S. LeRoy, PhD, Baylor University; Ryan L. Brown, PhD, University of California, San Francisco; Lydia E. Wu-Chung, PhD, Rice University; Michelle A. Chen, PhD, Northwestern University; Cobi J. Heijnen, PhD; Christopher P. Fagundes, PhD, Rice University

Poster 19

Developing a Tool To Manipulate Peri-Hippocampal Mast Cell Proliferation by Altering Local Stem Cell Factor and Interleukin-3 Signaling in Rat Postnatal Development

Anna Maximova, BS; Alexa Blanchard, PhD; Margaret McCarthy, PhD, University of Maryland

Poster 20

Alterations in Polyunsaturated Fatty Acids in Mothers Undergoing Chronic Caregiving Stress With Exposure to Early Life Adversity

Yolanda Sanchez-Carro, Dra, Center for Biomedical Research in Mental Health (CIBERSAM), Carlos III Health Institute; Christoph Rummel, PhD; Elena Neumann, PhD; Jens Bier, Justus Liebig University of Giessen; Friedrich Grimminger, PhD, Universities of Giessen and Marburg Lung Center (UGMLC); Jean-Philippe Gouin, PhD, Concordia University

Poster 21

The Role of Oxytocin in Mediating the Relationship Between Couple Satisfaction and Chemotherapy-Induced Cognitive Decline

Melina Seng, MS; Lauren Otto-Dobos, PhD; Lindsay Strehle, MS; Seth Adarkwah Yiadom, BS; Rebecca Andridge, PhD; Leah Pyter, PhD, The Ohio State University

Poster 22

Effects of Combined Gestational Exposure to Air Pollution and Maternal Stress on Microglial Interactions With Social Circuits in Male and Female Offspring

Maura C. Stoehr; Jason Xue; Joy T. Babalola; Elise M. Martin; Caroline J. Smith, PhD, Boston College

Poster 23

Glial Activation in the Hippocampus in a Mouse Model of Mild Neuroinvasive Coronavirus Infection

Catherine LaCourse, BS; Hawley Helmbrecht, PhD; Lauren Jantzie, PhD; Robert Yolken, MD; Lorraine Jones-Brando, PhD, Johns Hopkins University

Poster 24

Exploring the Immunometabolic Phenotype Linking Depression and Obesity

Dominique Piber, MD; Stefanie Gamradt, PhD; Deniz Dogan, MD; Christian Otte, MD; Stefan Gold, PhD, Charité – Universitätsmedizin Berlin

Poster 25

Associations of Interleukin-6 With Cognitive Functions Among Older Adults: Results from the Einstein Aging Study

Molly A. Wright, BS, The Pennsylvania State University; Erin E. Harrington, PhD, University of Wyoming; Jennifer E. Graham-Engeland, PhD; Martin J. Sliwinski, PhD, The Pennsylvania State University; Richard B. Lipton, MD; Mindy J. Katz, MPH, Albert Einstein College of Medicine; Christopher G. Engeland, PhD, The Pennsylvania State University

Poster 26

Abnormal Pioneer Colonization May Drive Immune Dysregulation in Prenatally Stressed Offspring

Audrey Duff, PhD; Miranda Hilt, BS; Heather Blin, BS; Michael Bailey, PhD, Nationwide Children's Hospital

Poster 27

Limited Nesting in Mice as a Model To Study the Psychoneuroimmunology of Post-Partum Depression

Marie Armbruster, PhD, University of Alberta

Poster 28

The Role of the Microglial Phagocytic Receptor, MerTK, in ELA-induced Changes in Excitatory Synapses and Behavior

Madison Garvin, BSc, Neuroscience Institute; Urjoshi Kar, High School; Jonila Shehu, High School; Jessica Bolton, PhD, Georgia State University

Poster 29

Systemic Inflammation & Subjective Wellbeing: Can Biopsychosocial Factors Explain the Link?

Micah L. McWhorter, BS; Michael J. Persin, MS; Jeanette M. Bennett, PhD, University of North Carolina at Charlotte

Poster 30

Bovine Lactoferrin as an Antioxidant in the Colon of BALB/c Mice in a Chronic Stress Model

Christian Axel Gutiérrez-Calvillo, PhD student; Mariazell Yépez-Ortega, PhD student; Belen Mendoza-Arroyo, PhD student; Erick Zarate-Ayón, MS; Saraí Adame-Hernández, MS student; Judith Pacheco-Yepez, PhD, ESM Instituto Politécnico Nacional; Nadia Mabel Pérez-Vielma, PhD, CICS Instituto Politécnico Nacional; Ivonne Maciel Arciniega-Martinez, PhD, ESM Instituto Politécnico Nacional

Poster 31

Chronic Stress Decreases IgA Secretion and Its plgR-Mediated Transport in Lung of BALB/c Mice

Erick Zarate-Ayón, MS; Mariazell Yépez-Ortega, PhD student; Belen Mendoza-Arroyo, PhD student; Christian Axel Gutiérrez-Calvillo, PhD student; María de los Ángeles Gómez-Román, MD Student; Judith Pacheco-Yepez, PhD, ESM Instituto Politecnico Nacional; Nadia Mabel Pérez-Vielma, PhD, CICS Instituto Politecnico Nacional; Aldo Arturo Reséndiz-Albor, PhD, ESM Instituto Politecnico Nacional

Poster 32

Effects of a Hypoxic Breathing Intervention on Transcriptional Control Pathways: A Randomized Controlled Clinical Trial

Ryan L. Brown, PhD, University of California, San Francisco; Steven Cole, PhD, University of California, Los Angeles; Aric Prather, PhD; Elissa Epel, PhD, University of California, San Francisco

Poster 33

Conscientiousness Moderates the Relationship Between Interleukin-6 and Memory Decline

Suzanne Segerstrom, PhD, MPH, Oregon State University

Poster 34

Colony Stimulating Factor 1 (CSF1) and Interleukin-34 (IL-34) Differentially Alter Microglia Function in White Matter and Gray Matter

Anzela Niraula, PhD; Audree Rumberger, BA; Caroline Hess, BA; Annabel Barnett, BA, Colgate University; Jonathan Godbout, PhD, The Ohio State University

Poster 35

Effect of Acute Stress on IgA Secretion and plgR-Mediated Transport in the Duodenum of BALB/c Mice

Christian Axel Gutiérrez-Calvillo, PhD student; Uri Axel García-Sánchez, MD Student; Daniela Alexandra Palomares-Fernandez, MD Student; Mariazell Yépez-Ortega, PhD student; Judith Pacheco-Yepez, PhD, Escuela Superior de Medicina - Instituto Politecnico Nacional; Nadia Mabel Pérez-Vielma, PhD, CICS Instituto Politecnico Nacional; Aldo Arturo Reséndiz-Albor, PhD, Escuela Superior de Medicina- Instituto Politecnico Nacional

Poster 36

Levodopa Effects on Functional Connectivity in Reward and Threat-Related Circuits and Symptoms of Anxiety in Depressed Patients With Higher Inflammation

Genevieve Craig, BS; Mandakh Bekhbat, PhD; Zhihao Li, PhD; Ebrahim Haroon, MD; Andrew Miller, MD; Jennifer Felger, PhD, MS, Emory University

Poster 37

Peripheral Markers of Blood Brain Barrier Disruption and Immune Cell Transmigration Are Related to Asociality and Mesial Temporal Lobe Cortical Thickness Reductions in Neuroinflammatory Schizophrenia

Cynthia Weickert, PhD; Roxanne Daniels, BS; John Burns, BA; Yunting Zhu, PhD; Thomas Weickert, PhD, The State University of New York, Upstate

Poster 38

Monocyte Glycolysis is Associated With Inflammation and Anhedonia Severity in Depression

Mandakh Bekhbat, PhD; Jessica Alvarez, PhD; Andrew Miller, MD; Jennifer Felger, PhD, Emory University

Poster 39

A 4-Week Written Emotional Disclosure Decreases Conserved Transcriptional Response to Adversity in Hispanic/Latina Women Living With and Without HIV

Roger McIntosh, PhD; Gail Ironson, MD, PhD; Yasmin Shemali, MA; Hannah Hoogerwoerd, BS; Salman Ahmad, MS; Isabella Villaverde, University of Miami; Steve Cole, PhD, University of California, Los Angeles

Poster 40

Psilocybin Alters the Circulating Metabolomic Profile in Both Non-Clinical and Clinical Models

Emese Prandovszky O'Donnell, PhD, Johns Hopkins University; Zachary A. Corder, MD, PhD, MindWork Group; Hua Liu, PhD; Shuojia Yang, MSc; Lindsey Macias, MSc; Kellie Tamashiro, PhD; Frederick Barrett, PhD; Robert Yolken, MD, Johns Hopkins University

Poster 41

Comorbid Alzheimer's Disease and Periodontitis Leads to Exacerbated Symptoms in an Experimental Mouse Model

Haanya Ijaz, BS; Daniela Jimenez-Harrison, PhD; Michael Butler, PhD; Sabrina Mackey-Alfonso, BS; Ruth Barrientos, PhD; Menaz Bettles, DS; James Demarsh, BS; Rami Alsabbagh, DDS; Sarah Peters, PhD, The Ohio State University

Halifax Convention Centre Floor Plan

Ballroom Level (Level 5)



Meeting Registration