



PsychoNeuroImmunology
Research Society

PNIRS 2016
23rd ANNUAL SCIENTIFIC MEETING
BRIGHTON, UNITED KINGDOM
JUNE 8-11, 2016



pnirs.org

Message from the President of the PNIRS



I am happy to welcome you to PNIRS-2016, the annual meeting of the Psychoneuroimmunology Research Society in Brighton, UK. The program committee and the local organizing committee headed by Neil Harrison have worked hard to put together an exciting program that provides a platform for all aspects of PNI.

The highlights of the program include three award lectures: the Norman Cousins Award lecture by Dr. Steve Cole, the Robert Ader New Investigator Award lecture by Dr. Lisa Christian, and the George Solomon Memorial lecture by Dr. Andrew Steptoe, supported by a generous donation from Susan Keran Solomon.

The PNIRS Excellence Fund supported the “Frontiers in PNI lecture”, an initiative that started in 2014 to invite a world class researcher from outside the PNIRS. We are honored that Dr. Hermona Soreq, Hebrew University of Jerusalem, accepted the invitation to present her cutting edge work on microRNA and behavior.

The program committee selected two exciting member-initiated symposia and four oral sessions as well as two data blitz sessions from the abstracts. We are very grateful to the Wellcome Trust for sponsoring the ten trainee travel awards for the best rating trainee abstracts and to our local organizer Neil Harrison for bringing the Wellcome Trust on board.

The trainee committee chaired by Dr. Teresa Reyes and Dr. Jonathan Godbout put together a wonderful program for trainees with a short course program on Wednesday afternoon followed by the Trainee Mentor Colloquium which will include a short introduction of PNIRS, How to Publish in *Brain, Behavior and Immunity*, the official journal of PNIRS, and effective grant writing. The trainee program on Wednesday closes with an interactive session of “Meet the Experts” that includes round table sessions around themes selected by the trainees.

New this year is a plan to increase involvement of trainees in the organization of PNIRS; the trainee committee has been asked to put forward names of trainees who will participate in all committees and the board of directors as non-voting members. The goal of this plan is to increase the influence of trainees on the society and to provide them with an opportunity to develop leadership skills. The Executive Committee looks forward to implementing this plan during the PNIRS-2016 meeting in Brighton.

Also new this year is the plan to form special interest groups around topics like PNI in: cancer and tumor biology; microbiome; brain, glia and neuroinflammation etc. The idea came from Dr. Suzi Hong, who is organizing a round table session during lunch on Friday to kick off this initiative. Thanks, Suzi!

It is a pleasure to welcome the new president-elect, Dr. Bill Banks and our incoming Secretary-Treasurer Dr. Staci Bilbo, who will assume their roles at the end of the meeting. I am also happy to welcome the newly elected member of the Board of Directors: Dr. Mats Lekander. On behalf of the entire society, many thanks to Jan Moynihan, our outgoing Secretary-Treasurer, Mark Opp, our past president, and John Sheridan, our outgoing Board of Director's member, for their excellent and valuable service to PNIRS. It has been a pleasure to discuss all PNIRS and meeting related issues in monthly phone conferences with the Executive Committee and occasional phone conferences with the Board of Directors.

At PNIRS-2016 we proudly present the first Primer of PsychoNeuroImmunology Research edited by Mark Opp. The Primer provides a concise overview of some of the many aspects of ongoing research in the field of psychoneuroimmunology. The goal is to provide a starting point for new comers in the field, be it trainees, early career investigators or experienced researchers who want to get started in this expanding and exciting area of research. Many thanks to Mark Opp for taking this initiative, and to him, all section editors and authors for their

contributions. I strongly recommend that all of you have a look at the display copies available at the registration desk and to order your own copy.

Finally, I sincerely thank the Program Committee for their work on selecting abstracts, trainee awardees, member-generated symposia, and their valuable contributions to all aspects of the program. A heartfelt thank you to Neil Harrison, chair of the local Organizing Committee and to Carmine Pariente and other members of the local team. The meeting and the society could not succeed without the superior work and guidance of our Executive Director, Susan Keran Solomon, and our administrator, Jackie Newman. Susan and Jackie, thanks for all your hard work, for keeping all of us on track and for your advice, suggestions and discussions!

Once again, welcome to Brighton for PNIRS-2016 and enjoy the meeting!

Sincerely,

Annemieke Kavelaars

Annemieke Kavelaars
PNIRS President 2015 – 2016



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Acknowledgements and Sponsors

We gratefully appreciate the support of Elsevier, Inc. for sponsoring the Brain, Behavior, and Immunity Editorial Board luncheon and providing the complimentary copies of Brain, Behavior, and Immunity for non-member registrants.



We gratefully appreciate the support of the Wellcome Trust for providing 10 travel awards for our PNIRS Trainee Scholar Award Winners



We gratefully appreciate the support of the Janssen Research and Development and GlaxoSmithKline Research and Development (GSK) for providing support at the gold level for PNIRS 2016.



About PNIRS

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

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

Executive Committee (Officers)

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Mark Opp (Past President)
Susan Lutgendorf (President-Elect)
Jan Moynihan (Secretary/Treasurer)
Susan Solomon (Executive Director)

PNIRS Staff

Jackie Newman

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Jonathan Godbout (Chair)
Christopher Engeland
Neil Harrison
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Jan Moynihan
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Alice Russell (Trainee Member)
Charlotte Clarke (Trainee Member)
Eric Wohleb (Trainee Member)

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Suzanne Segerstrom
Mark Hutchinson

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Erica Sloan
Greg Freund
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Jonathan Kipnis
Chris Coe
Neil Harrison
Carmine Pariante
Deb Hodgson
Raz Yirmiya



*PNIRS 2017
24th Annual Scientific Meeting*

*Galveston, TX
June 7-10, 2017*

*Conference Hotel: The Tremont House, a
Wyndham Grand Hotel Banquet Location:
Historic Garten Verein*



General Information

Registration Desk

The registration desk is located in the *central hallway of the main (ground) floor*. Please check in to receive your name badge and conference materials. Name badges are required at all times in order to access sessions and events. The registration desk will be open during the following hours:

Wednesday, June 8: 11:00 am – 5:00 pm
Thursday, June 9: 8:00 am – 4:00 pm
Friday, June 10: 8:00 am – 4:00 pm
Saturday, June 11: 8:00 am – 2:00 pm

The registration desk will be closed Thursday, Friday, and Saturday during lunch.

Chairs/Co-Chairs

Chairs of the sessions should be in the designated room at least 10 minutes before the session starts in order to assist the speakers. Every effort should be made to keep the session on schedule.

Symposium and Oral Session Speakers

Speakers should go to the designated room a minimum of 10 minutes before the session starts. Please introduce yourself to the Chair of your session. Speakers must strictly adhere to the allocated time.

Poster Presenters

The Poster Sessions will be held in the *Charlotte Room*. Push pins for mounting the posters will be provided. Look for your poster number in this Program Book. Remaining posters may be discarded if they are not taken down promptly.

Poster Session 1: You may begin to hang your posters the morning of Thursday, June 9th. Please remove your posters no later than the evening of Thursday, June 9th.

Poster Session 2: You may begin to hang your posters the morning of Friday, June 10th. Please remove your posters no later than the evening of Friday, June 10th.

Poster Session 3: You may begin to hang your posters the morning of Saturday, June 11th. Please remove your posters immediately after Poster Session 3 due to the closing banquet taking place in the same location.

Poster Data Blitz

The Poster Data Blitz talks will take place in the *Empress Suite*. All Data Blitz participants will give a 2-minute oral presentation with a maximum of 2 slides. Given their brevity, please upload all files the day before your talk at the registration desk. ***If you do not upload your talk in time, we cannot include your presentation.***

PNIRS Trainee Social

PNIRS Trainee Social is on **Friday, June 10** from 6-8 pm at the **Fiddler's Elbow** 11-12 Boyces Street, Brighton BN1 1AN, England. Directions will be available at the registration desk. Nametag will be required for entrance.

Guests

Guests accompanying registrants are welcome to attend the Opening Reception and Banquet as long as they have registered. Guest tickets for both events can be purchased at the registration desk.

Phones and WiFi

As a courtesy to presenters, speakers, and attendees, please switch cell phones to silent mode during all sessions and speakers. Please leave the session when answering calls. WiFi will be available at the meeting.

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 conference.

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 a highlight of the annual meeting of the *PsychoNeuroImmunology Research Society*.

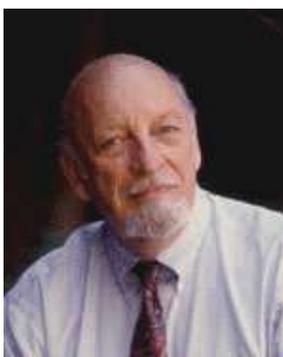
2016 Norman Cousins Award Lecture

A Genomic Perspective on PNI

Steve Cole, Ph.D.

Professor of Medicine and Psychiatry and Biobehavioral Sciences
University of California, Los Angeles
School of Medicine

The Robert Ader New Investigator Award



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

2016 Robert Ader New Investigator Award Lecture

*The Mind-Body Connection in Maternal and Child Health:
Stress, Race, Obesity, and Immune Function*

Lisa Christian, Ph.D.

Assistant Professor
Department of Psychiatry
The Ohio State University, Columbus
Wexner Medical Center

2017 COUSINS AND ADER AWARDS

The winners of the 2017 Norman Cousins Award Lecture and the Robert Ader New Investigator Award will be announced at the Closing Banquet on Saturday, June 11th.

The George Solomon Memorial Lecture



The George Solomon Memorial Lecture was newly 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.

2016 George Solomon Memorial Lecture

*Psychosocial Factors, Inflammation,
and Physical Health Outcomes*

Andrew Steptoe, Ph.D.

Professor of Psychology, Epidemiology & Public Health
Director, Institute of Epidemiology and Health Care in the
Faculty of Population Health Sciences and British Heart
Foundation
University College London

The Frontiers in PNI Lecture



The *Frontiers in Psychoneuroimmunology* lecture is supported by generous donations to the PNIRS Excellence Fund. The PNIRS Excellence Fund was established in 2011 to recruit outstanding non-PNIRS member scientists to participate in our annual meetings. By supporting outstanding invited lectures, we aim to further increase the visibility of our Society and to inspire the next generation of scientists exploring brain, behavior, and immunity. To support the PNIRS Excellence Fund, please see "Make a Donation" on the homepage of www.pnirs.org.

2016 Frontiers in PNI Lecture

*MicroRNA-Mediated Cholinergic Control of Inflammation and
Anxiety in Mice and Men*

Hermona Soreq, Ph.D.

Charlotte Slesinger Professor of Molecular Neuroscience
The Hebrew University of Jerusalem's Edmond and
Lily Safra Center for Brain Sciences

PNIRS Trainee Scholars (Supported by the Wellcome Trust)

Trainee Scholar	Presentation
Ronen Reshef	Poster Session 2 (#8) & Data Blitz 2
Eric Wohleb	Oral Session 2
Neta Rimmerman	Oral Session 2
Jacob Allen	Oral Session 4
Neta Rosenzweig	Oral Session 2
Gabriel Chiu	Oral Session 1
Lee Shaashua	Poster Session 1 (#36) & Data Blitz 1
Ryan Dawes	Oral Session 1
Sabrina Lisboa	Oral Session 4
Catherine Walsh	Oral Session 1

◇ Indicates a Trainee Scholar throughout the program

***Congratulations to our
2016 Trainee Scholars!***

PNIRS 2016 Schedule at a Glance

Time	Wednesday June 8	Thursday June 9	Friday June 10	Saturday June 11	Time		
8:00-8:30					8:00-8:30		
8:30-9:00	Financial Committee Meeting	Welcome Annemieke Kavelaars, PhD	Presidential Symposium Pain, Depression, and Cognition: It Is Not All About Microglia	Oral Session 3 Sleep and Pain	8:30-9:00		
9:00-9:30		Member Sponsored Symposium 1 Structural, Functional and Neurotransmitter Effects of Inflammation In Depression using Multimodal Imaging			Break	9:00-9:30	
9:30-10:00	Scientific Affairs Committee Meeting		9:30-10:00				
10:00-10:30			Break	10:00-10:30			
10:30-11:00	Membership Committee Meeting		Break	Member Sponsored Symposium 2 Food, Mood, and Cognition: When what we eat signals the brain	10:30-11:00		
11:00-11:30	Nominating Committee Meeting	Break	Oral Session 2 Neuroinflammation and Behavior		11:00-11:30		
11:30-12:00	Communication Committee Meeting	Robert Ader Lecture Lisa Christian, PhD		Break	11:30-12:00		
12:00-12:30		Poster Data Blitz 1	12:00-12:30				
12:30-1:00	Board of Directors Meeting (Lunch included)	Lunch Provided	Poster Data Blitz 2	Lunch Provided	12:30-1:00		
1:00-1:30		Concurrently: Leader Lunch	Lunch Provided Special Interest Roundtable		1:00-1:30		
1:30-2:00		Oral Session 1 PNI in Cancer	Concurrently: BBI Editorial Board Luncheon	Poster Session 3	1:30-2:00		
2:00-2:30					2:00-2:30		
2:30-3:00		Educational Short Course Cutting Edge Approaches in Imaging: Applications in Human and Animal PNI Research	Poster Session 1	Poster Session 2	Oral Session 4 Inflammation, Stress and Microbiome	2:30-3:00	
3:00-3:30			Break	Break		3:00-3:30	
3:30-4:00		Break	Frontiers in PNI Lecture Hermona Soreq, PhD	Break	3:30-4:00		
4:00-4:30		Norman Cousins Lecture Steve Cole, PhD			George Solomon Memorial Lecture Andrew Steptoe, PhD	4:30-5:00	
4:30-5:00			5:00-5:30				
5:00-5:30							
5:30-6:00				PNIRS Business Meeting	5:30-6:00		
6:00-6:30	Trainee-Mentor Colloquium	Welcome Reception	Trainee Mixer Social		6:00-6:30		
6:30-7:00						6:30-7:00	
7:00-7:30						Closing Banquet	7:00-7:30
7:30-8:00							7:30-8:00
8:00-8:30				8:00-8:30			
9:00-					9:00-		

Wednesday, June 8

8:30-3:00 COMMITTEE MEETINGS

Regent Room, Ground floor

- 8:30 Financial Committee
- 9:30 Scientific Affairs Committee
- 10:30 Membership Committee
- 11:00 Nominating Committee
- 11:30 Communications Committee
- 12:30 Board of Directors Meeting (lunch included)

3:00-5:30 EDUCATIONAL SHORT COURSE

Empress Suite, Ground floor

Chair: Neil Harrison and Teresa Reyes

Cutting Edge Approaches in Imaging Applications in Human and Animal PNI Research

Multiphoton Imaging of Immune Cells during CNS Infection

Tajie Harris

Department of Neuroscience, University of Virginia, School of Medicine,
Charlottesville, VA

Opportunities and Challenges in Small Animal Neuro(immune)imaging: From a Black Box with Holes to Grey Values

Jan Pieter Konsman

Institute of Cognitive Neuroscience and Integrative Aquitaine, University of Bordeaux,
Bordeaux, France

Using Neuroimaging to Understand Inflammation in the CNS

Federico Turkheimer

Institute of Psychology, Psychiatry and Neuroscience, King's College London, London,
UK

Advanced MRI for In Vivo Imaging of the Effects of Inflammation on the CNS

Mara Cercignani

Clinical Imaging Sciences Centre, Brighton and Sussex Medical School, East Sussex,
UK

6:00-8:00 TRAINEE/MENTOR COLLOQUIUM (All Trainees, refreshments will be provided)

Empress suite, Ground floor

Opening Remarks

Teresa Reyes, PNIRS Trainee Committee Chair

Welcome

Annemieke Kavelaars, President, PNIRS

A Brief History of the PsychoNeuroImmunology Research Society

Susan Lutgendorf, President-Elect, PNIRS

How to Publish in Brain Behavior and Immunity?

Keith Kelley, Editor-in-Chief, *Brain, Behavior and Immunity*
Toby Charkin, Elsevier

Tips for Effective Writing

Teresa Reyes, PNIRS Trainee Committee Chair

Meet the Experts

PNIRS Senior Faculty

Three-20 minute round table discussions with the following topics:

- Finding a postdoc position-Julie Lasselin and Eric Wohleb
- Finding an academic job-Lisa Christian and Christoph Rummel
- Thoughts on grant writing-Mark Opp and Teresa Reyes
- Tips for Networking-Manfred Schedlowski and Susan Solomon
- Science and [social] media-Jan Pieter Konsman and Leah Pyter
- How to manage conflict / maintain & foster collaborations-Cobi Heijnen and Rohan Walker
- Work-family balance-Jennifer Graham-Engeland and Mats Lekander

Thursday, June 9

7:00-8:30

BREAKFAST

GB1 Restaurant, Ground floor

8:45-9:00

WELCOME

Empress Suite, Ground floor

Annemieke Kavelaars, President PNIRS

9:00-11:00

MEMBER SPONSORED SYMPOSIUM

Empress Suite, Ground floor

Chair: Ebrahim Haroon and Jennifer Felger

Structural, Functional and Neurotransmitter Effects of Inflammation in Depression using Multimodal Imaging

Inflammation-induced Mood Change: Towards an Integration of Functional, Structural and Circuit-based Analyses?

Neil Harrison

Brighton and Sussex Medical School

Do Neuroactive Kynurenine Metabolites affect Brain Structure and Function in Depression?

Jonathan Savitz

Laureate Institute for Brain Research and University of Tulsa

Inflammation-induced Glutamate and Glial Pathology in Depression

Ebrahim Haroon

Emory University School of Medicine

From Primates to Patients: Inflammation effects on Dopamine, Motivation and Reward Circuitry

Jennifer C. Felger

Emory University School of Medicine

Discussant: **Andrew H. Miller**, Emory University School of Medicine

11:00-11:30

BREAK

The Pavillion, Ground floor

11:30-12:00 ROBERT ADER LECTURE

Empress Suite, Ground floor

Nominator: Janice Kiecolt-Glaser

Chair: Annemieke Kavelaars



*The Mind-Body Connection in Maternal and Child Health:
Stress, Race, Obesity, and Immune Function*

Lisa Christian

Assistant Professor, Psychiatry, Center for Psychiatry and Behavioral Health, Institute for Behavioral Medicine Research, The Ohio State University, Wexner Medical Center

12:00-12:30 POSTER DATA BLITZ 1

Empress Suite, Ground floor

Chair: Deb Hodgson

Poster Number	Title
1*	Cross-sectional and longitudinal associations between immune cells in blood and brain -- a TSPO PET study in healthy control subjects N. Kanegawa, K. Collste, A. Forsberg, M. Schain, R. Arakawa, A. Jucaite, M. Lekander, C. Olgart Höglund, E. Kosek, J. Lampa, C. Halldin, L. Farde, A. Varrone, S. Cervenka [1847]
6*	The role of endothelial IL-1R1 in angiogenic neuroinflammation X. Liu, D. P. Nemeth, D. B. Mckim, A. R. Yajnik, O. Berdysz, J. F. Sheridan, J. P. Godbout, L. Zhu, N. Quan [1736]
36*◇	Promotion of micrometastases by primary tumor secretome, and the deleterious effects of inflammatory surgical-stress responses on dormant metastases L. Shaashua, E. K. Sloan, R. Satchi-Fainaro, S. Ben-Eliyahu [1800]
11*	Acute coronary syndrome-associated depression: immunological, autonomic, nutritional, and psychosocial contributors. U. Vollmer-Conna, E. Cvejic, I. Granville Smith, D. Hadzi-Pavlovic, G. Parker [1738]
8*	Stress and the cholinergic system: the cholinergic pathway in allergic inflammation aggravated by psychosocial stress exposure is not anti-inflammatory E. Peters, F. R. Rommel, L. Ivanovas, W. Kummer, U. Gieler [1815]
3*	Impaired beta-adrenergic upregulation of anti-inflammatory cytokine production in patients with ulcerative colitis in remission H. Engler, M. Schöls, J. Köcke, H. Cramer, J. Langhorst, S. Elsenbruch [1796]
7*	Peripheral Cutaneous Inflammation Induces a Brain Chemokine Response, Immune Cell Infiltration and Functional Changes A. McColl, L. Nerurkar, G. J. Graham, J. Cavanagh [1805]
5*	Differential mechanisms of <i>cancer</i> - versus <i>cancer therapy</i> -related fatigue in patients with acute myeloid leukemia T. E. Lacourt, A. Kavelaars, S. Shelburne, D. Kontoyiannis, A. Futreal, C. J. Heijnen [1777]
9*	Attenuation of Opioid Analgesia in T cell Deficient Mice S. Rosen, B. Ham, M. Haichin, I. Walters, J. S. Mogil [1775]

-
- 10* Upper-respiratory viral infection triggers EAE onset in autoimmune prone T-cell receptor transgenic mice
S. Blackmore, M. Juda, J. Hernandez, R. W. Johnson, A. J. Steelman [1776]
-
- 4* Singing is associated with modulations in cortisol, cytokine, beta-endorphin and oxytocin activity in cancer patients and carers
D. Fancourt, A. Williamon, L. A. Carvalho, A. Steptoe [1708]

12:30-1:30 LUNCH
GB1, GB2, and Albert, Ground floor

Concurrently: Leader Luncheon (Invitation only)
Eugenie Room, Ground Floor

1:30-3:00 ORAL SESSION 1
Empress Suite, Ground Floor
Chair: Cobi Heijnen and Don Lamkin

PNI in Cancer

- 1:30 *Perioperative COX-2 inhibition and beta-adrenoceptor blockade in breast cancer patients improve markers of immunity and reduce inflammation and primary tumor epithelial-to-mesenchymal transition (EMT)*
L. Shaashua, M. Shabat-Simon, R. Haldar, M. Shabtai, E. Sharon, T. Alweis, O. Zmora, S. Cole, S. Ben-Eliyahu [1731]
- 1:45 *Beta-adrenergic receptor signaling constrains mammary tumor progression and modulates tumor-associated exosomes.*
R. P. Dawes, D. K. Byun, E. B. Brown, K. S. Madden [1825] ◇
- 2:00 *Activating the brain to fight cancer: reward system activation attenuates tumor growth in mice*
T. Ben-Shaan, M. Schiller, F. Hakim, A. Rolls [1782]
- 2:15 *Intranasal administration of mesenchymal stem cells promote recovery from cisplatin-induced neurological and cognitive impairments*
G. S. Chiu, S. Rizvi, N. Boukelmoune, A. Kavelaars, C. J. Heijnen [1778] ◇
- 2:30 *Select behavioral and physiological changes persist in novel cancer survivor model.*
L. M. Pyter, S. Bever, J. Kaur, J. Bellisario, H. Lin, L. Suarez-Kelly, W. E. Carson III [1779]
- 2:45 *Caregiving distress and childhood trauma associate with decline in cortisol over time among mothers of children newly diagnosed with cancer*
C. P. Walsh, L. J. Ewing, J. L. Cleary, A. D. Vaisleib, C. Farrell, K. Gray, A. L. Marsland [1832] ◇

3:00-4:00 POSTER SESSION 1
Charlotte Room, Ground floor

See poster number list in back of program. The number in bracket [nnnn] indicates the abstract number in the booklet.

The abstract booklet was e-mailed to all participants. To have another copy e-mailed to you please stop by the registration desk.

Friday, June 10

7:00-8:30 **BREAKFAST**
GB1 Restaurant, Ground floor

8:30-10:30 **PRESIDENTIAL SYMPOSIUM**
Empress Suite, Ground floor
Chair: Annemieke Kavelaars

Pain, Depression and Cognition. It is Not All About Microglia.

T cells Regulate Resolution of Pain and Depression

Annemieke Kavelaars

Department of Symptom Research, Division of Internal Medicine, University of Texas, MD Anderson Cancer Center, Houston, TX

Meningeal Lymphatics in CNS Health and Disease

Jonathan Kipnis

Department of Neuroscience, University of Virginia, School of Medicine, Charlottesville, VA

IL-6 and BDNF Act on the Meningeal Afferent System to Promote Headache

Gregory Dussor

School of Behavioral and Brain Sciences, University of Texas at Dallas, Richardson, TX

Autoantibodies and Pain: New Links to Joint Pain in Rheumatoid Arthritis

Camilla Svensson

Department of Physiology and Pharmacology, Karolinska Institutet, Stockholm Sweden

10:30-11:00 **BREAK**
The Pavilion, Ground floor

11:00-12:30 **ORAL SESSION 2**
Empress Suite, Ground floor
Chair: Carmine Pariante and Ute Vollmer-Conna

Neuroinflammation and Behavior

11:00 *Depression and Inflammation are Independent Predictors of Fatigue in Breast Cancer Survivors*

C. Xiao, A. Miller, J. Felger, D. Mister, T. Liu, M. Torres [1724]

11:15 *Microglia-mediated dendritic remodeling is associated with alterations in neuron-derived signals after chronic unpredictable stress*

E. S. Wohleb, R. S. Duman [1772] ◇

11:30 *Microglia mediate the anti-depressive effects of electroconvulsive shock therapy in mice exposed to chronic unpredictable stress.*

N. Rimmerman, M. Abargil, L. Cohen, R. Reshef, I. Arad, J. Kippen, R. Yirmiya [1774] ◇

11:45 *Transiently breaking immune tolerance by targeting Foxp3+CD4+ regulatory T cells mitigates Alzheimer's disease pathology*

N. Rosenzweig, K. Baruch, A. Kertser, A. Deczkowska, M. Schwartz [1715] ◇

- 12:00 *Microglia suppress cocaine-induced plasticity and behavioral sensitization through TNF- α*
G. M. Lewitus, S. C. Konefal, A. D. Greenhalgh, H. Pribiag, D. Stellwagen [1765]
- 12:15 *Inflammation and mitochondrial dysfunction in elderly women with Major Depressive Disorder*
C. Boeck, A. Karabatsiakos, J. Salinas-Manrique, E. Calzia, S. Kolassa, D. E. Dietrich, I. T. Kolassa [1746]

12:30-1:00 POSTER DATA BLITZ 2
Empress Suite, Ground floor
Chair: Manfred Schedlowski

Poster Number	Title
5*	Neonatal immune activation with lipopolysaccharide and a 'second hit' of adulthood stress alters ovarian inflammatory mediators: Implications for female subfertility. E. A. Fuller, M. C. Carey, K. A. Redgrove, E. A. McLaughlin, D. M. Hodgson [1761]
7*	Mitochondrial respiration in peripheral blood mononuclear cells of individuals with borderline personality disorder M. Rappel, A. Karabatsiakos, E. Calzia, M. Jungkunz, C. Schmahl, M. Bohus, I. Kolassa [1803]
11*	Metabolic Dysfunction, Inflammation, and Task-Induced Emotional Stress Reactivity: Neural and Cognitive Correlates in 331 Middle-aged Adults T. Wolf, A. Willette [1783]
8*◇	The role of microglia in adult neurogenesis R. Reshef, E. Kudryavitskaya, H. Shani, N. Rimmerman, A. Mizrahi, R. Yirmiya [1756]
10*	Experimental procedures performed sequentially exert a stress that activates caspase-1 and impairs memory in mice. A. Towers, M. Oelschlager, J. Patel, G. G. Freund [1771]
4*	Cell and transcript specific expression of tryptophan and indoleamine 2,3-dioxygenases in the mouse brain following acute restraint stress C. R. Dostal, G. G. Freund, R. H. McCusker [1841]
9*	Myocardial infarction influences microglia morphology in the hypothalamus L. Gouweleeuw, H. Wajant, O. Maier, U. M. Eisel, R. G. Schoemaker [1766]
1*	Unique immune profiles in children with autism who experience gastrointestinal co-morbidity D. Rose, J. Van de Water, P. Ashwood [1787]
2*	Exposure to a social stressor results in changes to microbial-produced short chain fatty acids and increased TNF- α production by colonic epithelial cells M. T. Bailey, A. R. Mackos, R. Maltz [1732]
6*	Effects of Tumor Development and Social Stress on Inflammation: Behavioral and Physiological Changes A. Lebeña, A. Azpiroz, G. Beitia, E. Gómez-Lázaro, A. Arregi, L. Garmendia, O. Vegas [1726]
3*	The effects of expressive writing on wound healing in surgical patients E. Broadbent, H. Koschwanez, H. Robinson, G. Beban, A. MacCormick, A. Hill, J. Windsor, M. Jüllig, R. Booth [1758]
36*	Essential Fatty Acids Intake Associated with Delay Aversion and Temporal Processing in Children with Attention Deficit Hyperactivity Disorder (ADHD) J. Chang, L. Jingling, Y. Huang, Y. Lu, K. Su, V. Mondelli, C. M. Pariante [1762]

1:00-2:30 **LUNCH**
GB1, GB2, and Albert, Ground floor
Special Interest Round Table

Concurrently: BBI BOARD MEETING (Invitation only)
Consort Room, Ground Floor

2:30-3:30 **POSTER SESSION 2**
Charlotte Room, Ground floor

See poster number list in back of program. The number in bracket [nnnn] indicates the abstract number in the booklet.

The abstract booklet was e-mailed to all participants. To have another copy e-mailed to you please stop by the registration desk.

3:30-4:00 **BREAK**
The Pavilion, Ground Floor

4:00-5:00 **FRONTIERS IN PSYCHONEUROIMMUNOLOGY**
Empress Suite, Ground floor
Chair: Raz Yirmiya

MicroRNA-Mediated Cholinergic Control of Inflammation and Anxiety in Mice and Men

Hermona Soreq

Charlotte Slesinger Professor of Molecular Neuroscience, The Hebrew University of Jerusalem's Edmond and Lily Safra Center for Brain Sciences



Professor Hermona Soreq is the Charlotte Slesinger Professor of Molecular Neuroscience at The Hebrew University of Jerusalem's Edmond and Lily Safra Center for Brain Sciences. She is the first woman to have served as dean of the university's Faculty of Science. Through her research, Dr. Soreq pioneers diverse Molecular Biomedicine approaches for exploring the mechanisms underlying stress-associated diseases and develops innovative strategies for alleviating the consequences of traumatic experiences or chemical and inflammatory stresses.

6:00-8:00 **PNIRS Trainee Social**
Fiddler's Elbow, 11-12 Boyces Street, Brighton

Directions are available at the registration desk

Saturday, June 11

7:00-8:30 BREAKFAST
GB1 Restaurant, Ground floor

8:30-10:00 ORAL SESSION 3
Empress Suite, Ground floor
Chair: Susan Lutgendorf and Mark Hutchinson

Sleep and Pain

- 8:30 *Sleep maintains homeostasis and function of monocytes in mice*
J. Hahn, M. Guenter, S. E. Autenrieth [1711]
- 8:45 *Sleep Improvement in Older Adults with Osteoarthritis is Associated with Lower Inflammatory Response to Laboratory Pain and Improved Clinical Pain*
K. L. Heffner, C. R. France, P. Walsh, W. R. Pigeon [1823]
- 9:00 *Early life adversity associated with enhanced capsaicin-induced spontaneous pain*
H. R. Linsenbardt, M. W. Meagher [1829]
- 9:15 *Evidence for Dissociation Between Spontaneous Pain and Depression-like Behavior in Neuropathic Pain models*
G. Laumet, R. Dantzer, C. J. Heijnen, A. Kavelaars [1745]
- 9:30 *Sleep Disturbance and Kynurenine Metabolism in a Group of Currently Depressed, Previously Depressed, and Never Depressed Subjects*
H. J. Cho, J. Savitz, R. Dantzer, T. K. Teague, W. C. Drevets, M. R. Irwin [1755]
- 9:45 *Cytotoxic T cells may induce pain hypersensitivity in female but not male mice after nerve injury in an interferon-g-receptor-dependent manner*
B. Ham, S. Rosen, J. Austin, J. S. Mogil [1773]

10:00-10:30 BREAK
The Pavilion, Ground floor

10:30-12:30 MEMBER SPONSORED SYMPOSIUM
Empress Suite, Ground floor
Chair: Ruth M. Barrientos

Food, Mood, and Cognition: When what we eat signals the brain

We are what we ate: Early life diet programs lifetime microglial sensitivity

Sarah J. Spencer

Health Innovations Research Institute, RMIT University

Nutritional n-3 PUFAs deficiency during perinatal period alters brain immune system and neuronal plasticity

Sophie Layé

University of Bordeaux

The sensitizing effects of a 3-day high-fat diet on LPS-induced neuroinflammation and contextual memory is mediated by corticosterone

Ruth M. Barrientos

University of Colorado Boulder

The beneficial effects of polyphenols on cognition via modulation of inflammation and oxidative stress in aging

Barbara Shukitt-Hale

Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University

12:30-1:30

LUNCH

GB1, GB2, and Albert, Ground floor

1:30-2:30

POSTER SESSION 3

Charlotte Room, Ground floor

See poster number list in back of program. The number in bracket [nnnn] indicates the abstract number in the booklet.

The abstract booklet was e-mailed to all participants. To have another copy e-mailed to you please stop by the registration desk.

2:30-4:00

ORAL SESSION 4

Empress Suite, Ground floor

Chair: Michael Bailey and Margaret Kemeny

Inflammation, Stress and Microbiome

- 2:30 *Secondary neurodegeneration after stroke is exacerbated by stress: a new opportunity for preserving viable brain tissue*
F. Walker, K. Jones, Z. Zhao, L. K. Ong, M. Kluge, K. Zalewska, S. Johnson, M. Nilsson [1760]
- 2:45 *Repeated social defeat stress-induced neuroinflammation contributes to later fear sensitization and impaired extinction recall of fear conditioning in mice: involvement of the endocannabinoid system.*
S. F. Lisboa, A. Niraula, D. Shea, L. B. Resstel, F. S. Guimaraes, J. P. Godbout, J. F. Sheridan [1831] ◇
- 3:00 *Early life stress predisposes to increased sensitivity to inflammatory stimuli through intestinal dysbiosis*
G. De Palma, M. Pigrau, J. Lu, Y. Deng, E. F. Verdu, S. M. Collins, P. Bercik [1850]
- 3:15 *Exercise-Induced Changes in Gut Microbiota Alters Response to Colitis in Mice: Clinical Scores and Body Weight Differences*
J. Allen, P. Kashyap, C. Salmonson, J. Fryer, V. Nehra, B. White and J. Woods [1852] ◇
- 3:30 *The Relationship Between Mood and Inflammatory Biomarkers is Influenced by their Temporal Proximity and Mood Measurement*
J. E. Graham-Engeland, C. G. Engeland, N. L. Sin, J. M. Smyth, M. J. Sliwinski, D. M. Almeida, R. B. Lipton, M. J. Katz [1710]
- 3:45 *Dynamical association between day-to-day fluctuations in inflammatory markers and affect in healthy individuals*
H. M. Schenk, S. L. van Ockenburg, M. C. Nawijn, P. de Jonge, J. G. Rosmalen [1826]

4:00-4:30

BREAK

The Pavilion, Ground floor

4:30-5:30 **GEORGE SOLOMON MEMORIAL LECTURE**

Empress Suite, Ground floor

Chair: Neil Harrison

Psychosocial Factors, Inflammation, and Physical Health Outcomes

Andrew Steptoe

Professor of Psychology, Epidemiology & Public Health Director, Institute of Epidemiology and Health Care in the Faculty of Population Health Sciences and British Heart Foundation University College London



Andrew Steptoe is Director of the Institute of Epidemiology and Health Care in the Faculty of Population Health Sciences, and British Heart Foundation Professor of Psychology at University College London. Andrew directs the Psychobiology Group and the English Longitudinal Study of Ageing research group at UCL. He has published more than 400 peer-reviewed articles and is author or editor of 18 books, most recently the Handbook of Behavioral Medicine (2010) and Stress and Cardiovascular Disease (2012).

5:30-6:30 **BUSINESS MEETING** (All attendees are encouraged to attend)

Regent Room, Ground floor

7:00- **CLOSING BANQUET** (Included)

Empress Suite, Ground floor

Presentation of the 2017 Norman Cousins and Robert Ader New Investigator Awards

Poster Session 1, Thursday, June 9

*Indicates participation in the Data Blitz; Number in brackets is abstract number in abstract booklet.

◇ Indicates a Trainee Scholar

Posters will be presented in CHARLOTTE ROOM	
1*	Cross-sectional and longitudinal associations between immune cells in blood and brain -- a TSPO PET study in healthy control subjects N. Kanegawa, K. Collste, A. Forsberg, M. Schain, R. Arakawa, A. Jucaite, M. Lekander, C. Olgart Höglund, E. Kosek, J. Lampa, C. Halldin, L. Farde, A. Varrone, S. Cervenka [1847]
2	Rapamycin inhibits antidepressant effects of leucine in lipopolysaccharide-treated mice A. K. Walker, B. P. Danysh, D. L. Christian, J. L. Remus, M. Hofmann, R. Dantzer [1750]
3*	Impaired beta-adrenergic upregulation of anti-inflammatory cytokine production in patients with ulcerative colitis in remission H. Engler, M. Schöls, J. Köcke, H. Cramer, J. Langhorst, S. Elsenbruch [1796]
4*	Singing is associated with modulations in cortisol, cytokine, beta-endorphin and oxytocin activity in cancer patients and carers D. Fancourt, A. Williamon, L. A. Carvalho, A. Steptoe [1708]
5*	Differential mechanisms of cancer- versus cancer therapy-related fatigue in patients with acute myeloid leukemia T. E. Lacourt, A. Kavelaars, S. Shelburne, D. Kontoyiannis, A. Futreal, C. J. Heijnen [1777]
6*	The role of endothelial IL-1R1 in angiogenic neuroinflammation X. Liu, D. P. Nemeth, D. B. Mckim, A. R. Yajnik, O. Berdysz, J. F. Sheridan, J. P. Godbout, L. Zhu, N. Quan [1736]
7*	Peripheral Cutaneous Inflammation Induces a Brain Chemokine Response, Immune Cell Infiltration and Functional Changes A. McColl, L. Nerurkar, G. J. Graham, J. Cavanagh [1805]
8*	Stress and the cholinergic system: the cholinergic pathway in allergic inflammation aggravated by psychosocial stress exposure is not anti-inflammatory E. Peters, F. R. Rommel, L. Ivanovas, W. Kummer, U. Gieler [1815]
9*	Attenuation of Opioid Analgesia in T cell Deficient Mice S. Rosen, B. Ham, M. Haichin, I. Walters, J. S. Mogil [1775]
10*	Upper-respiratory viral infection triggers EAE onset in autoimmune prone T-cell receptor transgenic mice S. Blackmore, M. Juda, J. Hernandez, R. W. Johnson, A. J. Steelman [1776]
11*	Acute coronary syndrome-associated depression: immunological, autonomic, nutritional, and psychosocial contributors. U. Vollmer-Conna, E. Cvejic, I. Granville Smith, D. Hadzi-Pavlovic, G. Parker [1738]
12	Serum factors as predictors of Interferon-alpha (IFN-alpha)-induced depression A. Borsini, N. Hepgul, A. Russell, Z. Zajkowska, P. Zunszain, C. Pariante, S. Thuret [1744]
13	Higher depressive symptoms relate to different inflammatory response patterns (<i>ex vivo</i>) among men and women C. G. Engeland, M. Majd, J. E. Graham-Engeland, J. M. Smyth, M. J. Sliwinski, R. B. Lipton, M. J. Katz [1709]
14	Gene Expression Profile of the Interferon Pathway in the Brains of Diet-Induced Obese Mice M. A. Jefferson, N. Singh, A. Kanthasamy, M. L. Kohut [1851]
15	β -adrenergic-activated macrophages: Location in the M1-M2 polarity spectrum and their transcriptional regulation D. M. Lamkin, S. W. Cole, E. K. Sloan [1833]
16	Combined influence of depression and systemic inflammation on cardiovascular disease and all-cause mortality: evidence for differential effects by gender in the English Longitudinal Study of Ageing S. Lawes, P. Demakakos, A. Steptoe, G. Lewis, L. Carvalho [1767]

17	Cytokine patterns in Interferon-alpha induced Persistent Fatigue A. Russell, N. Nikkheslat, N. Hepgul, A. Borsini, Z. Zajkowska, P. A. Zunszain, V. Mondelli, D. Forton, K. Agarwal, C. M. Pariante [1812]
18	Neuro-immune dysregulation and depressive vulnerability: The Cortisol:C-reactive protein ratio predicts context-dependent negative affect reactivity in men and women with elevated symptoms of depression E. C. Suarez, J. S. Sundry [1718]
19	Changes in Peripheral Immune Cell Functions in Women with Mild Cognitive Impairment and Parkinson's Disease C. Vida, E. Carro, J. Molina, M. De la Fuente [1741]
20	The effects of cannabis use in Interferon - alpha treatment for hepatitis C viral infection Z. Zajkowska, A. Russell, N. Hepgul, A. Cattaneo, D. Baumeister, E. Boorman, D. Forton, K. Agarwal, V. Mondelli, P. A. Zunszain, C. M. Pariante [1785]
21	Systemic levels of IgE as a determinant of self-rated health in patients with asthma A. Andreasson, K. Lodin, K. Alving, J. Syk, M. Lekander [1814]
22	Relationship Between Cortisol, Endocannabinoids, PTSD and Depression Immediately and Six Months After Traumatic Injury T. deRoon-Cassini, C. Hillard [1781]
23	Cilia, an organelle central to psychoneuroimmunology -- a characterization through its interactome M. Ganapathiraju, S. Chaparala, C. Lo [1827]
24	Cytokine level changes following acute ethanol intoxication in healthy men: a cross-over study S. P. Neupane, A. Skulberg, K. R. Skulberg, H. C. D. Aass, J. G. Bramness [1751]
25	IL-1 β negatively impacts upon expression of both inflammatory and neurogenesis-associated signalling molecules in hippocampal neural stem cells <i>in vitro</i> C. S. O Leime, J. F. Cryan, Y. M. Nolan [1834]
26	Age- and depression-related changes in FKBP4 and FKBP5 expression across adolescence J. M. Wolf, N. Rohleder, G. E. Miller [1845]
27	Plasma levels of lipopolysaccharide-binding protein in response to psychosocial stress induction: Association with sympathetic nervous system response K. de Punder, C. Heim, S. Entringer [1795]
28	Peripheral inflammatory mediators and p11 levels in peripheral blood mononuclear cells from patients with Parkinson's disease. H. F. Green, L. Brodin, P. Greengard, L. Berg, P. Svenningsson [1792]
29	Are "Larks" More Conscientious? Circadian Rhythms and Their Possible Links to Personality Traits K. H. Gunkel [1838]
30	Psychosocial and socioeconomic status as predictors of outcomes following hematopoietic stem cell transplantation: An ancillary study from the BMT CTN 0902 randomized controlled trial (RCT) J. M. Knight, M. Martens, K. L. Syrjala, J. Le-Rademacher, B. R. Logan, S. J. Lee, P. B. Jacobsen, W. A. Wood, H. Jim, J. R. Wingard, M. M. Horowitz, N. S. Majhail, M. H. Abidi, N. L. Geller, M. Fei, J. Wu, J. D. Rizzo [1729]
31	A high-sensitivity magnetic multiplex assay detects changes in plasma concentrations of interleukin-6 induced by the Trier Social Stress Test A. M. Quinn, A. R. Williams, T. I. Sivilli, C. L. Raison, T. W. Pace [1844]
32	Hair cortisol concentrations associate with hair growth rate L. Xiang, I. Sunesara, K. Rehm, G. D. Marshall, Jr [1697]
33	Investigating the Influence of environment and psychological state on the immune response: Developing a PNI toolkit S. Brod , T. Gobetti, B. Gittens, M. Perretti, F. D'Acquisto [1763]
34	Behaviorally conditioned immunosuppression: Effects of a prolonged post-conditioning retention interval E. M. Martínez-Gómez, L. Lückemann, H. Engler, M. Hadamitzky, M. Schedlowski [1822]

35	Corneal injury induces trigeminal pain, peripheral and central neuroinflammatory process A. Reaux Le Goazigo, P. Launay, E. Reboussin, H. Liang, K. Kessal, D. Godefroy, W. Rostene, J. Sahel, C. Baudouin, S. Melik Parsadaniantz [1835]
36* ◇	Promotion of micrometastases by primary tumor secretome, and the deleterious effects of inflammatory surgical-stress responses on dormant metastases L. Shaashua, E. K. Sloan, R. Satchi-Fainaro, S. Ben-Eliyahu [1800]
37	Time point of retrieval in behaviorally conditioned immunosuppression is important for the outcome of clinical symptoms in rheumatoid arthritis in rats L. Lueckemann, M. Hadamitzky, E. M. Martinez-Gomez, C. Wolff, H. Stangl, H. Engler, M. Schedlowski [1752]
38	Behaviorally conditioning of anti-proliferative and immunosuppressive effects with rapamycin M. Hadamitzky, L. Lueckemann, E. M. Martínez-Gómez, H. Engler, M. Schedlowski [1853]
39	Breast cancer patients undergoing surgery and subjected to perioperative inhibition of COX-2 and β -adrenoceptor blockade: Effects on number and cytotoxicity of circulating NK cells and their relations to cytokine levels R. Haldar, H. Lavon, E. Elbaz, E. Rozen, M. Shabat-Simon, S. Ben-Eliyahu [1856]
40	What your monocytes' inflammatory responses to adrenergic stimulation can tell you about your risk for cardiovascular disease beyond blood pressure S. I. Dimitrov, F. Sheikh, J. Green, T. Cheng, N. Beg, S. Hong [1863]
41	Altered brain intrinsic activity in allergy N. Ostby, G. Finotti, M. Costantini [1865]

Poster Session 2, Friday, June 10

*Indicates participation in the Data Blitz; Number in brackets is abstract number in abstract booklet.

◇ Indicates a Trainee Scholar

Posters will be presented in CHARLOTTE ROOM	
1*	Unique immune profiles in children with autism who experience gastrointestinal co-morbidity D. Rose, J. Van de Water, P. Ashwood [1787]
2*	Exposure to a social stressor results in changes to microbial-produced short chain fatty acids and increased TNF-alpha production by colonic epithelial cells M. T. Bailey, A. R. Mackos, R. Maltz [1732]
3*	The effects of expressive writing on wound healing in surgical patients E. Broadbent, H. Koschwanez, H. Robinson, G. Beban, A. MacCormick, A. Hill, J. Windsor, M. Jüllig, R. Booth [1758]
4*	Cell and transcript specific expression of tryptophan and indoleamine 2,3-dioxygenases in the mouse brain following acute restraint stress C. R. Dostal, G. G. Freund, R. H. McCusker [1841]
5*	Neonatal immune activation with lipopolysaccharide and a 'second hit' of adulthood stress alters ovarian inflammatory mediators: Implications for female subfertility. E. A. Fuller, M. C. Carey, K. A. Redgrove, E. A. McLaughlin, D. M. Hodgson [1761]
6*	Effects of Tumor Development and Social Stress on Inflammation: Behavioral and Physiological Changes A. Lebeña, A. Azpiroz, G. Beitia, E. Gómez-Lázaro, A. Arregi, L. Garmendia, O. Vegas [1726]
7*	Mitochondrial respiration in peripheral blood mononuclear cells of individuals with borderline personality disorder M. Rappel, A. Karabatsiakis, E. Calzia, M. Jungkunz, C. Schmahl, M. Bohus, I. Kolassa [1803]
8*◇	The role of microglia in adult neurogenesis R. Reshef, E. Kudryavitskaya, H. Shani, N. Rimmerman, A. Mizrahi, R. Yirmiya [1756]
9*	Myocardial infarction influences microglia morphology in the hypothalamus L. Gouweleeuw, H. Wajant, O. Maier, U. M. Eisel, R. G. Schoemaker [1766]
10*	Experimental procedures performed sequentially exert a stress that activates caspase-1 and impairs memory in mice. A. Towers, M. Oelschlager, J. Patel, G. G. Freund [1771]
11*	Metabolic Dysfunction, Inflammation, and Task-Induced Emotional Stress Reactivity: Neural and Cognitive Correlates in 331 Middle-aged Adults T. Wolf, A. Willette [1783]
12	β_2 -adrenoceptor dependent intracellular mechanisms of the learned immunosuppression in human CD4 ⁺ T cells J. S. Kirchhof, H. Engler, M. Schedlowski [1768]
13	Deconstructing cancer-related fatigue: a role for motivational deficits T. Lacourt, E. Vichaya, C. Escalante, M. Ellen, B. Gunn, C. Heijnen, R. Dantzer [1780]
14	Stimulated cytokine production is heightened among pregnant women carrying female versus male fetuses A. M. Mitchell, M. Palettas, L. M. Christian [1820]
15	Maternal viral infection during pregnancy elicits anti-social behavior in neonatal piglets independent of postnatal microglia cell activity A. M. Antonson, E. C. Radlowski, M. A. Lawson, J. L. Rytych, R. W. Johnson [1754]
16	The PsychoNeuroInflammatory related Signs and Severity Inventory (PNISSI) S. Bejerot, E. Hesselmark, M. B. Humble [1786]

17	G-alpha-s-protein coupled receptor signaling suppresses integrin-mediated cell adhesion of antigen-specific human CD8+ T cells S. Dimitrov, L. Besedovsky, A. T. Jensen, J. Born, C. Gouttefangeas, H. Rammensee, T. Lange [1813]
18	Early life adversity associates with increased depressive symptoms and few active T cells in adulthood M. M. Elwenspoek, V. Schaan, X. Hengesch, C. Voegelé, H. Schaechinger, C. P. Müller, J. D. Turner [1809]
19	T Lymphocytes are Required for Resolution of Inflammatory Pain and Depression-like Behavior G. Laumet, R. Dantzer, K. N. Krukowski, C. J. Heijnen, A. Kavelaars [1720]
20	Healthy Smokers' Peripheral Blood Lymphocytes Exhibit Differential Inflammatory Gene Expression to Glucocorticoid and Lipopolysaccharide Exposure J. M. Bennett, B. Peck, K. M. Joseph, L. B. Carter, L. G. Roos, M. J. Coffman, C. B. Smith, N. Rohleder, J. S. Marino [1824]
21	Predictors of bodily sickness symptoms during experimental endotoxemia S. Benson, H. Engler, A. Wegner, M. Schedlowski, S. Elsenbruch [1713]
22	Activation of indoleamine 2,3 dioxygenase does not mediate inflammation-induced reductions in incentive motivation E. G. Vichaya, D. L. Christian, R. Dantzer [1747]
23	Social isolation and age have synergistic effects on brain hippocampal signalling pathways and memory. A. Panossian, M. S. Flint, B. A. Patel, M. S. Yeoman [1770]
24	Expectation shapes the behavioral response of experimentally-induced sickness J. Lasselín, K. Jensen, S. Paues-Göranson, A. Soop, M. J. Olsson, M. Lekander, P. Petrovic, J. Axelsson [1802]
25	Immune Activity in Accordance with Psychological Characteristics in Breast Cancer Survivors J. Pérez-Tejada, L. Garmendia, A. Labaka, E. Gómez-Lázaro, A. Lebeña, A. Arregi [1727]
26	Modulation of SGK1 system induced by stress early in life N. Mariani, A. Cattaneo, A. Luoni, M. A. Riva, C. M. Pariante [1816]
27	Anti-CD40 Prevents the Corticosterone-Induced Loss of Splenic Dendritic Cells in C57BL/6 Mice J. L. Yorty [1701]
28	Cardiac surgery causes more extended neuroinflammation and cognitive dysfunction compared to abdominal surgery in rats. I. B. Hovens, B. L. van Leeuwen, M. A. Mariani, A. D. Kraneveld, R. G. Schoemaker [1704]
29	Acute Stress Reactivity is Differentially Moderated by Perceived Stress and Anxiety in Adults with Chronic Idiopathic Urticaria S. Deng, S. Mathur, D. Adams, M. J. Slattery [1828]
30	Childhood experience of parental separation and associations with perinatal inflammation E. Fransson, A. Dubicke, M. Lekander [1698]
31	Propagation of endotoxin-induced nasal mucosal inflammation to the olfactory bulb along the olfactory neural pathway S. Hasegawa-Ishii, A. Shimada, F. Imamura [1788]
32	Clinical evaluation of potential biomarkers for Pediatric Acute onset Neuropsychiatric Syndrome - an observational study E. Hesselmark, S. Bejerot [1798]
33	Stress and Depression Levels Predict Neuroendocrine Dynamics in Long Term Ovarian Cancer Survivors S. K. Lutgendorf, M. G. Cuneo, A. Schrepf, P. H. Thaker, M. Goodheart, S. W. Cole, G. M. Slavich, A. K. Sood [1740]
34	Effects of corticotropin-releasing hormone on lymphocyte distribution and LPS-induced <i>ex vivo</i> cytokine production in humans: A pilot study L. Petrakova, K. Boy, H. Engler, S. Benson, L. Möller, M. Schedlowski [1797]

35	Coping strategies of top managers, the state of their immune systems and risk of cancer M. Pospichal [1703]
36*	Essential Fatty Acids Intake Associated with Delay Aversion and Temporal Processing in Children with Attention Deficit Hyperactivity Disorder (ADHD) J. Chang, L. Jingling, Y. Huang, Y. Lu, K. Su, V. Mondelli, C. M. Pariante [1762]
37	Cohort differences in learning and memory in response to fiber feeding in genetically identical C57Bl/6J mice: a relationship to the gut microbiota? Woods JA, Allen JM, Rytych J, Sun Y, Pence BD, Bhattacharya TK, Park P, Liu TW, Swanson K, Fahey GC, Rhodes JS, Kelley KW, Johnson RW [1854]
38	A new LPS-based mouse model of chronic inflammation and depression K. Musaelyan, S. Aldridge, A. Du Preez, M. Egeland, P. A. Zunszain, C. M. Pariante, S. Thuret, C. Fernandes [1859]
39	Indoleamine-2,3-dioxygenase 1 (Ido1) protects against viral encephalitis. M. Juda, A. K. Brooks, A. Towers, G. G. Freund, R. H. McCusker, A. J. Steelman [1862]
40	How is the immune balance affected in patients with Generalised Anxiety Disorder? R. Hou, C. Holmes, M. Garner, C. Osmond, L. Lau, D. S. Baldwin [1866]

Poster Session 3, Saturday, June 11

*Indicates participation in the Data Blitz; Number in brackets is abstract number in abstract booklet.

◇ Indicates a Trainee Scholar

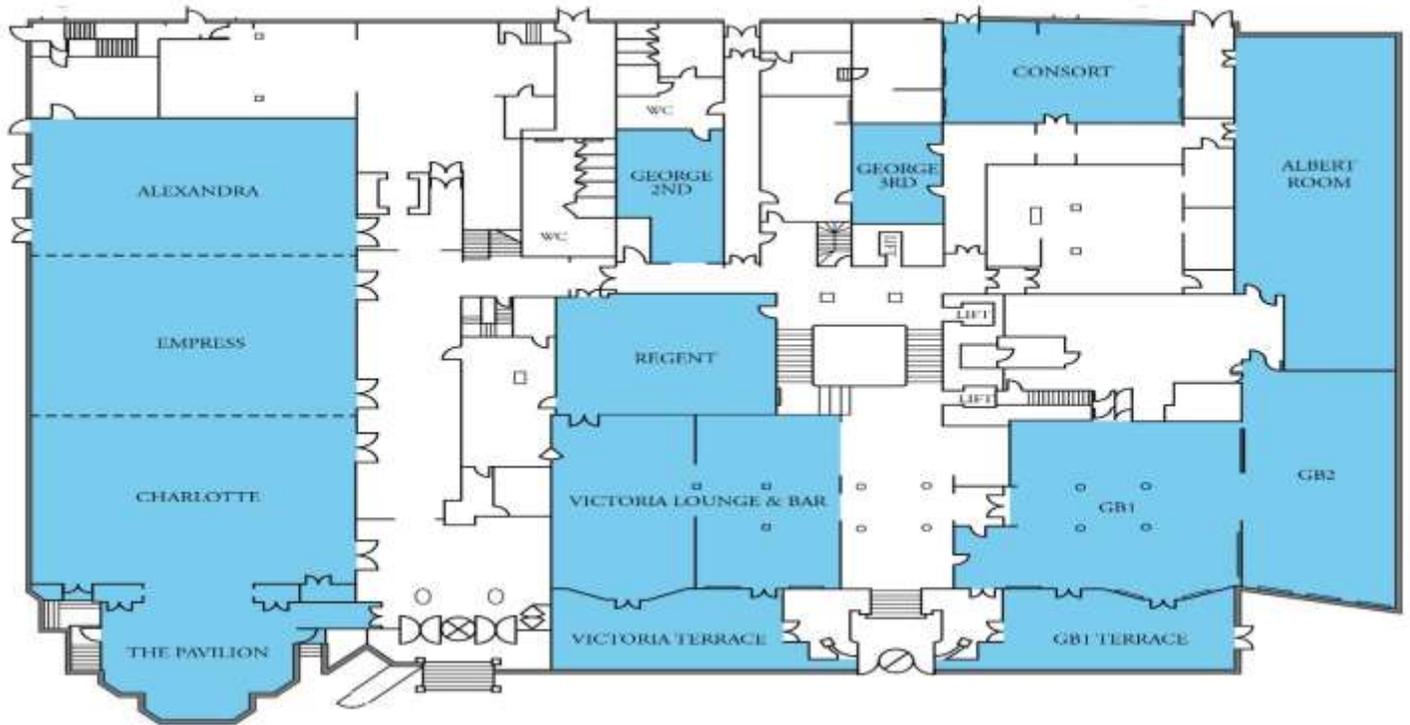
Posters will be presented in CHARLOTTE ROOM	
1	The perioperative use of a beta-adrenergic blocker and a COX-2 inhibitor in colorectal cancer patients for the prevention of cancer recurrence: A preliminary study assessing feasibility and safety O. Zmora, L. Shaashua, M. Gutman, S. Ben-Eliyahu [1733]
2	The effect of minocycline on hippocampal and non-hippocampal memory systems S. C. Berens, C. M. Bird, C. F. Doeller, N. A. Harrison [1837]
3	Cytotoxic T cells of different antigen specificity are differentially regulated by the circadian system in humans L. Besedovsky, S. Dimitrov, C. Gouttefangeas, J. Born, H. Rammensee, T. Lange [1730]
4	Inflammation and circulating LPS are independent predictors of depressive symptoms and fatigue in stable kidney transplant recipients J. A. Bosch, W. Chan, P. G. McTernan, O. Kaur, A. C. Phillips, R. Borrows [1830]
5	Exercise induces a differential mobilisation of haematopoietic stem cell subsets into peripheral blood which is partly influenced by donor age. F. F. Brown, J. A. Bosch, S. Aldred, M. T. Drayson, J. E. Turner [1810]
6	Is there a causal association between inflammation and depression? J. Bell, E. Bullmore, M. Kivimaki, A. Steptoe, L. A. Carvalho [1811]
7	Social regulation of the lymph node transcriptome dynamics in rhesus macaques (<i>Macaca mulatta</i>) K. Chun, D. M. Lamkin, J. P. Capitanio, S. W. Cole [1705]
8	Tumor-induced inflammation mediates behavioral deficits in a murine model of head and neck cancer E. G. Vichaya, D. W. Vermeer, D. L. Christian, J. M. Molkenhine, K. A. Mason, A. Kavelaars, C. J. Heijnen, J. H. Lee, R. Dantzer [1749]
9	Cytokine Impairment after Restraint Stress in Mice Selected for High and Low Immobility Time T. M. Reis-Silva, A. P. Lima, N. Moreira, A. S. Calefi, T. M. Sandini, M. M. Bernardi [1725]
10	The Role of Immune System Maturation in Development of Normal Behavior in Mice V. Philip, J. Lu, H. J. Galipeau, E. F. Verdu, K. D. McCoy, A. J. Macpherson, S. Hapfelmeier, G. De Palma, M. G. Surette, S. M. Collins, P. Bercik [1849]
11	Morning vaccination enhances antibody response over afternoon vaccination: a cluster-randomised trial of older adults. A. C. Phillips, J. E. Long, M. T. Drayson, N. A. Duggal, A. E. Taylor, K. M. Toellner, J. M. Lord [1706]
12	Neuronal Pentraxin 2 Predicts Medial Temporal Atrophy and Memory Decline Across the Alzheimer's Disease Spectrum A. Swanson, A. Willette [1784]
13	Childhood violence victimisation predicts elevated inflammation levels in young women independent of latent genetic influences J. Baldwin, L. Arseneault, A. Danese [1819]
14	Sex differences in cytokine responses to endotoxin in humans unfold only <i>in vivo</i> H. Engler, A. Wegner, L. Rebernik, T. Roderigo, M. Schedlowski, S. Elsenbruch, S. Benson [1793]
15	Effect of an omega-3 and antioxidants supplemented diet on emotional and cognitive alterations and neuroinflammatory processes associated with obesity C. Fourier, C. Bosch-Bouju, J. Sauvart, A. Aubert, S. Layé, C. Joffre, N. Castanon [1806]

16	Systematic review of studies examining the effects of acute psychological stress on circulating inflammatory markers K. G. Lockwood, C. P. Walsh, N. A. John-Henderson, A. L. Marsland [1807]
17	Age-related effects of neonatal overfeeding on leptin-mediated hypothalamic connectivity. L. Sominsky, I. Ziko, T. Nguyen, S. J. Spencer [1759]
18	Differential speed of recovery across symptom domains after naturally-occurring viral infections: preliminary genetic associations. E. Cvejic, A. R. Lloyd, U. Vollmer-Conna [1737]
19	Tumor Necrosis Factor (Tnf) Increases Transient Potential Receptor Type Ankyrin (Trpa)-1 Expression and Function in Rheumatoid Arthritis Synovial Fibroblasts: Trpa1 as Therapeutic Target to Reduce Joint Inflammation in RA? T. Lowin, G. Pongratz [1764]
20	Effects of CyPPA on lipopolysaccharide-induced sickness responses, microglial activation as well as brain and systemic inflammatory mediators in mice J. Bredehöft, A. M. Dolga, S. Mazurek, B. Honrath, C. Culmsee, R. Gerstberger, J. Roth, C. Rummel [1717]
21	Exposure during fire-overhaul period demonstrates an increase in disease risk and immune dysregulation for first responders with impact being reduced using a transitional technique S. J. Gainey, A. Towers, M. Oelschlager, V. Tir, J. Drnevich, G. Horn, G. Freund [1769]
22	Lentiviral overexpression of interleukin-1 β in the hippocampus induces neurogenesis-associated cognitive deficits in adult male Sprague-Dawley rats C. M. Hueston, C. S. Ó'Leíme, D. A. Kozareva, J. F. Cryan, Y. M. Nolan [1839]
23	Effect of chronic social instability stress on behavior, cytokine and GR receptor expression and monoaminergic brain activity in female mice. A. Labaka, E. Gómez-Lázaro, J. Pérez-Tejada, A. Arregi, L. Garmendia [1734]
24	The Effects of Psychological Stress and Optimistic Expectation on T Cell-Mediated Immunity V. Maydych, M. Claus, C. Watzl, O. T. Wolf, T. Kleinsorge [1790]
25	Markers of circadian disturbances in cabin crew: Combining cortisol and melatonin responses with self-reporting measures T. C. D'Oliveira [1753]
26	Physical versus psychosocial stress: Distinctive stressors result in differential behavioural and biological phenotypes A. Du Preez , K. Musaelyan, M. Egeland, A. Hye, P. A. Zunszain, C. M. Pariante, S. Thuret, C. Fernandes [1728]
27	The domestic pig exhibits circadian rhythms in blood leukocytes L. Engert, V. Stefanski, S. Schmucker [1808]
28	Characterization of Microglia in Multiple Brain Regions of Dominant and Subordinate Mice B. A. Johnsson, J. LeSauter, J. P. Curley [1804]
29	Latent Virus Reactivation in Astronauts during International Space Station S. K. Mehta, M. L. Laudenslager, R. P. Stowe, B. E. Crucian, A. H. Feiveson, C. F. Sams, D. L. Pierson [1855]
30	Sickness behavior mediates the effects of inflammation on self-rated health B. A. Karshikoff, A. Andreasson, J. Axelsson, M. Lekander [1860]
31	Modafinil prevents sickness behavior induced by LPS in mice: role for dopaminergic D1 receptor A. Zager, R. O. Margatho, W. N. Brandão, J. Peron, M. L. Andersen, J. Palermo-Neto [1864]

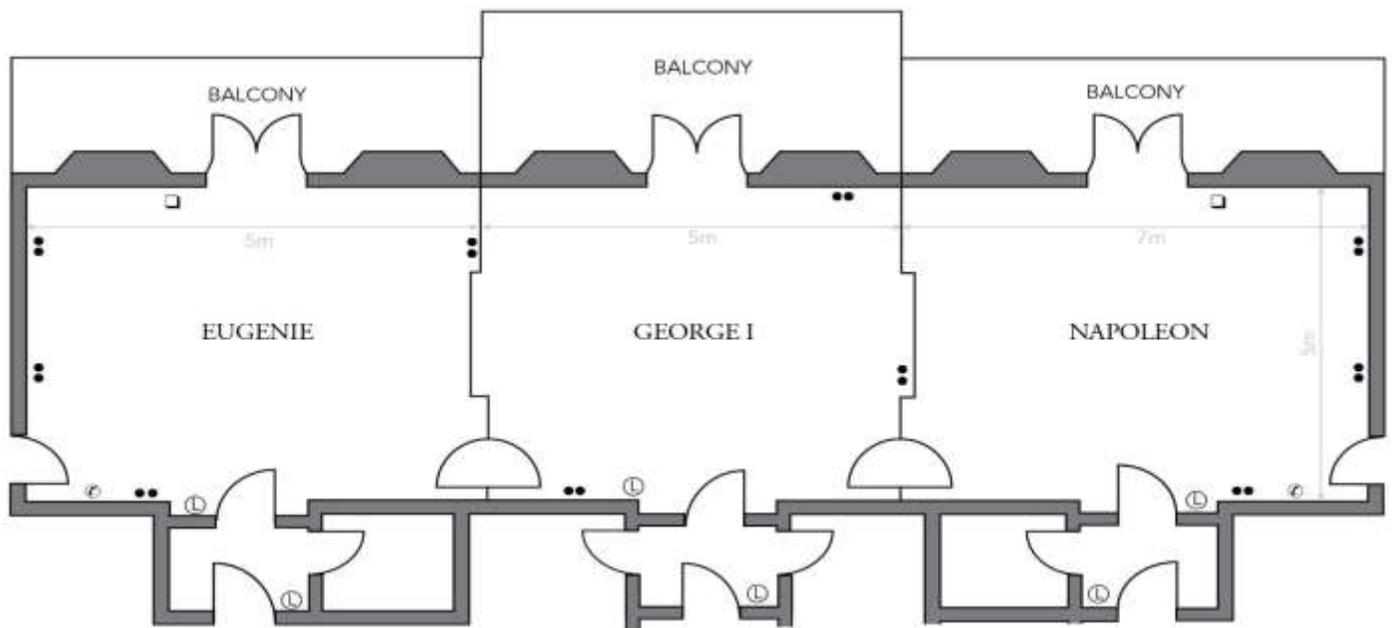
Link to Abstracts: [PNIRS 2016 Abstracts](#)

Maps and Floor Plans

The Grand Brighton-Ground Floor Map



The Grand Brighton-First Floor Map



Welcome to Brighton!

Welcome to Brighton! We provide here some information about transportation, some popular local restaurants/pubs, and activities in-and-around Brighton.

Transportation

With the Grand Hotel's central location, most of city centre is within walking distance. There are also plenty of buses around the town. All are wheelchair accessible. The bus stops nearest to the Grand are to the north of the Churchill Square shopping centre or along North Road. Whilst there is an app for bus tickets, paying with cash is the most reliable way to pay as mobile signal can be patchy. There are also a number of tickets you can purchase: most areas of the city are reachable with a city-saver ticket, and if you are taking more than two trips a day-rider will be the cheapest.

The official hackney carriages (aqua and white taxis) can be hailed off the street, all others need to be booked (01273 204060, 01273 747474, 01273 205205). Wheelchair accessible taxis are available.

To/from Gatwick Airport

The cheapest and most efficient way to get from Gatwick Airport to Brighton is with the train (tickets are available at Gatwick airport). The journey takes approximately 30 minutes and costs approximately £11. Brighton train station is a 15-20 minute walk from the Grand Hotel. Taxis are available at the train station. Taxis are also available at the airport though will cost approximately £60 and take 35-45 minutes depending on traffic.

To/from Heathrow Airport

The quickest way to get from Heathrow to Brighton is via taxi. However, taxis at the airport can be very expensive. A better and much cheaper alternative is to pre-book a taxi through one of the minicab companies listed here: <https://www.pnirs.org/meetings/index.cfm>. This should be done before travel. Alternately the 747 bus goes regularly from Heathrow to Brighton. Alternately, it is possible to take the train/tube from Heathrow into central London, then catch a train from Victoria station to Brighton. Full details are available here: <https://www.pnirs.org/meetings/index.cfm>

Places to Visit

Within Brighton

Brighton Royal Pavilion (former summer home of Prince Regent) & **Brighton Museum and Art Gallery**

- Both are located in Royal Pavilion Gardens, Brighton BN1 1EE, about 15 minutes' walk from The Grand. Turn left (east) out of the hotel and walk along the road for about 5 minutes. When you reach East Street, turn left into East Street and keep going until you reach North Street. Cross North Street walk past al Duomo restaurant and you will arrive at the Royal Pavilion Gardens.

Brighton Pier - fairground amusements

Aquarium - just in front of Brighton Pier

North Laine area - arty shops and cafes and vintage/independent shops

The Lanes - famous for antique jewellery and also more expensive clothes shops

Outside Brighton

Brighton Marina Taxis, number 7 bus or a 45min walk from the Grand out East from the city. There are plenty of restaurants along the boardwalk and the harbour walls can be walked.

Rottingdean village was the home of the author, Rudyard Kipling and has pretty, walled gardens, village pond and an old church with lovely stained glass windows designed by Sir Edward Burne-Jones. The Grange, has a café with seating in a walled garden. It is an **easy 1½ hour walk** along the seafront heading East out of Brighton. You could catch a bus back (12 or 12A).

Ditchling is a few miles north of Brighton, just over the South Downs, with a picturesque high street, village green and church as well as a small museum. There are several good tea shops e.g. 'Ditchling Tea Rooms' and pubs 'The White Horse' and 'The Bull'. A taxi would be needed for this.

Devil's Dyke Walk for a short while along the South Downs Way and take in the famous views from the South Downs over the Weald. The 77 bus takes you there. Get refreshments and food from the Devil's Dyke pub at the top.

Lewes, is the historic county town of Sussex. It is a very attractive town about 5 miles from Brighton, with frequent trains. It has the remains of Lewes castle in the centre and contains a number of interesting independent shops.

Seven Sisters For the adventurous - Take the train to Seaford and walk East along the coastal path for one of the most famous views in the country of the Seven Sisters (white cliffs) from Seaford Head (particularly beautiful as the sun sets). Follow the path down past the Coastguard Cottages into Cuckmere Haven to walk the Seven Sisters to reach Beachy Head and Eastbourne beyond to get the train back (5 hour walk in total).

Nice pubs (all serving good food)

a. **The Prince George**, 5 Trafalgar Street, North Laine, Brighton, BN1 4EQ (vegetarian)

b. **The Eagle**, 125 Gloucester Road North Laine, Brighton, BN1 4AF

c. **The Basket Maker's Arms**, 12 Gloucester Road, North Laine, Brighton, BN1 4 AD

d. **The Lion and Lobster**, 24 Sillwood Street, Brighton, BN1 2PS

e. **Tempest Inn** 159-161 Kings Road Arches Brighton BN1 1NB

The Urchin (not on map) 15-17 Belfast street, Hove BN3 3YS (craft beer and shellfish)

Restaurants

1 The Regency Restaurant - fish and seafood restaurant (with a few vegetarian and meat options) 131 King's Rd, Brighton BN1 2HH (less than 5 minutes' walk west of The Grand)

<https://theregencyrestaurant.co.uk>

2 China Garden - medium price - good quality Chinese food. 88-91 Preston Street (about 5 minutes' walk west of The Grand) turn right into Preston Street and China Garden is the first restaurant

<http://www.chinagarden.name>

3 Al Duomo - Italian 17 Pavilion Buildings, Brighton BN1 1EE <https://www.alduomo.co.uk/>

4 Chilipickle (excellent indian food - need to reserve normally) <http://thechillipickle.com/restaurant/>

5 64 Degrees (Won Best restaurant in Brighton 2015 – small and need to reserve)

<http://www.64degrees.co.uk>

6 Bincho Yakitori (Japanese grilled food - excellent but small and may need to reserve)

<https://binchoyakitori.com>

7 Food for Friends (Vegetarian and excellent) <https://binchoyakitori.com>

8 Terre a Terre (Vegetarian and excellent) - <http://www.terreaterre.co.uk>

9 Riddle and Finns (Fish more expensive) - <http://www.riddleandfinns.co.uk>

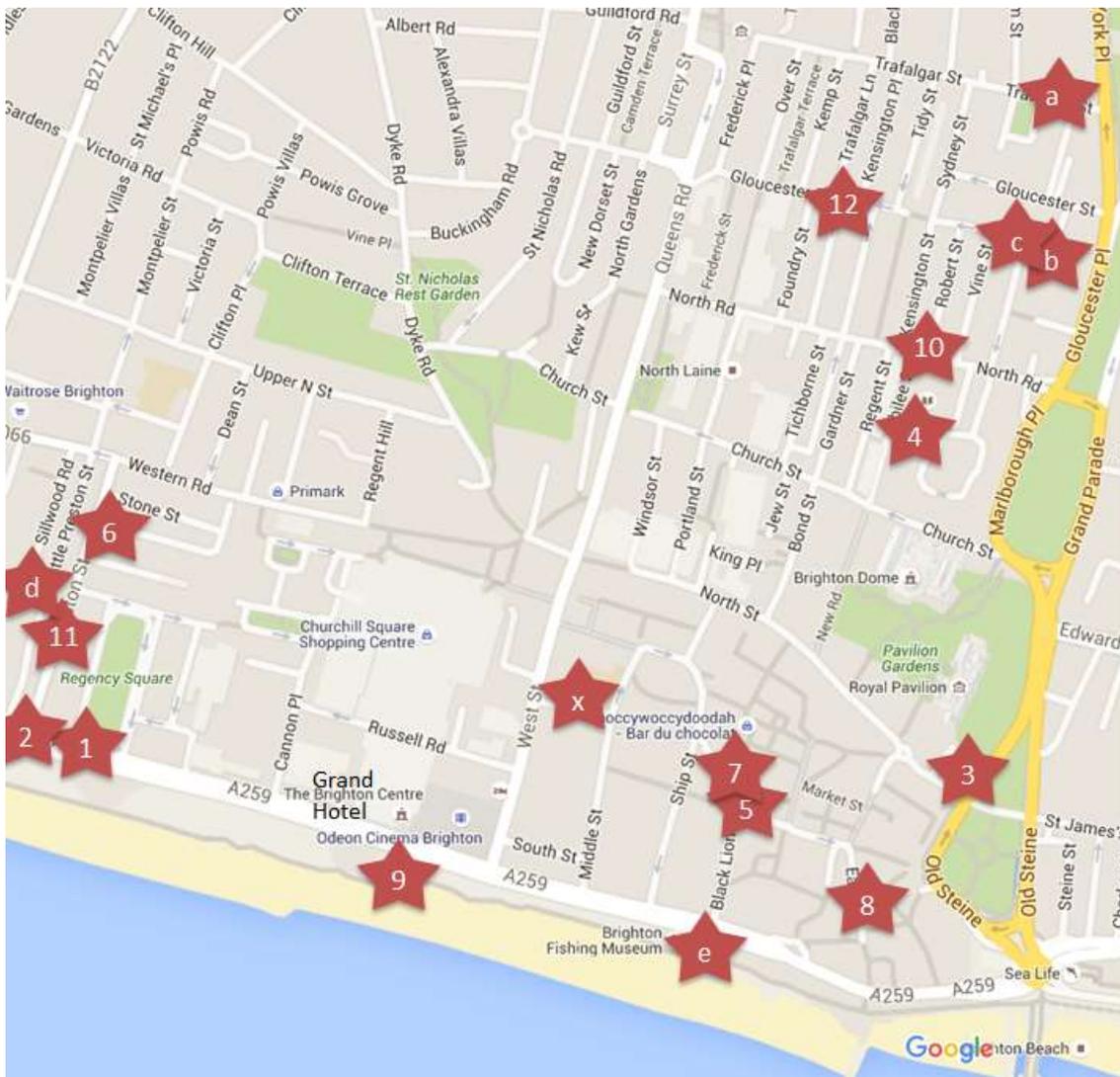
10 Burger Brothers (Burgers only - very small and limited seating very casual but excellent burgers) -

<http://restaurantsbrighton.co.uk/burger-review-burger-brothers-north-road-brighton/>

11 Goemon Ramen (Good Japanese Ramen – very reasonably priced) -

https://www.tripadvisor.com/Restaurant_Review-g186273-d7017421-Reviews-Goemon_Ramen_Bar-Brighton_East_Sussex_England.html

12 La Choza (Mexican) 36 Gloucester Road, North Laine, Brighton www.lachoza.co.uk/



X – The Fiddler’s Elbow. Location of trainee Mixer Social (6-8pm Friday 10th June)