



## 2021 Virtual Meeting Agenda

Thursday, May 20<sup>th</sup>, 2021

Open Networking Time Available Online Before the Meeting in the Virtual Meeting Hub

8:00am – **Welcome from Julienne Bower, PNIRS President**  
8:15am PDT **Location: Virtual Ballroom**

8:15am – **Norman Cousins Award Lecture**  
9:15am PDT **Location: Virtual Ballroom**

Intro from Raz Yirmiya

**“Treating Cancer Patients Perioperatively for Stress-Inflammatory Responses to Improve Cancer Outcomes: Why, How, and Is It Working?”** from **Shamgar Ben Eliyahu**

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9:15am – 9:30am PDT **Break (Move to SwapCard)**

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9:30am – **Member-Sponsored Symposia 1 & 2**  
10:45am PDT **Location: SwapCard**

### **Symposium 1: Neuroimmune Signaling in Neurodevelopmental Disorders**

Chairs: **Staci Bilbo** and **Caroline Smith**

*In vivo imaging of neuroimmune mechanisms in autism spectrum disorder.* **Nicole Zurcher**

*Early life neural-immune processes and executive function: A potential role in neurodevelopmental disorders.* **Teresa Reyes**

*Prenatal C-reactive protein is associated with brain microstructural tissue organization and metabolites in neonates.* **Marisa Spann**

*Effects of environmental toxins and stress during development: Key roles for microglia and microbiota.* **Caroline Smith**

### **Symposium 2: Biobehavioral Interventions in Subjects with Cancer: Moving PNI to the Forefront of Oncology**

Chair: **Derek Wainwright**

*Social disparities in cancer: Biobehavioral implications in hematopoietic stem cell transplantation.* **Jennifer Knight**

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*Estrogen modulation of mammary tumor-induced neuroinflammation and cognitive dysfunction in mice.* **Leah Pyter**

*The use of preclinical models to examine the role of cognitive processes in recovery from cancer-related fatigue.* **Elisabeth Vichaya**

*Overall survival of glioblastoma patients treated with psychosocial modifiers and standard of care or simultaneous radiation, anti-PD-1 mAb (nivolumab), and an IDO1 enzyme inhibitor.* **Derek Wainwright**

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10:45am –  
11:00am PDT

## **Break**

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11:00am –  
12:00pm PDT

## **Oral Sessions 1, 2, & 3**

**Location: SwapCard**

### **Oral Session 1: Neuroimmunology of Stress and Depression**

Moderator: **Aric Prather**

*Peripheral inflammation is associated with micro-structural and functional connectivity changes in depression-related brain networks.* **Neil Harrison**

*Elimination of stress-associated microglia reverses behavioral deficits by restoring endothelial homeostasis and synaptic- and LTP-related genes in neurons.* **Damon DiSabato**

*Association between dysconnectivity of a resting-state functional network and peripheral inflammation in depression.* **Athina Aruldass**

*Microglial P2RY12 mediates stress-induced structural remodeling of neurons in the prefrontal cortex and associated behavioral deficits.* **Justin Bollinger**

*Systematic review and meta-analysis of cancer related inflammation and depression.* **Daniel McFarland**

### **Oral Session 2: PsychoNeuroImmunity Across the Lifespan**

Moderator: **Jude Carroll**

*Maternal opioid exposure heterogeneously impairs offspring cognition in mice.* **Brittany Smith**

*A brief reflective functioning intervention predicts reduced pro-inflammatory gene expression in mothers and children: ATTACH randomized controlled trial.* **Kharah Ross**

*Mechanisms of Maternal High-Fat Diet-Induced Brain and Behavior Changes.* **Alexis Ceasrine**

*Early life adversity and systemic, cellular, and genomic responses to acute psychosocial stress among adolescents.* **Kate Kuhlman**

*Astrocyte immunosenescence in IL-10 and cholesterol signaling in the aged brain impairs microglial regulation following peripheral immune activation.* **Shane O'Neil**

### Oral Session 3: Gut-brain axis, sex differences, and psychopathology

Moderator: **Peter Grace**

*Leaky gut syndrome, body mass and inflammation during pregnancy and postpartum.*  
**Anna Strahm**

*Sex and stress: The impact of early life stress on adult rat behaviour and microbiome.*  
**Annalisa Cuskelly**

*The gut connection: Gut leakiness as a pathway from breast cancer survivors' relationship satisfaction to inflammation across treatment.* **Rosie Shrout**

*Perinatal sex hormones induce male-biased microglial mitochondrial dysfunction.*  
**Evan Bordt**

*Converging evidence for immune dysregulation in the frontal cortex in schizophrenia.*  
**Clare Beasley**

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12:00pm –  
12:30pm PDT

**Break**

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12:30pm –  
1:45pm PDT

### Member-Sponsored Symposia 3 & 4

**Location: SwapCard**

#### Symposium 3: Stress-Related Transcriptome and Psychoneuroimmunology of Stress and Depression: Integration of Animal and Human Experimental Models

Chair: **Joshua Cho**

*Adolescent stress increases neuroimmune reactivity and perivascular immune cells.*  
**Gretchen Neigh**

*Microglia are necessary for recall of anxiety-like behavior.* **John Sheridan**

*The metabolic basis of inflammation-induced depression.* **Robert Dantzer**

*Transcriptomic predictors of inflammation-induced symptoms of depression and anxiety.* **Joshua Cho**

#### Symposium 4: Ageing-Related Cognitive Decline: Causes and Consequences

Chairs: **Sarah Spencer** and **Ruth Barrientos**

*Microglial phenotype in ageing and disease.* **Jenna Zeibell**

*Ageing, high-fat diet, and precipitous cognitive decline: Potential mechanisms.* **Ruth Barrientos**

*The microglial contribution to ageing-related cognitive decline.* **Sarah Spencer**

*The relationship between gut microbiota and longitudinal cognitive function: A potentially modifiable factor in brain ageing and dementia risk.* **Barbara Bendlin**

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1:45pm – **Break** (Move to Ballroom)  
2:00pm PDT

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2:00pm – **Ronald Glaser Frontiers in PNI Lecture**  
3:00pm PDT *Location: Virtual Ballroom*

Intro from **Steve Cole**

**“Crosstalk Connecting Inflammation, Marrow, and the Nervous System”** from **Matthias Nahrendorf**

3:00pm – **Poster Session 1**  
4:00pm PDT *Location: Virtual Ballroom*

## Friday, May 21<sup>st</sup>, 2021

*Open Networking Time Available Online Before the Meeting in the Virtual Meeting Hub*

7:00am – **Poster Session 2**  
8:00am PDT *Location: Virtual Ballroom*

8:00am – **Welcome Back from Julienne Bower, PNIRS President**  
9:00am PDT *Location: Virtual Ballroom*

**George Solomon Memorial Lecture**  
*Location: Virtual Ballroom*

Intro from **Jennifer Felger**

**“Beyond Depression: The Expanding Role of Inflammation in Psychiatric Disorders”** from **Andrew Miller**

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9:00am – **Break** (Move to SwapCard)  
9:15am PDT

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9:15am – **Presidential Symposium & Member-Sponsored Symposium 5**  
10:30am PDT *Location: SwapCard*

**Presidential Symposium: PNI Perspectives on COVID-19**  
Chair: **Julienne Bower**

*Could psychological factors influence COVID-19 outcomes?* **Kavita Vedhara** and **Lucy Fairclough**

*SARS-CoV-2 infection of the CNS.* **Thomas Lane**

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*The landscape of humoral immunity in the cerebrospinal fluid of COVID-19 patients with neuropsychiatric impairment.* **Christopher Bartley**

*Post-COVID depression: A provocative testing of the immunopsychiatry of mood disorders.* **Francesco Benedetti**

## **Symposium 5: The Sleep-Brain-Immune Interface: Role of Sleep Disturbances in Pain, Fatigue, Emotional Processing, and Cognitive Health**

Chair: **Judith Carroll**

*Sleep disruption and inflammation: Co-conspirators in chronic pain.* **Mark Opp**

*Sex differences to prolonged experimentally induced sleep disturbances: Pain, fatigue, and pro- and counter-inflammatory responses.* **Monika Haack**

*Sleep disturbance and reward and emotion processing mechanisms of depression: Moderating role of sex and inflammation.* **Michael Irwin**

*Biological aging in breast cancer survivors, cognitive symptoms, and the protective role of good sleep.* **Judith Carroll**

*Non-REM sleep response during recovery sleep counteracts impaired inflammatory resolution due to sleep disturbance in healthy humans.* **Larissa Engert**

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10:30am –  
10:45am PDT

### **Break**

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10:45am –  
11:45am PDT

## **Oral Sessions 4, 5, & 6**

**Location: SwapCard**

### **Oral Session 4: Neuro-immune Risk and Resilience Factors**

Moderator: **Kate Kuhlmann**

*Social support and perceived stress buffer caregiving's link with antibody responses to hepatitis A vaccine: A test of the stress-buffering hypothesis.* **Annelise Madison**

*The value of cultivating multiple resilience factors: effects of resilience factors on inflammation-related depression in the context of stress.* **Andrew Manigault**

*Sleep fragmentation enhances inflammation and compromises stress-responsive neuronal activity following traumatic brain injury.* **Zoe Tapp**

*Effects of insomnia and inflammation on spatial memory: a randomized controlled trial of endotoxin in older adults.* **Dominique Piber**

*Non-REM sleep response during recovery sleep counteracts impaired inflammatory resolution due to sleep disturbance in healthy humans.* **Larissa Engert**

## Oral Session 5: Cancer PsychoNeuroImmunology

Moderator: **Jackie Schwarz**

*Toward a clinical perioperative systemic use of CpG-C to prevent postoperative metastases.* **Elad Sandbank**

*Does extent of breast cancer surgery impact inflammation and fatigue? More is not better.* **Arielle Radin**

*Doxorubicin sensitizes breast cancer cells to stress signaling.* **Aeson Chang**

*Effects of perioperative beta-blockade and COX2-inhibition on 5-year disease-free-survival in colorectal cancer patients undergoing curative surgery: A pilot randomized controlled trial.* **Itay Ricon-Becker**

*Voluntary exercise reduces hypoxia gene expression and inhibits mammary tumor growth through alteration of mononuclear phagocytes.* **Donald Lamkin**

## Oral Session 6: Signaling Molecules in Health and Disease

Moderator: **Asya Rolls**

*Spinal interleukin-10 maintains remission of neuropathic pain via delta opioid receptor upregulation in dorsal root ganglia.* **Geoffrey Laumet**

*Between the brain and the heart: Effects of mood-regulating networks on immune and healing process following heart attack.* **Hedva Haykin**

*Airway inflammation leads to microstructural brain changes in asthma.* **Melissa Rosenkranz**

*Microglial BDNF regulates susceptibility to the behavioral and synaptic effects of chronic stress.* **Samuel Woodburn**

*Corticosterone activity regulation by hepatic sympathetic innervation.* **Eden Avishai**

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11:45am –  
12:15pm PDT

### **Break**

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12:15pm –  
1:15pm PDT

### **Discussion Groups 1 & 2**

#### **Discussion Group 1: New Approaches for Studying Behavior in PNI Research**

**Location: Virtual Ballroom**

Leader: **Robert Dantzer**

Speakers: **Jan Pieter Konsman, Jennifer Felger, and Catherine Dulac**

#### **Discussion Group 2: Advantages and Methodological Considerations of Experimental Endotoxemia in Humans: Towards a Standardized Procedure for its Application in PNI**

**Location: Virtual Meeting Hub**

Leader: **Julie Lasselin**

Speakers: **Joshua Cho, Mats Lekander, Jonathan Savitz, and Manfred Schedlowski**

1:15pm –  
2:00pm PDT

## **Robert Ader Award Lecture**

***Location: Virtual Ballroom***

Intro from **Teresa Reyes**

**“Neuron-Microglia Interactions Shape Synapses and Behavior in Chronic Stress”** from **Eric Wohleb**

2:00pm-  
2:30pm PDT

## **Closing and Awards**

***Location: Virtual Ballroom***

Meeting Close and Award Announcements from **Julienne Bower**

*BBI Impact Award* announced by **Carmine Pariante**

*Michael Irwin Equity, Diversity, and Inclusion Awards* announced by **Deborah Hodgson and Sarah Spencer**

*Robert Ader New Investigator Award and Norman Cousins Award* announced by **Julienne Bower**

2:30pm-  
3:00pm PDT

## **Member Meeting and Cocktails**

***Location: Virtual Ballroom***