



***PNIRS and GEBIN 2019
26th ANNUAL SCIENTIFIC MEETING
BERLIN, GERMANY
JUNE 4-8, 2019***

Message from the President of the PNIRS

Welcome to the 26th Meeting of the Psychoneuroimmunology Research Society. I would like to extend my sincere thanks to those on the Executive, Program, and Local Organizing Committees, for their hard work in bringing together an exciting program of great science. This meeting is a landmark meeting as we celebrate the first time that the society has come together in partnership with the German Endocrine Brain Immune network (GEBIN). Having a joint meeting with GEBIN is an exciting initiative and is sure to create a vibrant conference atmosphere, facilitating new research, new friendships, and enhancing opportunities for new collaborations. The conference will take place in a historic building, the Virchow-Langenbeck-House, built in 1915. It is centrally located, next to the Charité University Hospital, near the main central train station and within walking distance from the famous central street 'Unter den Linden'. The meeting will have a special focus theme on "Inflammation across the lifespan" and will be preceded by a half day Educational Short Course addressing novel techniques in our field; Neuroinflammation and Aging: Novel Techniques and Emerging Technologies.



Two exciting initiatives that will be implemented at this meeting include, firstly, a dedicated member-sponsored symposium for Mid-Career Researchers on Saturday June 8th. The second is the introduction of the new Equity Travel Awards sponsored by Professor Michael Irwin. The intent of these awards is to facilitate attendance by academics/researchers at the annual PNIRS conference who are a) from underrepresented groups and/or b) conduct research dedicated to issues related to equity and diversity. The goal of these awards is to facilitate greater diversity within PNIRS, and to support and encourage research that is dedicated to having a significant impact on diverse and underrepresented communities. Other highlights of the meeting include the GEBIN sessions on 4th and 5th of June and a special GEBIN sponsored session to be held on Friday June 7th entitled "Microbes and Stress Resilience".

The meeting will showcase the great advances being made in our field by a wonderful array of exciting researchers. The Ronald Glaser-Frontiers in Psychoneuroimmunology Lecture: a special Award Lecture in honor of Ronald Glaser is the "cutting edge special lecture". Rainer H. Straub will introduce our speaker, Lluís Quintana-Murci, speaking on "Nature, Nurture, and your inner Neanderthal: Dissecting Evolutionary Drivers of Immune Function". The Norman Cousins Memorial Lecture will be delivered by Monika Fleshner, The Robert Ader Lecture by Judith Carroll, and the George Solomon Memorial Lecture by Susan Lutgendorf. We have two symposia nominated by members, one specially targeted at Mid-Career researchers (Saturday June 8th). Plus, we have the Presidential Symposium: Early Life Trajectories toward Health; the Brain, the Gut, and the Immune System. This is to be delivered on the Friday morning after which, we will announce and present the BBI impact award.

It is a packed schedule but don't forget to attend the welcome reception and for trainees there is the trainee dinner and Teresa Reyes will hold her wildly successful PNIRS Mentoring Colloquium on Wednesday evening. Finally, don't miss the PNIRS Asia-Pacific lunch on Friday, June 7th. Each year the numbers attending this session grow and it is great to see new members from the Asia-Pacific region. If you need some recovery time before the final days then enjoy the free afternoon on Friday to give you time to get out and enjoy the sights, sounds and tastes of the great city of Berlin.

Finally, thanks to the Executive Committee (Secretary/Treasurer Staci Bilbo, Past-President Bill Banks, President-Elect Julie Bower, Executive Director Susan Solomon), Jackie and Karl Newman, the Program Committee, the Local Organizing Committee (Stefan Gold, Rainer H. Straub, Manfred Schledlowski, Harald Engler, Silvia Capellino and Georg Pongratz), the GEBIN committee members, and to the many other PNIRS members who either through committee work or as individuals have contributed to this meeting. And my very final thanks you for giving me the privilege of serving as your President for this past year. It has been an honor and a pleasure. PNIRS is a wonderful, warm and collegial society with great history, science, people and energy. I wish Julie Bower, your incoming President the very best wishes as she steps into the role. I know she will do a magnificent job. See you in Berlin.

Sincerely,

Deb Hodgson
PNIRS President



Follow us on Twitter @PNIRS #PNIRS2019

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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, providing the complimentary copies of Brain, Behavior, and Immunity for registrants as well as additional financial support for the trainee scholar awards.



We also appreciate the support of the following sponsors of PNIRS and GEBIN 2019:



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.

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About GEBIN

GEBIN is a network that combines activities in different German scientific societies with a special interest in Behaviour-Neuro-Endocrine-Immune interactions. People interested in GEBIN typically concentrate on interdisciplinary research foci.

The GEBIN is a non-profit network without strict formal rules. It is open for interested people who are dedicated to interdisciplinary thinking and research. The GEBIN was founded in November 1997 in Munich during the Volkswagen-Symposium "Neuroimmunologie, Verhalten und Befinden". The promotion of scientific interactions and the coordination of information exchange between the different groups is one of the main aims of this network.

This year, GEBIN will celebrate the 14th meeting.

GEBIN Steering Committee

Judith Alferink, Münster
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Jan Born, Tübingen
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Harald Engler, Essen (Spokesman)
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Markus Schwarz, München
Volker Stefanski, Stuttgart
Rainer H. Straub, Regensburg
Eberhard Weihe, Marburg

Get in contact:

www.gebin.org

Email: info@gebin.org

Follow us in Twitter: @GEBIN01

2020 Meeting

*PNIRS 2020
27th Annual Scientific Meeting*



PsychoNeuroImmunology
Research Society

*Los Angeles, California
June 3-6, 2019*

*Conference Location:
Luskin Conference Center
University of California at Los Angeles*



General Information

Registration Desk

The registration desk is located in foyer of the main lecture hall in the Langenbeck-Virchow-Haus beginning on Wednesday, June 5. Registration will be held in the Hörsaalruine on Tuesday, June 4. 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:

Tuesday, June 4 (Hörsaalruine): 11:00 am – 5:00 pm

Wednesday, June 5 (Langenbeck-Virchow-Haus): 9:00 am – 5:00 pm

Thursday, June 6 (Langenbeck-Virchow-Haus): 8:00 am – 5:00 pm

Friday, June 7 (Langenbeck-Virchow-Haus): 8:00 am – 3:00 pm

Saturday, June 8 (Langenbeck-Virchow-Haus): 8:00 am – 2:00 pm

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

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.
- We value your attendance. That is why we expect all participants to follow these rules at all conference venues or related social events.

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 Bernhard von Langenbeck Room, Langenbeck-Virchow-Haus. Adhesive poster strips for mounting the posters will be provided. Poster size is limited to a width of 92 cm and height of 121 cm. Look for your poster number in this Program Book. Remaining posters may be discarded if they are not taken down promptly.

GEBIN Poster Session: You may begin to hang your posters the morning of Wednesday, June 5th. Please remove your posters no later than the morning of Thursday, June 6th.

PNIRS Poster Session 1: You may begin to hang your posters the morning of Thursday, June 6th. Please remove your posters no later than the morning of Friday, June 7th.

PNIRS Poster Session 2: You may begin to hang your posters the evening of Friday, June 7th. Please remove your posters after the session on Saturday, June 8th.

Poster Data Blitz

The Poster Data Blitz talks will take place in the main lecture hall in the Langenbeck-Virchow-Haus . 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.***

GEBIN and PNIRS Trainee Social

GEBIN Trainee Social is on **Tuesday, June 4** from 8-10 pm at Arminiusmarkthalle. GEBIN Trainee Social is invite only. PNIRS Trainee Social is on **Friday, June 7** from 7:30-10 pm at Arminiusmarkthalle. 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.

PNIRS Commitment to Equity and Diversity.

PNIRS is committed to equity and diversity. The society will promote inclusivity and transparency, to improve diversity across all categories of membership and to increase representation of members from underrepresented groups in the society and attending the PNIRS annual conference.

The Annual Meeting will aim to fulfil its commitment to equity and diversity in the following ways:

- Every facet of the conference is committed to facilitating gender balance and cultural diversity
- There is a range of diverse speakers in terms of gender, culture, age and seniority.
- Abstracts will be solicited from a diverse range of people, particularly in areas where those groups are in a minority, and that the gender distribution of the final selected spectra, when compared to the distribution of the submissions, should strive to be similar.
- Where possible, travel support is made available to attendees from under-represented groups who would otherwise not be able to attend the conference.
- All conference materials are accessible, including promotion, signage and abstract submission processes.
- A question on the registration form informs of any support or access requirements that participants may have.
- An equity report will be made accessible on our website for measuring change over time which will include information such as the gender and cultural balance of speakers, participants, and session chairs.

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*.

2019 Norman Cousins Award Lecture

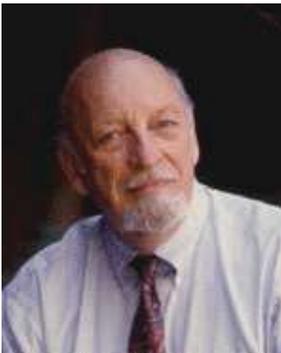
*Integrative Stress Physiology:
Brain, Behavior & Immunity*

Monika Fleshner, PhD

Professor

Department of Integrative Physiology
University of Colorado, Boulder, CO

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.

2019 Robert Ader New Investigator Award Lecture

Aging Biology in PNI

Judith Carroll, PhD

Associate Professor

David Geffen School of Medicine
Department of Psychiatry
University of California Los Angeles, Los Angeles, CA

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. For example, the 2019 award winner, announced in 2018, is the corresponding author of the paper that achieved the highest level of citations in 2017 to papers published in 2016 and 2015. The Kelley Family provides an annual gift of \$5,000 per year and a commemorative plaque for the PNIRS to present to the winner of the Brain, Behavior, and Immunity Impact Award at the annual PNIRS meeting.

2019 BBI Impact Award

Bing Ruan, PhD; Lanjuan Li, MD; and Hai-yin Jiang, MD
State Key Laboratory for Diagnosis and Treatment of
Infectious Diseases, the First Affiliated Hospital, School of
Medicine, Zhejiang University

2020 COUSINS, ADER AND BBI IMPACT AWARDS

The winners of the 2020 Norman Cousins Award Lecture, Robert Ader New Investigator Award and BBI Impact Award will be announced at the Closing Banquet on Saturday, June 8th.

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.

2019 George Solomon Memorial Lecture

*From Social Connection to Cell Signaling: Biobehavioral
Influences on Cancer Progression*

Susan Lutgendorf, PhD
Professor & Starch Faculty Fellow
Department of Psychological and Brain Sciences
University of Iowa, Iowa City, IA

The Ronald Glaser Frontiers in PNI Lecture



PsychoNeuroImmunology
Research Society

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 visit <https://www.pnirs.org/portal/donations/>.

2019 Ronald Glaser Frontiers in PNI Lecture

Nature, Nurture, and your inner Neanderthal: Dissecting Evolutionary Drivers of Immune Function

Lluís Quintana-Murci, PhD
Department of Genomes and Genetics
Institut Pasteur, Paris, France

PNIRS Trainee Scholars

Trainee Scholar	Presentation
Jessica Bolton	Oral Session #1
Anabel Eckerling	Poster Session #1, Poster Data Blitz #1 (Poster #54)
Anja Gump	Oral Session #2
Brett Loman	Poster Session #1, Poster Data Blitz #1 (Poster #57)
Neeti Mehta	Oral Session #2
Luba Sominsky	Oral Session #2
Justin Bollinger	Poster Session #2, Poster Data Blitz #2 (Poster #48)
Damon DiSabato	Poster Session #1, Poster Data Blitz #1 (Poster # 53)
Tsipi Hanalis-Miller	Poster Session #1, Poster Data Blitz #1 (Poster # 55)
Maria Antonietta Nettis	Poster Session #2, Poster Data Blitz #2 (Poster # 51)
Gregory Pearson	Poster Session #2, Poster Data Blitz #2 (Poster # 53)

◇ Indicates a Trainee Scholar throughout the program

Congratulations 2019 Trainee Scholars!

PNIRS Michael Irwin Equity and Diversity Travel Awardees

Michael Irwin Equity and Diversity Travel Awardees	Presentation
Bart Ford	Poster Session #1 (Poster 48)
Naghmeh Nikkheslat	Poster Session #2 (Poster 38)
Rita Haldar	Oral Session #3
Azize Ngo	Poster Session #1 (Poster 30)
Angela Casaril	Poster Session #2 (Posters 8 & 9)
Dominique Piber	Poster Session 2 and Poster Data Blitz #2 (Poster 55)

Congratulations 2019 Michael Irwin Equity & Diversity Awardees!

PNIRS 2019 Schedule at a Glance

Time	Tuesday June 4	Wednesday June 5	Thursday June 6	Friday June 7	Saturday June 8			
8:00 - 8:30								
8:30 - 9:00		GEBIN Meeting	Committee Meetings Financial 8:30-9:30	Welcome	Presidential Symposium	Oral Session 3		
9:00 - 9:30							Member Sponsored Symposium 1	BBI Impact Award 10:25
9:30 - 10:00								
10:00 - 10:30		Break	Scientific Affairs 9:30-10:30		Break			
10:30 - 11:00		GEBIN Meeting	Membership 10:30-11:15	Break		Member Sponsored Symposium 2 (Early Career Scientists)		
11:00 - 11:30					GEBIN Sponsored Session <i>Microbes and Stress Resilience</i>			
11:30 - 12:00			Nominating 11:15-12:00					
12:00 - 12:30		Break	Communications 12:00-12:30	Ronald Glaser-Frontiers in PNI Lecture				
12:30 - 13:00		GEBIN Meeting Poster Session with Lunch Provided	Board of Directors Meeting (with lunch)	Poster Data Blitz 1	Robert Ader Lecture	Poster Data Blitz 2		
13:00 - 13:30	GEBIN Meeting					Lunch Provided	Lunch On Your Own PNIRS _{Asia-Pacific} Lunch	Lunch Provided
13:30 - 14:00								
14:00 - 14:30				Oral Session 1	Ronald Glaser Tribute	Poster Session 2		
14:30 - 15:00		Break					Oral Session 2	
15:00 - 15:30	Break	GEBIN Steering Committee						
15:30 - 16:00	GEBIN Meeting					Free Afternoon	Sightseeing Tours	George Solomon Lecture
16:00 - 16:30		Educational Short Course GEBIN + PNIRS <i>Neuroinflammation and Aging: Novel Techniques and Emerging Technologies</i>		Poster Session 1				
16:30 - 17:00					Norman Cousins Lecture			
17:00 - 17:30								
17:30 - 18:00								
18:00 - 18:30	Break	Break		Break and Snacks				
18:30 - 19:00	GEBIN Meeting	Trainee-Mentor Colloquium				Closing Banquet <i>Clärchens Ballhaus</i>		
19:00 - 19:30					Welcome Reception <i>Museum für Naturkunde</i>			
19:30 - 20:00								
20:00 - 20:30	GEBIN Trainee Dinner <i>Arminiusmarkthalle</i>				PNIRS Trainee Dinner <i>Arminiusmarkthalle</i>			
20:30 - 21:00								

Tuesday, June 4

12:45-13:00 GEBIN - WELCOME

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité
Silvia Capellino and Harald Engler, Spokespersons GEBIN

13:00-15:00 GEBIN - ORAL SESSION 1

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité
Chairs: Silvia Capellino, Ulrike Gimsa

13:00 *The dopaminergic pathway - a potential new route to modulate inflammation in rheumatoid arthritis [3209]*

Karolin Wieber

Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

13:15 *The opposite sides of the same coin: Norepinephrine aggravates cartilage degeneration but attenuates subchondral bone changes [4292]*

Karima El Bagdadi

University Hospital Regensburg, Germany

13:30 *Hints for catecholamine-driven autocrine mechanisms to regulate regulatory B cells [4339]*

Nadine Honke

University Hospital Düsseldorf, Germany

13:45 *Catecholamines and supernatants of catecholamine-treated bacteria differently modulate porcine immune function in vitro [4333]*

Lena Reiske

University of Hohenheim, Stuttgart, Germany

14:00 *Age dependent changes of adipokine - and adipo-cytokine secretion from rat adipose tissue by endogenous and exogenous toll-like receptor agonists [3243]*

Christoph Rummel

Justus Liebig University of Giessen, Germany

14:15 *The ghrelin system is regulated by nutrient availability and pro-inflammatory cytokines in rheumatoid arthritis synovial fibroblasts [4269]*

Torsten Lowin

University Hospital Düsseldorf, Germany

14:30 *The role of neutrophil granulocytes in immune-to-brain communication during LPS-induced systemic versus lung inflammation [3234]*

Jessica Hernandez

Justus Liebig University Giessen, Germany

14:45 *Modulation of the brain and peripheral response to systemic inflammation and stress by omega-3 fatty acids [3245]*

Fabian Pflieger

Justus Liebig University Giessen, Germany

15:00-15:30 BREAK

15:30-18:00 GEBIN - ORAL SESSION 2

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité

Chairs: Manfred Schedlowski, Volker Stefanski

15:30 *Mycobacterium vaccae promotes resilience when administered subcutaneously prior to or during chronic psychosocial stress [4340]*

Mattia Amoroso

University Clinic Ulm, Germany

15:45 *Chronic stress is associated with greater mood impairment during experimental systemic inflammation [3246]*

Harald Engler

University Hospital Essen, Germany

16:00 *Vulnerability to chronic stress: The role of frontal alpha asymmetry [4274]*

Mauro Larra

Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

16:15 *C-reactive protein levels in children aged 3-5 years with verified exposure to maltreatment: Sex differences and association with depression [4336]*

Karin De Punder

Charité Universitätsmedizin Berlin, Germany

16:30 *Lifetime stress exposure and its association with anti-inflammatory markers in young adults [4319]*

Sarah Sturmbauer

Friedrich-Alexander University Erlangen-Nürnberg, Germany

16:45 *Effect of retention interval length on the memory trace of behaviorally conditioned immunosuppression with cyclosporine A in rats [4271]*

Tina Hörbelt

University Hospital Essen, Germany

17:00 *Adolescent asthma during development and its impact on the physiological stress response and the brain: a mouse model [4265]*

Jasmine Caulfield

Pennsylvania State University, USA

17:15 *Stress perception and mediators following the diagnosis of early-stage malignant melanoma, a comparison group and follow-up study in patients displaying psychooncologic need [4363]*

Eva Peters

Justus Liebig University of Giessen, Germany

17:30 *Combined metabolite and lipid fingerprinting in women with childhood maltreatment reveals novel serum biomarkers linked to inflammation, oxidative stress and energy metabolism [4255]*

Alexander Karabatsiakis

University of Ulm, Germany

17:45 *Stocking density during rearing affects the immune system of laying hens [4273]*

Tanja Hofmann

University of Hohenheim, Stuttgart, Germany

18:00-18:30 BREAK

18:30-20:00 GEBIN - ORAL SESSION 3

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité

Chairs: Stefan Gold, Bernd Fiebich

18:30 *Rat model of prenatal Zika virus infection and associated neural and behavioral consequences in the offspring [3221]*

Morgan Sherer

Psychological and Brain Sciences, Newark, USA

18:45 *Telomerase-dependent senescence and inflammation with ageing in the zebrafish brain [3231]*

Raquel Martins

University of Sheffield, United Kingdom

19:00 *Lipopolysaccharide induces mitochondrial dysfunction and activates the cGAS-STING pathway in the mouse brain: possible involvement in inflammation-induced anergia [4358]*

Angela Casaril

Federal University of Pelotas, Pelotas, USA

19:15 *Analysis of brain microglia and behavior after peripherally-induced neuroinflammation in mice [3242]*

Jan-Sebastian Grigoleit

Janssen Research & Development, San Diego, USA

19:30 *Anti-neuroinflammatory effects of GPR55 antagonists in LPS-activated primary microglial cells [3250]*

Bernd Fiebich

University Hospital Freiburg, Germany

19:45 *Primary cultures of the rat dorsal root ganglia: influence of lipopolysaccharide and cisplatin on properties of neuronal and glial elements [3228]*

Stephan Leisengang

Justus Liebig University of Giessen, Germany

20:00

GEBIN Trainee Dinner

(Invite Only)

Der Schmarrnkaiser Arminiusmarkthalle

Arminiusstraße 2-4, 10551 Berlin

Wednesday, June 5

8:30-3:00 PNIRS COMMITTEE MEETINGS

Room: Business Lounge at Langenbeck-Virchow-Haus (LVH)

- 8:30 Financial Committee
- 9:30 Scientific Affairs Committee
- 10:30 Membership Committee
- 11:15 Nominating Committee
- 12:00 Communications Committee
- 12:30 Board of Directors Meeting (lunch included)

8:00-10:00 GEBIN - ORAL SESSION 4

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité

Chairs: Eva Peters, Judith Alferink

- 8:00 *Mnemonic-like representation of immune-related information in the insular cortex [3237]*
Tamar Koren
Technion - Israel Institute of Technology, Haifa, Israel
- 8:15 *Plasma tryptophan metabolite concentrations in depression and the response to electroconvulsive therapy [4258]*
Karen Ryan
Trinity College Dublin, Ireland
- 8:30 *Severity of psychomotor retardation in depressed patients is associated with mRNA enrichment of Toll-like receptor, cytokine and mTOR signaling pathways [4315]*
Mandakh Bekhbat
Emory University, Atlanta, USA
- 8:45 *Depressive patients producing high cytokine levels by peripheral blood mononucleocytes show good success of multi-modal psychotherapeutic inpatient therapy [4364]*
Eva Peters
Justus Liebig University of Giessen, Germany
- 9:00 *Propentofylline prevents body weight loss, motor behavior impairments, depressive-like behavior, and TNF increase in rats which were exposed to LPS [3241]*
Thiago Kirsten
Paulista University, Sao Paulo, Brazil
- 9:15 *Associations between hypovitaminosis-D and tic severity and comorbidities in children and adolescents with chronic tic-disorders: A large pan-European cross-sectional study [4381]*
Natalie Moll
Institute of Laboratory Medicine, LMU Munich, Germany
- 9:30 *Reduced immunity to measles and rubella, but not polio in adults with major depressive disorder: a follow up study [3240]*
Bart Ford
Laureate Institute for Brain Research, Tulsa, USA
- 9:45 *Alterations of the serum N-glycan profile in female patients with major depressive disorder [4268]*
Melissa Hitzler
University of Ulm, Germany

10:00-10:30 BREAK

10:30-12:00 GEBIN - ORAL SESSION 5

Room: Hörsaalruine (Lecture Hall Ruin), Berlin Museum of Medical History at the Charité

Chairs: Adriana del Rey, Christoph Rummel

10:30 *Effective connectivity within the insula mediates the association between inflammation and human sickness behavior [4295]*

Kristian Stefanov

University of Glasgow, Great Britain & Northern Ireland

10:45 *Sleep supports integrin activation on antigen-specific T cells via suppression of Galphas-coupled receptor signaling [3233]*

Tanja Lange

University of Lübeck, Germany

11:00 *Maximal telomerase activity capacity (mTAC) mediates the effect of the cortisol stress response on leukocyte telomere length [4288]*

Karin De Punder

Charité Universitätsmedizin Berlin, Germany

11:15 *Relationship between HPA axis reactivity and innate immunity in mice [4342]*

Oliver Ambree

University of Osnabrück, Germany

11:30 *A mouse model for benign obesity? [4353]*

Ulrike Gimsa

Leibniz Institute for Farm Animal Biology, Dummerstorf, Germany

11:45 *Cardiovascular neuroimmune circuits regulate atherosclerosis [4286]*

Sarajo Mohanta

Ludwig-Maximilians-University Munich, Germany

12:00-12:30 BREAK

12:30-2:30 GEBIN POSTER SESSION

Room: Bernhard von Langenbeck Room, Langenbeck-Virchow-Haus

Lunch Provided

See poster number list in back of program.

2:30-3:00 BREAK

3:00-4:00 GEBIN STEERING COMMITTEE MEETING

3:00-6:00 EDUCATIONAL SHORT COURSE

Room: Hörsaalruine (lecture hall ruin)

Moderator: Staci Bilbo

Neuroinflammation and Aging: Novel Techniques and Emerging Technologies

Cytof Mapping of the Brains Immune System

Asya Rolls

Technion-Israel Institute of Technology, Haifa, Israel

Mapping of Central and Peripheral Cells using Single Cell Sequencing

Francesco Bifari

University of Milan, Milan, Italy

Imaging of Monocytes vs. Microglia in-vivo

Martin Kerschensteiner

Ludwig-Maximilians-Universität München, Munich, Germany

Translational Opportunities

Steve Cole

University of California, Los Angeles College of Medicine, Los Angeles, California

6:15-8:00

PNIRS TRAINEE MENTOR COLLOQUIUM

Room: Hörsaalruine (lecture hall ruin)

(All Trainees, refreshments will be provided)

6:15

President's Welcome

Deb Hodgson

PNIRS President

6:30-8:00

Speed mentoring

The goal is to facilitate interactions between trainees and more senior members of the PNIRS community through a series of brief small group meetings

Thursday, June 6

8:30-9:00 WELCOME

Room: Main lecture hall in the Langenbeck-Virchow-Haus
Deb Hodgson, President PNIRS

9:00-11:00 MEMBER SPONSORED SYMPOSIUM

Room: Main lecture hall in the Langenbeck-Virchow-Haus
Chair: Mats Lekander and John Axelsson

Disease avoidance: our first line of defense against pathogenic threats

Evolution of behaviors to avoid pathogens and to improve recovery from infection

Benjamin Hart

University of California, Davis, School of Veterinary Medicine, Davis, California

Avoidance of biological contaminants in non-human primates

Cécile Sarabian

Primate Research Institute, Kyoto University, Inuyama, Aichi, Japan

Perceptual disease detection, social consequences and human sickness

Mats Lekander & John Axelsson

Stockholm University and Karolinska Institutet, Stockholm, Sweden

Disgust as an adaptive system for disease avoidance behavior

Valerie Curtis

London School of Hygiene and Tropical Medicine, London, UK

Discussants: **Mats Lekander & John Axelsson**, Stockholm University and Karolinska Institutet, Stockholm, Sweden

11:00-11:30 BREAK

Room: Foyer of the Langenbeck-Virchow-Haus

11:30-12:30 RONALD GLASER-FRONTIERS IN PSYCHONEUROIMMUNOLOGY LECTURE

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Rainer H. Straub



Nature, Nurture, and your inner Neanderthal: Dissecting Evolutionary Drivers of Immune Function
Lluís Quintana-Murci, PhD

Department of Genomes and Genetics
Institut Pasteur, Paris, France

12:30-1:00

POSTER DATA BLITZ I

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Leah Pyter

Poster Number	Title
5*	The Role of Inflammation and Aging in Motivated Learning Behaviors -- A Conceptual Replication in Chronic Inflammation L. J. Balter , J. A. Bosch, S. Aldred, J. E. Raymond, S. Higgs [4373]
12*	Anxiety symptoms predict sickness-induced hyperalgesia in a model of musculoskeletal pain S. Eisenbruch , H. Engler, A. Wegner, M. Schedlowski, S. Benson [4305]
14*	Maximal telomerase activity capacity (mTAC) mediates the effect of the cortisol stress response on leukocyte telomere length K. de Punder , C. Heim, P. D. Wadhwa, S. Entringer [4288]
22*	The impact of circadian rhythms disruption on cancer progression and CNS toxicities A. K. Walker , E. K. Sloan, A. J. Phillips [4326]
53*◇	The neuronal IL-1b receptor is necessary and sufficient for paired fighting-induced social withdrawal and cognitive impairment D. DiSabato , D. Nemeth, X. Liu, B. Oliver, J. Godbout, N. Quan [4311]
54*◇	The potential clinical use of CpG-C immune stimulation in the stressful context of oncological surgery A. Eckerling* , E. Sandbank*, S. Scarlat, T. Levine, R. Haldar, E. Rosen, S. Ben-Eliyahu [4310]
55*◇	Peri-operative novel psychological intervention in breast cancer patients aiming to reduce stress responses and improve biomarkers of cancer progression T. Hanalis-Miller* , I. Ricon*, R. Haldar, A. Eckerling, S. Scarlat, T. Levine, E. Sharon, G. Goldzweig, A. Magen, R. Jacoby, S. Ben-Eliyahu [4317]
56*	Glucocorticoid receptor sensitivity and stress predict motivated effort expenditure T. Lacourt , C. Fagundes, A. Kavelaars, R. Dantzer, C. Heijnen [4270]
57*◇	Microbial composition and restraint stress induce anxiety-like behavior related to inflammation and GABA signaling along the gut-brain axis of mice B. R. Loman , E. Kolanci, G. De Palma, N. Quan, P. Bercik, M. T. Bailey [4379]
58*	Does acute inflammation change gut memories? Effects of experimental endotoxemia on the extinction of conditioned visceral pain-related fear R. J. Pawlik , L. Petrakova, A. Labanski, K. Fleischer, N. Theysohn, S. Eisenbruch, H. Engler [4256]
59*	Macrophage Migration Inhibitory Factor Promotes Neuroinflammation and Pain During Stress C. M. Sawicki , J. K. Kim, M. D. Weber, J. P. Godbout, J. F. Sheridan [3211]
60*	Maternal psychological resilience during pregnancy and fetal cellular aging G. Verner , K. Räikkönen, M. Lahti-Pulkkinen, E. Kajantie, C. Buss, J. Lin, E. Blackburn, E. Epel, P. Wadhwa, S. Entringer [4331]
63*	Sleep supports integrin activation on antigen-specific T cells via suppression of Galphas-coupled receptor signaling L. Besedovsky , T. Lange, C. Gouttefangeas, A. T. Jensen, M. Szczepanski, J. Lehnholz, S. Soekadar, H. Rammensee, J. Born, S. Dimitrov [3233]

1:00-2:00

LUNCH

Room: Foyer of the main lecture hall in the Langenbeck-Virchow-Haus

Concurrently: Leader Luncheon (Invitation only)

Room: Virchow Room at LVH

2:00-3:30

ORAL SESSION 1

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Sarah Spencer

2:00 *Excitability of spinal networks involved in pain processing is enhanced following a neonatal immune challenge*

M. Tadros, I. Zouikr, **D. M. Hodgson**, R. J. Callister [4382]

2:15 *The Role of Microglia in Synaptic Rewiring by Early-Life Adversity*

J. L. Bolton, M. Shao, S. Othy, J. Beck, X. Bai, C. Kooiker, I. Parker, M. Cahalan, T. Z. Baram [4380] ◆

2:30 *Maternal Pro-Inflammatory State during Pregnancy and Newborn Leukocyte Telomere Length: A Prospective Investigation*

C. Lazarides, E. S. Epel, J. Lin, E. H. Blackburn, M. C. Voelkle, C. Buss, H. N. Simhan, P. D. Wadhwa, S. Entringer [4338]

2:45 *Pars Triangularis Volume Mediates the Association Between Maternal Interleukin-6 Concentration During Pregnancy and Offspring Fluid Intelligence*

J. M. Rasmussen, L. E. Gyllenhammer, D. A. Fair, A. M. Graham, T. G. O'Connor, S. Entringer, P. D. Wadhwa, C. Buss [4351]

3:00 *The role of adolescent microglia for adult executive function after maternal high fat diet*

B. L. Smith, C. J. Laaker, K. R. Lloyd, A. R. Hiltz, T. M. Reyes [4341]

3:15 *Maternal immune activation induces transgenerational effects on prefrontal cortex structure and function*

U. Weber-Stadlbauer, T. Notter, J. Richetto, U. Meyer [3212]

3:30-5:00

POSTER SESSION 1

Room: Langenbeck-Virchow-Haus, Bernhard von Langenbeck Room

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

5:00-6:00

NORMAN COUSINS MEMORIAL LECTURE

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Nominators: Mark Laudenslager, Keith Kelley, Michael Irwin, and Andrew Miller

Chair: Andrew Miller



Integrative Stress Physiology:

Brain, Behavior & Immunity

Monika Fleshner, PhD

Professor, Department of Integrative Physiology
University of Colorado, Boulder, CO

6:00-7:00 **BREAK and SNACKS**
Room: Foyer of the Langenbeck-Virchow-Haus

7:00-10:00 **WELCOME RECEPTION** (Included)
*Natural History Museum
Invalidenstraße 43, 10115 Berlin, Germany*

Friday, June 7

8:30-10:25 **PRESIDENTIAL SYMPOSIUM**

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Deb Hodgson

Early Life Trajectories toward Health; the Brain, the Gut, and the Immune System

Prenatal Inflammation by Combined Environmental Stressors and Implications for Health throughout the Lifespan.

Staci Bilbo

Harvard University, Director of Research, Lurie Center for Autism, Boston, MA

Microglia at the Crossroads of Early Brain Circuits and Microbiota

Sonia Garel

Institute of Biology of the Ecole Normale Supérieure (IBENS), Paris, France

Hot Baby: How Early Life Inflammation Programs the Brain

Quentin Pittman

Department of Physiology and Pharmacology, University of Calgary, Calgary, Alberta, Canada

Susceptibility and Resilience in Immune-mediated Neurodevelopmental Disorders

Urs Meyer

Institute of Veterinary Pharmacology and Toxicology, University of Zurich, Vetsuisse, Switzerland

10:25

PRESENTATION OF THE BBI IMPACT AWARD

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Presenter: Carmine Pariante and Rachael Engels



Bing Ruan, PhD; Lanjuan Li, MD; and Hai-yin Jiang, MD

State Key Laboratory for Diagnosis and

Treatment of Infectious Diseases,

the First Affiliated Hospital, School of Medicine, Zhejiang University

10:30-11:00 **BREAK**

Room: Foyer of the Langenbeck-Virchow-Haus

11:00-12:30 **GEBIN SPONSORED SYMPOSIUM**

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Stefan Reber

Microbes and Stress Resilience

Prebiotics and probiotics to attenuate the exacerbating effects of stress on intestinal inflammation.

Michael T. Bailey

Center for Microbial Pathogenesis, the Research Institute at Nationwide Children's Hospital, Columbus, Ohio [4378]

Immunization with Mycobacterium vaccae induces an anti-inflammatory milieu in the CNS: Attenuation of stress-induced microglial priming, alarmins and anxiety-like behavior.

Matt Frank

Department of Psychology and Neuroscience, University of Colorado Boulder, Boulder, Colorado [4318]

Peripheral and central effects of Mycobacterium vaccae on mice exposed to both early life adversity and chronic stress during adulthood.

Stefan O. Reber

University of Ulm, Department of Psychosomatic Medicine and Psychotherapy, Laboratory for Molecular Psychosomatics, Ulm, Germany [4266]

12:30-1:00

ROBERT ADER LECTURE

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Nominators: Anna Marsland, Julie Bower, Steve Cole, Lisa Christian, and Michael Irwin

Chair: Lisa Christian



Aging Biology in PNI

Judith Carroll, PhD

Associate Professor, David Geffen School of Medicine
University of California at Los Angeles, Los Angeles, CA

1:00-2:00

LUNCH

On your own

Concurrently: *PNIRS* Asia-Pacific *Lunch*

Room: Wandelhalle at LVH

Invited Lecturer: Atsuyoshi Shimada, MD, PhD

Tokyo, Japan

2:00-2:15

SPECIAL TRIBUTE

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Lisa Christian, Colleague of Dr. Glaser

Ronald Glaser, PhD, 1939-2019

2:15-3:45

ORAL SESSION 2

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Carmine Pariante

2:15 *Immune cell mitochondrial respiration in postpartum women with a history of childhood maltreatment: Associations with the stress-related hormone cortisol and the attachment-related hormone oxytocin*

A. M. Gump, C. Boeck, E. Calzia, P. Radermacher, C. Waller, A. Karabatsiakis, I. T. Kolassa [4275] ◇

2:30 *Blood endotoxin levels may contribute to gender differences in the link between depressive symptoms and ex vivo inflammatory responses*

E. L. Knight, M. Majd, J. E. Graham-Engeland, J. M. Smyth, M. J. Sliwinski, R. B. Lipton, M. J. Katz, C. G. Engeland [4367]

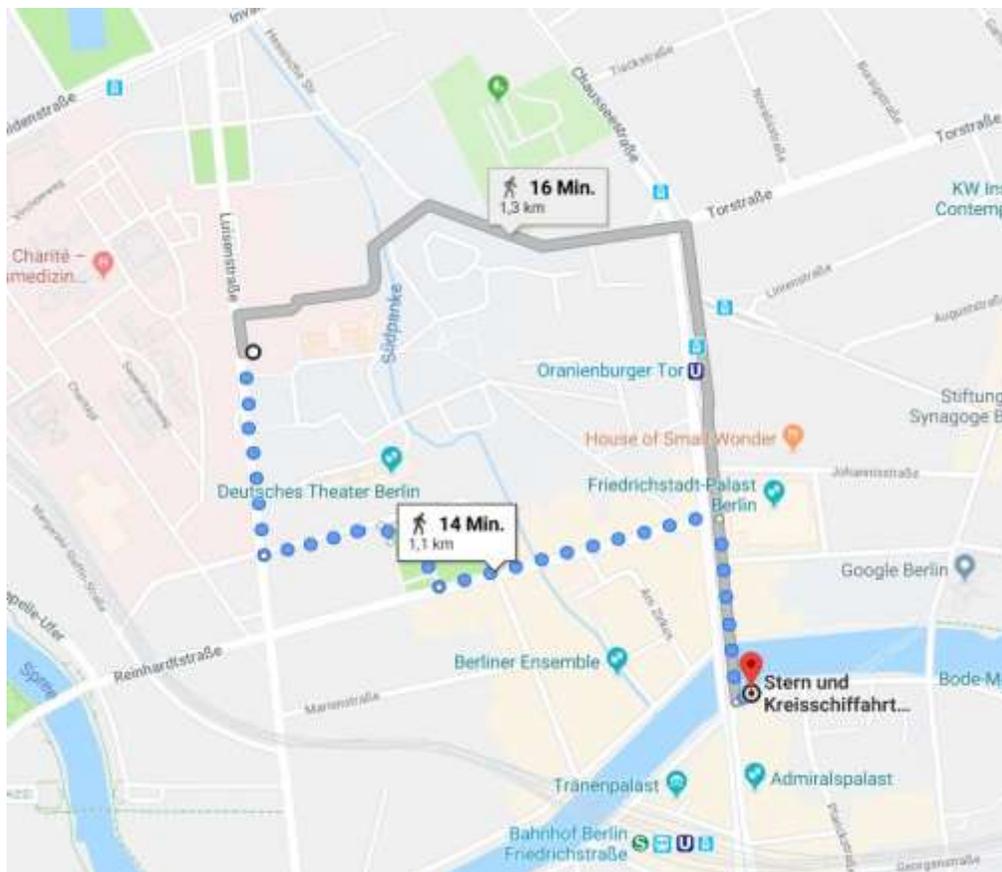
- 2:45 *Intestinal Permeability Markers Predict Future Depressive Symptoms in Women: A Two-Year Observational Study*
A. Madison, R. Andridge, A. Padin, S. Wilson, C. Alfano, S. Povoski, A. Lipari, D. Agnese, W. Carson, W. Malarky, J. Kiecolt-Glaser [3248]
- 3:00 *High Inflammation is Associated with Low Functional Connectivity in Reward Circuitry and Symptoms of Anhedonia and PTSD in a High-Trauma Population*
N. D. Mehta, V. Michopoulos, J. S. Stevens, A. H. Miller, Z. Li, J. C. Felger [4328] ◇
- 3:15 *Microglia are not necessary for the resolution of LPS-induced inflammation.*
L. Sominsky, S. Malik, S. Younesi, A. Soch, S. Xavier, S. J. Spencer [4284] ◇
- 3:30 *Harnessing microglia to fight depression*
R. Yirmiya, N. Rimmerman, H. Verdiger, H. Goldenberg, L. Ayoun, K. Lazar, R. Reshef, L. Naggan [4289]

FREE AFTERNOON

4:00-

Boat Tour

Starting Point: Stern und Kreisschiffahrt



7:30-10:00

PNIRS Trainee Social

*Arminiusmarkthalle
 Arminiusstraße 2-4, 10551 Berlin*

Saturday, June 8

8:30-10:00 ORAL SESSION 3

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Julie Bower

- 8:30 *Neuroinflammation does not mediate fatigue induced by tumor growth in an inflammatory murine model of lung cancer*
E. G. Vichaya, B. Ford, C. Quave, A. M. Casaril, R. M. Rishi, **R. Dantzer** [4377]
- 8:45 *G(alpha)s-to-G(alpha)i switch of G protein-coupled receptor signaling in rheumatoid arthritis synovial fibroblasts*
B. Dufner, R. H. Straub [3202]
- 9:00 *Tumor-secreted factors are elevated by surgery-induced sympathetic-inflammatory responses and promote the outbreak of human breast cancer dormant micrometastases*
R. Haldar, E. Rosenne, L. Shaashua, E. K. Sloan, T. Geiger, A. Radin, S. Ben-Eliyahu [4304]
- 9:15 *Molecular correlates of socioeconomic status predict acute myelogenous leukemia relapse following hematopoietic cell transplantation*
J. Knight, J. D. Rizzo, T. Wang, N. He, B. R. Logan, S. R. Spellman, S. J. Lee, M. R. Verneris, J. M. Arevalo, S. W. Cole [3208]
- 9:30 *Gustatory-immune integration in the insular cortex*
M. Krot, T. Koren, E. Avishai, M. Schiller, N. T. Boshnak, H. Hajjo, M. Amer, H. Haykin, T. Ben-Shaan, H. Azulay-Debby, F. Hakim, K. Rosenblum, A. Rolls [3238]
- 9:45 *Neurodegeneration in Asthma*
M. A. Rosenkranz, D. C. Dean, S. Esnault, J. Mumford, M. Evans, R. J. Davidson, W. W. Busse [3213]

10:00-10:30 BREAK

Room: Foyer of the Langenbeck-Virchow-Haus

10:30-12:30 MEMBER SPONSORED SYMPOSIUM (Early Career Scientists)

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Eric Wohleb

The 'formative' role of microglia across development, stress, and aging

Microglia as regulators of sex differences in brain and behavioral development

Kathryn M. Lenz

The Ohio State University, Columbus, Ohio

Dynamic neuron-microglia interactions contribute to stress-induced synaptic deficits and depressive-like behaviors

Eric S. Wohleb

University of Cincinnati College of Medicine, Cincinnati, Ohio

Microglia-endothelial-monocyte interactions augment stress-induced anxiety

Dan McKim

University of Illinois, Urbana-Champaign, Illinois [4384]

Dark microglia across contexts of health and disease

Marie-Eve Tremblay

Université Laval, Quebec City, Quebec, Canada

Discussant: **Jonathan P. Godbout**, The Ohio State University, Columbus, Ohio

12:30-1:00 POSTER DATA BLITZ 2

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Christoph Rummel

Poster Number	Title
18*	You sleep, but your heart is not in it - the importance of nocturnal autonomic signalling. U. Vollmer-Conna , M. Joubert, S. Fatt, J. Beilharz, A. Lloyd, E. Cvejic [3251]
48*◇	Lamina-specific microglial phenotypes are associated with stress-induced synaptic deficits in the prefrontal cortex J. L. Bollinger , S. C. Woodburn, E. S. Wohleb [3253]
49*	The Gut-Brain Axis in a Two-Hit Model of Anxiety S. L. Hollins , M. Katz-Barber, A. Cuskelly, L. Harms, A. Dunn, D. M. Hodgson [4283]
50*	Combined metabolite and lipid fingerprinting in women with childhood maltreatment reveals novel serum biomarkers linked to inflammation, oxidative stress and energy metabolism. A. Karabatsiakis , A. Koenig, T. Stoll, S. Wilker, T. Hennessy, M. Hill, I. Kolassa [4255]
51*◇	Imaging microglia activation in healthy humans, with TSPO PET, after Interferon-alpha immune challenge M. A. Nettis , M. Veronese, N. Nikkheslat, N. Mariani, G. Lombardo, L. Sforzini, D. Enache, F. Turkheimer, C. M. Pariante, V. Mondelli [4306]
52*	Microglial Repopulation Attenuates Age-Associated Dysfunction Independent of Neuroinflammation S. M. O'Neil , E. E. Hans, S. Jiang, A. T. Perl, J. P. Godbout [4312]
53*◇	Environmental circadian desynchronization prolongs sickness behavior and alters immune responses in mice G. L. Pearson , M. Savenkova, I. N. Karatsoreos [4322]
54*	Modulation of the brain and peripheral response to systemic inflammation and stress by omega 3 fatty acids F. Pflieger , J. Bredehöft, D. Bhandari, V. Peek, B. Spengler, S. Schulz, K. Mayer, J. Roth, C. Rummel [3245]
55*	Disrupted Sleep Continuity and Inflammation Attenuate Facial Emotion Perception in Community-Dwelling Older Adults D. Piber , N. I. Eisenberger, R. Olmstead, J. H. Cho, E. C. Breen, E. Karmarkar, H. Kim, M. Guzman, M. R. Irwin [4361]
56*	Microglia regulate cognitive function in the healthy brain S. J. Spencer , S. N. De Luca, A. Soch, L. Sominsky [3254]

1:00-2:00

LUNCH

Room: Foyer of the main lecture hall in the Langenbeck-Virchow-Haus

Concurrently: BBI Editorial Board Meeting (Invitation only)

2:00-3:30

POSTER SESSION 2

Room: Langenbeck-Virchow-Haus, Bernhard von Langenbeck Room

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

3:30-4:30

GEORGE SOLOMON MEMORIAL LECTURE

Room: Main lecture hall in the Langenbeck-Virchow-Haus

Chair: Steve Cole



From Social Connection to Cell Signaling: Biobehavioral Influences on Cancer Progression

Susan Lutgendorf, PhD

Professor and Starch Faculty Fellow

Department of Psychological and Brain Sciences

University of Iowa, Iowa City, IA

4:30-5:30

BUSINESS MEETING (All attendees are encouraged to attend)

Room: Main lecture hall in the Langenbeck-Virchow-Haus

7:00-

CLOSING BANQUET (Included)

Clärchens Ballhaus,

Auguststrasse 24, 10117 Berlin.

Presentation of the 2020 Norman Cousins and Robert Ader New Investigator Awards

GEBIN Poster Session, Wednesday, June 5

The number in bracket [nnnn] indicates the abstract number in the booklet.

Posters will be presented at Langenbeck-Virchow-Haus, Bernhard von Langenbeck Room	
1	<i>The role of adolescent microglia for adult executive function after maternal high fat diet [4341]</i> B. L. Smith , C. J. Laaker, K. R. Lloyd, A. R. Hiltz and T. M. Reyes
2	<i>Immunization with Mycobacterium vaccae enhances immunoregulation in the CNS: a role for IL-4 in mitigation of stress-induced microglial priming, alarmins and anxiety-like behavior [4318]</i> M. Frank
3	<i>C-reactive protein levels in dried blood spots are associated with frontal resting-state beta-asymmetry [4320]</i> L. Becker and N. Rohleder
4	<i>Fatigue in spondyloarthritis: from understanding molecular mechanisms to new treatment targets [4272]</i> S. Korte
5	<i>Gustatory-immune integration in the insular cortex [3238]</i> M. Krot , T. Koren, E. Avishai, M. Schiller, N. T. Boshnak, H. Hajjo, M. Amer, H. Haykin, T. Ben-Shaanan, H. Azulay-Debby, F. Hakim, K. Rosenblum and A. Rolls
6	<i>Maternal pro-inflammatory state during pregnancy and newborn leukocyte telomere length: a prospective investigation [4338]</i> C. Lazarides , E. S. Epel, J. Lin, E. H. Blackburn, M. C. Voelkle, C. Buss, H. N. Simhan, P. D. Wadhwa and S. Entringer
7	<i>Effects of the neurotransmitter dopamine on bone resorption in rheumatoid arthritis patients [4355]</i> G. Schmitz, L. Salinas Tejedor, X. Baraliakos, J. Braun and S. Capellino
8	<i>Insomnia and reward motivation in older adults [4362]</i> C. C. Boyle , H. J. Cho, N. I. Eisenberger, R. Olmstead and M. R. Irwin
9	<i>Stress alters mast cell protease profiles in murine skin and allergy [4352]</i> E. Peters , F. R. Rommel, S. Tumala, A. Urban, F. Siebenhaar and U. Gieler
10	<i>Intranasal Mycobacterium vaccae administration prevents stress-induced aggravation of dextran sulfate sodium (DSS) colitis [4335]</i> M. Amoroso , E. Kempfer, T. Eleslambouly, C. A. Lowry, D. Langgartner and S. O. Reber
11	<i>The alpha7 nicotinic acetylcholine receptor is target for the treatment of skin fibrosis [4385]</i> M. Böhm and A. Stegemann
12	<i>The effect of acute and sustained beta2-adrenergic receptor stimulation on the function of Natural Killer cells [4290]</i> M. Claus , S. Wingert and C. Watzl
13	<i>G(alpha)s-to-G(alpha)i switch of G protein-coupled receptor signaling in rheumatoid arthritis synovial fibroblasts [3202]</i> B. Dufner and R. H. Straub
14	<i>Lipopolysaccharide (LPS)-induced tolerance and sensitization: effects on primary cultures of the afferent nociceptive system [3232]</i> F. Nürnberger , S. Leisengang, D. Ott, J. Murgott, R. Gerstberger, C. Rummel and J. Roth
15	<i>Intimate encounters: How the nervous system's afferents innervate the immune system [3255]</i> C. Wuelfing , H. S. Guenther, J. Oehlmann and S. Henne
16	<i>Introduction and validation of a new semi-automated method to determine sympathetic fiber density in target tissues [4337]</i> D. Bleck , L. Ma, R. Brinks, M. Schneider, L. Tian and G. Pongratz

17	<i>Streptococcal titers in patients with tic disorders with and without comorbidities [4332]</i> J. M. Schnell , E. Weidinger, B. Burger, N. Moll, M. Schwarz, D. Martino, A. Schrag, P. J. Hoekstra, A. Dietrich and N. Müller
18	<i>Bate-palmas mutant mice has an increased sickness behavior response and modified sexual dimorphic responses: possible model of Kabuki syndrome [4263]</i> E. P. Silva , P. S. Rodrigues, S. M. Massironi, C. M. Mori, C. V. Cardoso, E. F. Bondan, M. M. Bernardi and T. B. Kirsten
19	<i>Plasma concentrations of CRP, IL-6, IL-10, and TNF-alpha in patients with depression before and after treatment with electroconvulsive therapy [4294]</i> K. M. Ryan and D. M. McLoughlin
20	<i>High inflammation is associated with low functional connectivity in reward circuitry and symptoms of anhedonia and PTSD in a high-trauma population [4328]</i> N. D. Mehta , V. Michopoulos, J. S. Stevens, A. H. Miller, Z. Li and J. C. Felger
21	<i>The allosteric Chrna7 regulator SLURP-1 modulates inflammatory responses in noise-stressed mice [4354]</i> F. R. Rommel , C. M. Ertle, S. Tumala, Y. Moriwaki, J. Klein, W. Kummer, U. Gieler and E. M. Peters
22	<i>Lipopolysaccharide reduces incentive motivation and increases sensitivity to reward devaluation in mice [4356]</i> A. M. Casaril , E. Vichaya, A. Grossberg, D. Christian, B. Ford, M. R. Rishi, L. Savegnago and R. Dantzer
23	<i>Immune cell mitochondrial respiration in postpartum women with a history of childhood maltreatment: Associations with the stress-related hormone cortisol and the attachment-related hormone oxytocin [4275]</i> A. M. Gump , C. Boeck, E. Calzia, P. Radermacher, C. Waller, A. Karabatsiakakis and I. T. Kolassa
24	<i>Adaptive and maladaptive coping differentially predicts pro-inflammatory immune responses to repeated acute stress [4287]</i> J. Janson , S. C. Sturmbauer and N. Rohleder
25	<i>Athlete burnout is related with C-reactive protein levels in dried blood spots in young and old men [4321]</i> L. Becker , A. Dupke and N. Rohleder
26	<i>Interpersonal motivations and health: Compassion toward others and prioritizing self-image possible biological pathways [4343]</i> J. M. Bennett , L. G. Roos, A. C. Mehta, C. J. Penley, A. M. Gresham and A. Canevello
27	<i>Adolescent cellular immune responses to acute stress: a preliminary study [4323]</i> A. Ngo , Z. Mousavi, N. Semsar, S. Cole, M. R. Irwin, J. E. Bower and K. R. Kuhlman
28	<i>Promoting resilience to early life stress in female C57BL/6N mice by repeated administration of Mycobacterium vaccae [4259]</i> G. Weingast , J. E. Hofeichner, J. Probst, M. Amoroso, D. Langgartner and S. O. Reber
29	<i>Psychoneuroimmunology - the link that explains the nature of health between the constraints imposed by the external environment limiting the emergent possibilities of the biological blueprint [4346]</i> J. M. Bennett , N. Rohleder and J. P. Sturmburg
30	<i>Promoting resilience to early life stress in female C57BL/6N mice by repeated administration of Mycobacterium vaccae [4260]</i> J. Probst , J. E. Hofeichner, G. Weingast, M. Amoroso, D. Langgartner and S. O. Reber
31	<i>Immune Function Improvement after Sleeping on a Bed with an Insulated System of Electromagnetic Fields</i> E. Díaz-Del Cerro , C. Vida, M. De La Fuente and I. Martínez de Toda
32	<i>Behavioral Conditioning of Anti-Proliferative Effects of Rapamycin in experimental CNS malignancy</i> S. Hetze , L. Lückemann, L. Barthel, U. Sure, M. Schedlowski and M. Hadamitzky

33	<p><i>Intestinal dysbiosis in maltreated children is associated with concentrations of salivary cortisol, C-reactive protein and with depressive symptoms</i> G. D. Karaboycheva, K. de Punder, J. Overfeld, P. Dörr, K. Dittrich, E. Murray, E. Binder, S. Entringer and C. Heim</p>
34	<p><i>Conditioned immunosuppression in rats diminished severity of experimentally-induced rheumatoid arthritis</i> L. Lückemann, H. Stangl, R. H. Straub, M. Schedlowski and M. Hadamitzky</p>
35	<p><i>Analysis of mRNA levels of inflammatory mediators in samples from the KARMA-dep (Ketamine as an adjunctive therapy for major depression) Trial</i> K. M. Ryan, B. Gallagher and D. M. McLoughlin</p>

PNIRS Poster Session 1, Thursday, June 6

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

◇ Indicates a Trainee Scholar

Posters will be presented at Langenbeck-Virchow-Haus, Bernhard von Langenbeck Room	
1	Associations between hypovitaminosis-D and tic severity and comorbidities in children and adolescents with chronic tic-disorders: A large pan-European cross-sectional study N. Moll, M. Bond, A. Rosello, R. Bond, B. Burger, P. J. Hoekstra, A. Dietrich, A. Schrag, E. Kocovska, D. Martino, N. Mueller, M. Schwarz, U. Meier [4381]
2	Low-grade inflammation and symptom severity in ME/CFS M. Jonsjö, G. Olsson, R. Wicksell, L. Holmström, K. Alving, A. Andreasson [4360]
3	Sickness behavior assessed with the Sickness Questionnaire is elevated in patients with ME/CFS and chronic pain compared to the general population and primary care patients M. Jonsjö, M. Kemani, L. Agréus, K. Lodin, J. Åström, R. Wicksell, M. Lekander, G. Olsson, L. Holmström, A. Andreasson [4366]
4	Unique Neurophysiological Vulnerability of Visual Attention Networks to Acute Inflammation L. J. Balter, J. A. Bosch, S. Aldred, M. T. Drayson, S. Higgs, J. J. Veldhuijzen van Zanten, J. E. Raymond, A. Mazaheri [4369]
5*	The Role of Inflammation and Aging in Motivated Learning Behaviors -- A Conceptual Replication in Chronic Inflammation L. J. Balter, J. A. Bosch, S. Aldred, J. E. Raymond, S. Higgs [4373]
6	Deletion of indoleamine 2,3 dioxygenase (Ido)1, but not Ido2, exacerbates symptoms in a preclinical murine model of multiple sclerosis. A. J. Steelman, L. Wetzel, R. H. McCusker [4291]
7	C-reactive protein levels in dried blood spots are associated with frontal resting-state beta-asymmetry L. Becker, N. Rohleder [4320]
8	Athlete burnout is related with C-reactive protein levels in dried blood spots in young and old men L. Becker, A. Dupke, N. Rohleder [4321]
9	Short-term methotrexate administration induces astrogliosis in several brain areas E. Vazi, F. Holanda, N. A. Santos, C. V. Cardoso, A. L. Bachi, M. M. Martins, E. F. Bondan [3218]
10	Maropitant potentiates sickness behavior and reverses astrogliosis induced by LPS P. D. Dossa, L. B. Viebig, C. V. Cardoso, T. B. Kirsten, E. F. Bondan [3220]
11	Pain-related learning and memory processes are distinctly altered in patients with functional and inflammatory abdominal pain L. R. Koenen, A. Icenhour, H. Engler, N. Theysohn, J. Langhorst, S. Elsenbruch [4303]
12*	Anxiety symptoms predict sickness-induced hyperalgesia in a model of musculoskeletal pain S. Elsenbruch, H. Engler, A. Wegner, M. Schedlowski, S. Benson [4305]
13	C-Reactive Protein Levels in Children Aged 3-5 Years with Verified Exposure to Maltreatment: Sex Differences and Association with Depression K. de Punder, J. Overfeld, G. Karaboycheva, K. Dittrich, S. M. Winter, C. Buss, E. B. Binder, S. Entringer, C. Heim [4336]

14*	Maximal telomerase activity capacity (mTAC) mediates the effect of the cortisol stress response on leukocyte telomere length K. de Punder, C. Heim, P. D. Wadhwa, S. Entringer [4288]
15	'Intimate encounters'; How the nervous system's afferents innervate the immune system: C. Wuelfing, H. S. Guenther, J. Oehlmann, S. Henne [3255]
16	Stress perception and mediators following the diagnosis of early-stage malignant melanoma, a comparison group and follow-up study in patients displaying psychooncologic need E. Prof. Dr. med. Peters, P. Madeo, M. Schock, S. Foth, S. Philipp, A. Bender, J. Kruse [4363]
17	Depressive patients producing high cytokine levels by peripheral blood mononucleocytes show good success of multi-modal psychotherapeutic inpatient therapy E. Prof. Dr. med. Peters, M. Neusetzer, A. Murat, S. Diekmeyer, M. Rose, M. L. Conrad, J. Kruse [4364]
18	Lipopolysaccharide (LPS)-induced tolerance and sensitization: effects on primary cultures of the afferent nociceptive system F. Nürnberger, S. Leisegang, D. Ott, J. Murgott, R. Gerstberger, C. Rummel, J. Roth [3232]
19	Primary cultures of the rat dorsal root ganglia: influence of lipopolysaccharide and cisplatin on properties of neuronal and glial elements S. Leisegang, D. Ott, J. Murgott, R. Gerstberger, C. Rummel, J. Roth [3228]
20	Parkin-dependent mitophagy is required for the inhibition of ATF4 on NLRP3 inflammasome activation in cerebral ischemia-reperfusion injury in rats J. Zhao [4293]
21	Anti-inflammatories can prevent but not treat (reverse) tumour-induced cognitive impairment in mice. A. K. Walker, N. Chung, E. K. Sloan [4325]
22*	The impact of circadian rhythms disruption on cancer progression and CNS toxicities A. K. Walker, E. K. Sloan, A. J. Phillips [4326]
23	Inflammation associated with coronary heart disease predicts onset of depression in a three-year prospective follow-up. L. Sforzini, N. Nikkheslat, J. E. Palacios, A. Tylee, L. A. Carvalho, C. A. Viganò, C. M. Pariante [4262]
24	Acute responses of intracranial macrophages to LPS-induced systemic inflammation in newborn mice A. Shimada, A. Miura, S. Hasegawa-Ishii [4285]
25	TLR-7 agonist imiquimod may trigger pro-inflammatory reaction by acting on brain cells directly M. Suessmilch, J. Edgar, G. Graham, J. Cavanagh [4300]
26	Examining Sex Differences in the Neuroimmune Profile of the Developing Rat. E. L. Reinl, L. A. Pickett, M. M. McCarthy [4279]
27	Perioperative stress and hypothermic responses jeopardize beneficial effects of immune stimulation by CpG-C: Partial mediation through glucocorticoid responses E. Sandbank, S. Scarlat, T. Levine, A. Eckerling, A. Ekerling, R. Haldar, E. Rosen, S. Ben-Eliyahu [4313]
28	Subjective social standing is related to inflammation during pregnancy L. Scholaske, C. Buss, P. D. Wadhwa, S. Entringer [4281]
29	Influence of poly(I:C) variability on thermoregulation, immune responses and pregnancy outcomes in mouse models of maternal immune activation F. S. Mueller, J. Richetto, L. Hayes, A. Zambon, D. Pollak, A. Sawa, U. Meyer, U. Weber-Stadlbauer [3223]

30	Adolescent Cellular Immune Responses to Acute Stress: A Preliminary Study A. Ngo, Z. Mousavi, N. Semsar, S. Cole, M. R. Irwin, J. E. Bower, K. R. Kuhlman [4323]
31	Differential effects of chronic inflammation and exercise on hippocampal neurogenesis-associated behaviour through the lifespan C. M. Hueston, J. D. O'Leary, D. A. Kozareva, C. S. O'Leime, A. E. Hoban, L. C. Pawley, O. F. O'Leary, J. F. Cryan, Y. M. Nolan [3225]
32	Immune Dysregulation and Perinatal Mood and Anxiety Symptoms L. M. Osborne, J. F. Betz, G. Yenokyan, L. R. Standeven, J. L. Payne [3235]
33	Molecular pathways involved in the interferon-alpha model of immune depression N. Mariani, M. A. Nettis, N. Nikkheslat, G. Lombardo, D. Enache, A. Cattaneo, N. Cattane, A. Borsini, V. Mondelli, C. M. Pariante [4307]
34	Indoleamine-2,3-dioxygenase 2 deficiency attenuates Theiler's murine encephalomyelitis virus-induced ictogenesis A. K. Brooks, M. A. Lawson, G. G. Freund, A. J. Steelman, R. H. McCusker [4365]
35	Maternal Depressive Symptoms and Pro-Inflammatory State during Pregnancy T. Kleih, S. Entringer, L. Scholaske, K. De Punder, P. D. Wadhwa, C. Buss [4374]
36	Intranasal Mycobacterium vaccae administration prevents stress-induced aggravation of dextran sulfate sodium (DSS) colitis M. Amoroso, E. Kempter, T. Eleslambouly, C. A. Lowry, D. Langgartner, S. O. Reber [4334]
37	Effect of Chronic Stress and Morphine Treatments on Spinal Nerve Growth Factor in a Rat Model H. R. Linsenbardt, N. M. Sosanya, S. Tongkhuya, R. J. Christy, S. Crimmins, B. P. Cheppudira [4302]
38	Mycobacterium vaccae promotes resilience when administered subcutaneously prior to or during chronic psychosocial stress M. Amoroso, A. Böttcher, C. A. Lowry, D. Langgartner, S. O. Reber [4340]
39	Immune responses at the maternal-fetal interface following restraint stress in late gestation A. M. Antonson, T. A. Rajasekera, H. J. Chen, T. L. Gur [4370]
40	Intra-hippocampal Depletion of Microglia as a Tool to Examine the Role of Microglia in the Ontogeny of Learning and Learning Deficits Produced by Immune Challenge M. B. Bielicki, N. A. Haas, J. M. Schwarz [4278]
41	Pro- and anti-inflammatory properties of interleukin (IL-6): relevance for human hippocampal neurogenesis A. Borsini, P. Zunszain, C. M. Pariante [3210]
42	Insomnia and Reward Motivation in Older Adults C. C. Boyle, H. J. Cho, N. I. Eisenberger, R. Olmstead, M. R. Irwin [4362]
43	Adolescent asthma during development and its impact on the physiological stress response and the brain: a mouse model J. I. Caulfield, K. J. Schopf, S. A. Cavigelli [4265]
44	
45	Implications of exposure to community violence on post traumatic stress disorder, allostatic load, and physical quality of life in a sample of injured urban trauma survivors T. A. deRoos-Cassini, M. Halling, L. Torres, J. Knight [4372]
46	Chronic stress is associated with greater mood impairment during experimental systemic inflammation H. Engler, S. Elsenbruch, M. Schedlowski, M. Schedlowski, S. Benson [3246]
47	

48	Reduced immunity to measles and rubella, but not polio in adults with major depressive disorder: a follow up study. B. N. Ford, T. K. Teague, R. H. Yolken, F. B. Dickerson, M. R. Irwin, J. Bodurka, M. P. Paulus, J. Savitz [3240]
49	A mouse model for benign obesity? U. Gimsa, E. Kanitz, A. Tuchscherer, M. Langhammer [4353]
50	Combined LPS challenge and TSPO PET as a method for screening novel microglial targeted immunotherapies R. de Marco, E. Arstad, A. Colasanti, A. Barritt, N. A. Harrison [4350]
51	Neuroprotective Effects of TNF-alpha inhibitor on Rat Hippocampal Organotypic Slice Cultures Treated with the 1-42 beta--amyloid J. Heo, T. Park [3204]
52	Alterations of the serum N-glycan profile in female patients with Major Depressive Disorder M. Hitzler, C. Boeck, S. Pfister, A. Buerkle, V. Vanhooren, C. Libert, J. Salinas-Manrique, D. E. Dietrich, I. T. Kolassa, A. Karabatsiakakis [4268]
53* ◇	The neuronal IL-1b receptor is necessary and sufficient for paired fighting-induced social withdrawal and cognitive impairment D. DiSabato, D. Nemeth, X. Liu, B. Oliver, J. Godbout, N. Quan [4311]
54* ◇	The potential clinical use of CpG-C immune stimulation in the stressful context of oncological surgery A. Eckerling*, E. Sandbank*, S. Scarlat, T. Levine, R. Haldar, E. Rosen, S. Ben-Eliyahu [4310]
55* ◇	Peri-operative novel psychological intervention in breast cancer patients aiming to reduce stress responses and improve biomarkers of cancer progression T. Hanalis-Miller*, I. Ricon*, R. Haldar, A. Eckerling, S. Scarlat, T. Levine, E. Sharon, G. Goldzweig, A. Magen, R. Jacoby, S. Ben-Eliyahu [4317]
56*	Glucocorticoid receptor sensitivity and stress predict motivated effort expenditure T. Lacourt, C. Fagundes, A. Kavelaars, R. Dantzer, C. Heijnen [4270]
57* ◇	Microbial composition and restraint stress induce anxiety-like behavior related to inflammation and GABA signaling along the gut-brain axis of mice B. R. Loman, E. Kolanci, G. De Palma, N. Quan, P. Bercik, M. T. Bailey [4379]
58*	Does acute inflammation change gut memories? Effects of experimental endotoxemia on the extinction of conditioned visceral pain-related fear R. J. Pawlik, L. Petrakova, A. Labanski, K. Fleischer, N. Theysohn, S. Elsenbruch, H. Engler [4256]
59*	Macrophage Migration Inhibitory Factor Promotes Neuroinflammation and Pain During Stress C. M. Sawicki, J. K. Kim, M. D. Weber, J. P. Godbout, J. F. Sheridan [3211]
60*	Maternal psychological resilience during pregnancy and fetal cellular aging G. Verner, K. Räikkönen, M. Lahti-Pulkkinen, E. Kajantie, C. Buss, J. Lin, E. Blackburn, E. Epel, P. Wadhwa, S. Entringer [4331]
61	Dietary oligosaccharides attenuate stress-induced disruptions in immune reactivity and microbial B-vitamin metabolism J. Allen, R. Jagers, L. Solden, B. Loman, C. Ladaika, M. Chichlowski, M. T. Bailey [4348]
62	Cytokine concentrations are related to level, but not development, of mental distress in inpatients not using anti-inflammatory drugs H. Toft, L. Lien, S. P. Neupane, D. S. Abebe, T. Tilden, B. E. Wampold, J. G. Bramness [3229]

63*	Sleep supports integrin activation on antigen-specific T cells via suppression of Galphas-coupled receptor signaling L. Besedovsky, T. Lange, C. Gouttefangeas, A. T. Jensen, M. Szczepanski, J. Lehnholz, S. Soekadar, H. Rammensee, J. Born, S. Dimitrov [3233]
64	Transcriptional changes to glia during peripheral influenza infection are revealed by scRNA-seq K. Soto Diaz, M. Juda, R. Nowak, A. J. Steelman [4401]
65	The effects of stress on the immune system using salivary free light chains as a biomarker. L. Irshad, S. Spranger, Z. Silverthorne, E. Starr, J. Utting, J. Fawcett, S. Faustini, J. Campbell, J. Heaney [4390]
66	CLARITY and immunofluorescence provides a sensitive method to determine changes to myelin volume in the prefrontal cortex. A. Y. Louie, H. Koito, A. J. Steelman [4403]
67	Modeling prenatal depression in mice: behavioral and molecular consequences and the impact of antidepressant treatment J. Scarborough, F. S. MÅ¼ller, A. Cattaneo, U. Meyer, J. Richetto [4387]
68	Reduced IL-1beta-induced chemokine response in human iPSC-astrocytes in schizophrenia revealed by RNA-sequencing A. Szabo, I. A. Akkouch, L. Hansson, E. Inderhaug, T. Hughes, T. Ueland, N. E. Steen, O. A. Andreassen, S. Djurovic [4389]
69	Chronic inhaled corticosteroids during development minimize allergic asthma symptoms but exacerbate comorbid anxiety symptoms S. A. Cavigelli, J. I. Caulfield, A. Ching, S. Studer, T. Craig, H. M. Kamens, A. August [4368]

PNIRS Poster Session 2, Saturday, June 8

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

◇ Indicates a Trainee Scholar

Posters will be presented at Langenbeck-Virchow-Haus, Bernhard von Langenbeck Room	
1	Validation of the English translation of the Sickness questionnaire in an Australian population sample with medically unexplained symptoms A. Andreasson, D. McNaughton, M. P. Jones, A. Beath, K. Lodin, R. Wicksell, M. Lekander [4357]
2	Aging reduced generalization of learned information -- Do working memory capacity and inflammation play a role? L. J. Balter, J. A. Bosch, S. Aldred, M. T. Drayson, J. J. Veldhuijzen van Zanten, S. Higgs, J. E. Raymond [4371]
3	Interpersonal motivations and health: Compassion toward others and prioritizing self-image possible biological pathways J. M. Bennett, L. G. Roos, A. C. Mehta, C. J. Penley, A. M. Gresham, A. Canevello [4343]
4	Psychoneuroimmunology -- the link that explains the nature of health between the constraints imposed by the external environment limiting the emergent possibilities of the biological blueprint J. M. Bennett, N. Rohleder, J. P. Sturmborg [4346]
5	Glial fibrillary acidic protein (GFAP) expression in astrocytes following the administration of different pain management drugs E. F. Bondan, L. B. Viebig, M. C. Augusto, P. Q. Brigo, P. M. Silva, P. D. Dossa, C. V. Cardoso, M. M. Martins [3217]
6	High-fat diet induces memory impairments and hippocampal and hypothalamic astrogliosis C. V. Cardoso, M. M. Martins, R. Otton, E. F. Bondan [3216]
7	Demyelination and remyelination following a gliotoxic injury in the brainstem of XID mice C. V. Cardoso, M. M. Martins, E. P. Hurtado, E. F. Bondan [3226]
8	Lipopolysaccharide reduces incentive motivation and increases sensitivity to reward devaluation in mice A. M. Casaril, E. Vichaya, A. Grossberg, D. Christian, B. Ford, M. R. Rishi, L. Savegnago, R. Dantzer [4356]
9	Lipopolysaccharide induces mitochondrial dysfunction and activates the cGAS-STING pathway in the mouse brain: possible involvement in inflammation-induced anergia A. M. Casaril, E. Vichaya, S. Cole, L. Savegnago, R. Dantzer [4358]
10	Bate-palmas mutant mice has an increased sickness behavior response and modified sexual dimorphic responses: possible model of Kabuki syndrome E. P. Silva, P. S. Rodrigues, S. M. Massironi, C. M. Mori, C. V. Cardoso, E. F. Bondan, M. M. Bernardi, T. B. Kirsten [4263][
11	Propentofylline prevents body weight loss, motor behavior impairments, depressive-like behavior, and TNF increase in rats which were exposed to LPS T. B. Kirsten, M. C. Galvão, M. M. Moraes, M. M. Bernardi [3241]
12	Stress alters mast cell protease profiles in murine skin and allergy E. M. J. Peters, F. R. Rommel, S. Tumala, A. Urban, F. Siebenhaar, U. Gieler [4352]

13	The allosteric Chrna7 regulator SLURP-1 modulates inflammatory responses in noise-stressed mice F. R. Dr. med. Rommel, C. M. Ertle, S. Tumala, Y. Moriwaki, J. Klein, W. Kummer, U. Gieler, E. M. Prof. Dr. med. Peters [4354]
14	Plasma tryptophan metabolite concentrations in depression and the response to electroconvulsive therapy K. M. Ryan, K. A. Allers, D. M. McLoughlin, A. Harkin [4258]
15	Plasma concentrations of CRP, IL-6, IL-10, and TNF-alpha in patients with depression before and after treatment with electroconvulsive therapy K. M. Ryan, D. M. McLoughlin [4294]
16	Relationship between HPA axis reactivity and innate immunity in mice A. Gül, L. Gohrbandt, V. Rappeneau, C. Touma, O. Ambree [4342]
17	Healthy aging--a role for autonomic function? U. Vollmer-Conna, J. P. Tan, J. Beilharz, E. Cvejic [3252]
18*	You sleep, but your heart is not in it - the importance of nocturnal autonomic signalling. U. Vollmer-Conna, M. Joubert, S. Fatt, J. Beilharz, A. Lloyd, E. Cvejic [3251]
19	Genetic variants drive altered epigenetic regulation of endotoxin tolerance in BTBR macrophages A. Vogel Ciernia, M. Careaga, J. LaSalle, P. Ashwood [3247]
20	Severity of Psychomotor Retardation in Depressed Patients is Associated with mRNA Enrichment of Toll-like Receptor, Cytokine and mTOR Signaling Pathways M. Bekhbat, D. R. Goldsmith, A. H. Miller, J. C. Felger [4315]
21	Introduction and validation of a new semi-automated method to determine sympathetic fiber density in target tissues D. Bleck, L. Ma, R. Brinks, M. Schneider, L. Tian, G. Pongratz [4337]
22	Blood Brain Barrier Breakdown Following Topical Aldara Treatment. J. Bourgognon, M. Suessmilch, A. McColl, J. Cavanagh [4297]
23	Effects of the neurotransmitter dopamine on bone resorption in rheumatoid arthritis patients G. Schmitz, L. Salinas Tejedor, X. Baraliakos, J. Braun, S. Capellino [4355]
24	
25	Anhedonic Behavior and Peripheral Immune Function in Postpartum Rats R. B. Della Valle, N. A. Haas, J. M. Schwarz [4277]
26	The opposite sides of the same coin: Norepinephrine aggravates cartilage degeneration but attenuates subchondral bone changes K. El Bagdadi, D. Muschter, S. Taheri, A. Meurer, F. Zaucke, R. H. Straub, Z. Jenei-Lanzl [4292]
27	Ghosts of relationships past: Child maltreatment and inflammation interact to predict depression prospectively among recently widowed older adults C. P. Fagundes, L. Wu, C. Heijnen [4376]
28	Enhanced alterations of inflammatory markers and growth-factors in women reporting self-harm ideation during pregnancy. E. Fransson, F. Papdopoulos, I. Sundström-Poromaa, M. Ramklint, A. Skalkidou [4329]
29	Analysis of brain microglia and behavior after peripherally-induced neuroinflammation in mice J. Grigoleit, S. Worthen, A. Bhattacharya [3242]
30	The differential effects of nasal inflammation and odor deprivation on the layer-specific degeneration of the olfactory bulb in mice S. Hasegawa-Ishii, F. Imamura, A. Shimada [4327]

31	The role of neutrophil granulocytes in immune-to-brain communication during LPS-induced systemic versus lung inflammation. J. Hernandez, H. Kitagawa, F. Pflieger, C. Herden, K. Mayer, C. Rummel [3234]
32	Adaptive and maladaptive coping differentially predicts pro-inflammatory immune responses to repeated acute stress J. Janson, S. C. Sturbauer, N. Rohleder [4287]
33	Mnemonic-like representation of immune-related information in the insular cortex T. Koren, M. Krot, N. T. Boshnak, T. L. Ben-Shaanan, M. Schiller, H. Azulay-Debby, B. Korin, H. Hajjo, E. Avishai, M. Amer, H. Haykin, K. Rosenblum, A. Rolls [3237]
34	The More You Love, The More You Lose: Relationship Satisfaction Determines the Effect of Stress-related Immune Dysregulation on Health After the Loss of a Spouse A. LeRoy, W. Petit, R. Brown, K. Murdock, L. Garcini, R. Stowe, C. Fagundes [4324]
35	Hints for catecholamine-driven autocrine mechanisms to regulate regulatory B cells N. Honke, B. Opgenoorth, K. Krebber, T. Lowin, M. Schneider, G. Pongratz [4339]
36	Telomerase-dependent senescence and inflammation with ageing in the zebrafish brain R. R. Martins, P. Ellis, N. Mughal, F. Gimán, E. Thompson, I. Bellantuono, C. M. Henriques [3231]
37	A Cortex -- Hypothalamic Pathway That Drives Sympathetic Responses to Psychosocial Stress N. Kataoka, K. Nakajima, K. Nakamura [4267]
38	Glucocorticoid Resistance, Childhood Trauma and Antidepressant Response in Patients with Depression: Results from BIODEP Study UK N. Nikkheslat, A. P. McLaughlin, C. Hastings, Z. Zajkowska, M. A. Nettis, N. Mariani, D. Enache, G. Lombardo, L. Pointon, P. J. Cowen, J. Cavanagh, N. A. Harrison, E. T. Bullmore, N. Consortium, C. M. Pariante, V. Mondelli [4264]
39	Psychosocial and Environmental Influences on Prenatal Maternal Inflammation T. O'Connor, D. Rich, P. Hopke, R. Miller, M. Caserta, E. Barrett, K. Scheible [4345]
40	The role of gut microbiota in chemotherapy-induced anxiety-like behavior A. Lahoud, K. R. Jordan, B. Haynes, S. Vickery, J. Kaur, K. Sullivan, L. M. Pyter [4347]
41	Cognitive deficits in survivors of childhood leukemia: a role for inflammation T. Reyes, C. Laaker, M. Smail, A. Hiltz, K. R. Lloyd, B. L. Smith, J. Konsman [4349]
42	Role of Microglia Deficiency in Brain Maturation and Behaviors Relevant to Neurodevelopmental Disorders S. M. Schalbeter, T. Notter, F. Müller, J. Scarborough, D. Mattei, U. Weber, J. Richetto, U. Meyer [3224]
43	Genetic variation of IL-6 expression modulates age-related memory decline L. Knopf*, A. Richter*, H. Schütze, C. I. Seidenbecher, E. Düzel, B. H. Schott [4308]
44	Rat Model of Prenatal Zika Virus Infection and Associated Neural and Behavioral Consequences in the Offspring. M. L. Sherer, P. Khanal, R. Patel, M. Parcels, J. Schwarz [3221]
45	Effective connectivity within the insula mediates the association between inflammation and human sickness behaviour K. Stefanov, J. McLean, B. Allan, N. Basi, J. Cavanagh, R. Krishnadas [4295]
46	Lifetime stress exposure and its association with anti-inflammatory markers in young adults. S. C. Sturbauer, G. S. Shields, F. Grosshauser, G. M. Slavich, N. Rohleder [4319]
47	Pilot Study of Combined Aerobic Resistance Exercise on Fatigue and Inflammation for Patients with Head and Neck Cancer C. Xiao, J. J. Beitler, K. A. Higgins, Y. Z. Zhu, H. Zhao, D. W. Bruner, A. H. Miller, R. Gary [4314]

48*◇	Lamina-specific microglial phenotypes are associated with stress-induced synaptic deficits in the prefrontal cortex J. L. Bollinger, S. C. Woodburn, E. S. Wohleb [3253]
49*	The Gut-Brain Axis in a Two-Hit Model of Anxiety S. L. Hollins, M. Katz-Barber, A. Cuskelly, L. Harms, A. Dunn, D. M. Hodgson [4283]
50*	Combined metabolite and lipid fingerprinting in women with childhood maltreatment reveals novel serum biomarkers linked to inflammation, oxidative stress and energy metabolism. A. Karabatsiakos, A. Koenig, T. Stoll, S. Wilker, T. Hennessy, M. Hill, I. Kolassa [4255]
51*◇	Imaging microglia activation in healthy humans, with TSPO PET, after Interferon-alpha immune challenge M. A. Nettis, M. Veronese, N. Nikkheslat, N. Mariani, G. Lombardo, L. Sforzini, D. Enache, F. Turkheimer, C. M. Pariante, V. Mondelli [4306]
52*	Microglial Repopulation Attenuates Age-Associated Dysfunction Independent of Neuroinflammation S. M. O'Neil, E. E. Hans, S. Jiang, A. T. Perl, J. P. Godbout [4312]
53*◇	Environmental circadian desynchronization prolongs sickness behavior and alters immune responses in mice G. L. Pearson, M. Savenkova, I. N. Karatsoreos [4322]
54*	Modulation of the brain and peripheral response to systemic inflammation and stress by omega 3 fatty acids F. Pflieger, J. Bredehöft, D. Bhandari, V. Peek, B. Spengler, S. Schulz, K. Mayer, J. Roth, C. Rummel [3245]
55*	Disrupted Sleep Continuity and Inflammation Attenuate Facial Emotion Perception in Community-Dwelling Older Adults D. Piber, N. I. Eisenberger, R. Olmstead, J. H. Cho, E. C. Breen, E. Karmarkar, H. Kim, M. Guzman, M. R. Irwin [4361]
56*	Microglia regulate cognitive function in the healthy brain S. J. Spencer, S. N. De Luca, A. Soch, L. Sominisky [3254]
57	Using the influenza vaccine as an exogenous mild inflammatory challenge: when does inflammation peak? A. Radin, K. Kuhlman, C. Boyle, M. Haydon, E. Paine, E. Mondell, A. Mendoza, N. LeRaybaud, J. E. Bower [4391]
58	Immune Function Improvement after Sleeping on A Bed with an Insulated System of Electromagnetic Fields E. Díaz-Del Cerro, C. Vida, M. De La Fuente, I. Martínez de Toda [4399]
59	Conditioned immunosuppression in rats diminished severity of experimentally-induced rheumatoid arthritis L. Lückemann, H. Stangl, R. H. Straub, M. Schedlowski, M. Hadamitzky [4388]
60	Behavioral Conditioning of Anti-Proliferative Effects of Rapamycin in experimental CNS malignancy S. Hetze, L. Lückemann, L. Barthel, U. Sure, M. Schedlowski, M. Hadamitzky [4396]
61	Intestinal dysbiosis in maltreated children is associated with concentrations of salivary cortisol, C-reactive protein and with depressive symptoms G. D. Karaboycheva, K. de Punder, J. Overfeld, P. Dörr, K. Dittrich, E. Murray, E. Binder, S. Entringer, C. Heim [4402]
62	Early-life Immune Insult Results in Sex-Specific Quantitative and Qualitative Differences in Ultrasonic Vocalizations Z. J. Pranske, S. O. Nolan, S. L. Hodges, I. Muhammad, M. Binder, J. N. Lugo [4397]

63	Correlative effects of cancer-related fatigue on the neuroendocrine-immune network: Role of hormone responsiveness, metastatic markers, immune markers and psychosocial factors. R. S. Nair, E. Prabhu , D. Suresh Kumar, M. P. Viswanathan, K. Vijayasarathy, K. Chandramouleeswari, R. Adrishia , D. Meghna, H. P. Priyanka [4392]
64	Social Attachment Predicts Inflammatory and Anti-Viral Signaling in Individuals Undergoing Autologous Hematopoietic Cell Transplantation K. E. Rentscher, S. W. Cole, J. E. Carroll, C. L. Coe, P. Hematti, J. Kim, M. P. Juckett, D. M. Lamkin, E. S. Costanzo [4405]
65	Analysis of mRNA levels of inflammatory mediators in samples from the KARMA-dep (Ketamine as an adjunctive therapy for major depression) Trial K. M. Ryan, B. Gallagher, D. M. McLoughlin [4393]
66	Prevention of liver metastases through perioperative acute CpG-C immune stimulation L. Sorski, R. Melamed, B. Levi , P. Matzner, H. Lavon , E. Rosenne , L. Shaashua , I. Ricon, E. Sandbank, S. Ben-Eliyahu [4395]
67	To Sleep Isolated from Electromagnetic Fields Decreases Cortisol Levels and Improve Redox and Inflammatory State C. Vida Rueda, E. Díaz-Del Cerro, M. De la Fuente [4400]

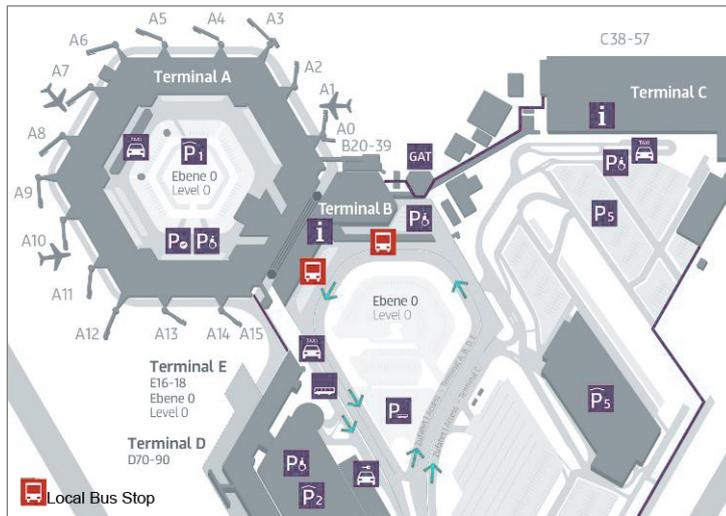
Welcome to Berlin!

How to get to the city from Tegel

Various bus connections are available from Berlin Tegel Airport to Berlin city center, making the airport very well integrated in Berlin's public transport network. Four BVG (Berlin Transport Services) stops are located right outside Terminal A and B.

The ticket machine is located at the bus stop at Terminal A. To get to Berlin city center you need a ticket for fare zone AB. One way ticket fare is 2,80 Euro, but it will be convenient to purchase a 4-way or day ticket or a Berlin Welcome Card - depending on possibly further rides.

The trip from the airport to the Berlin city center (East) takes about 30 minutes



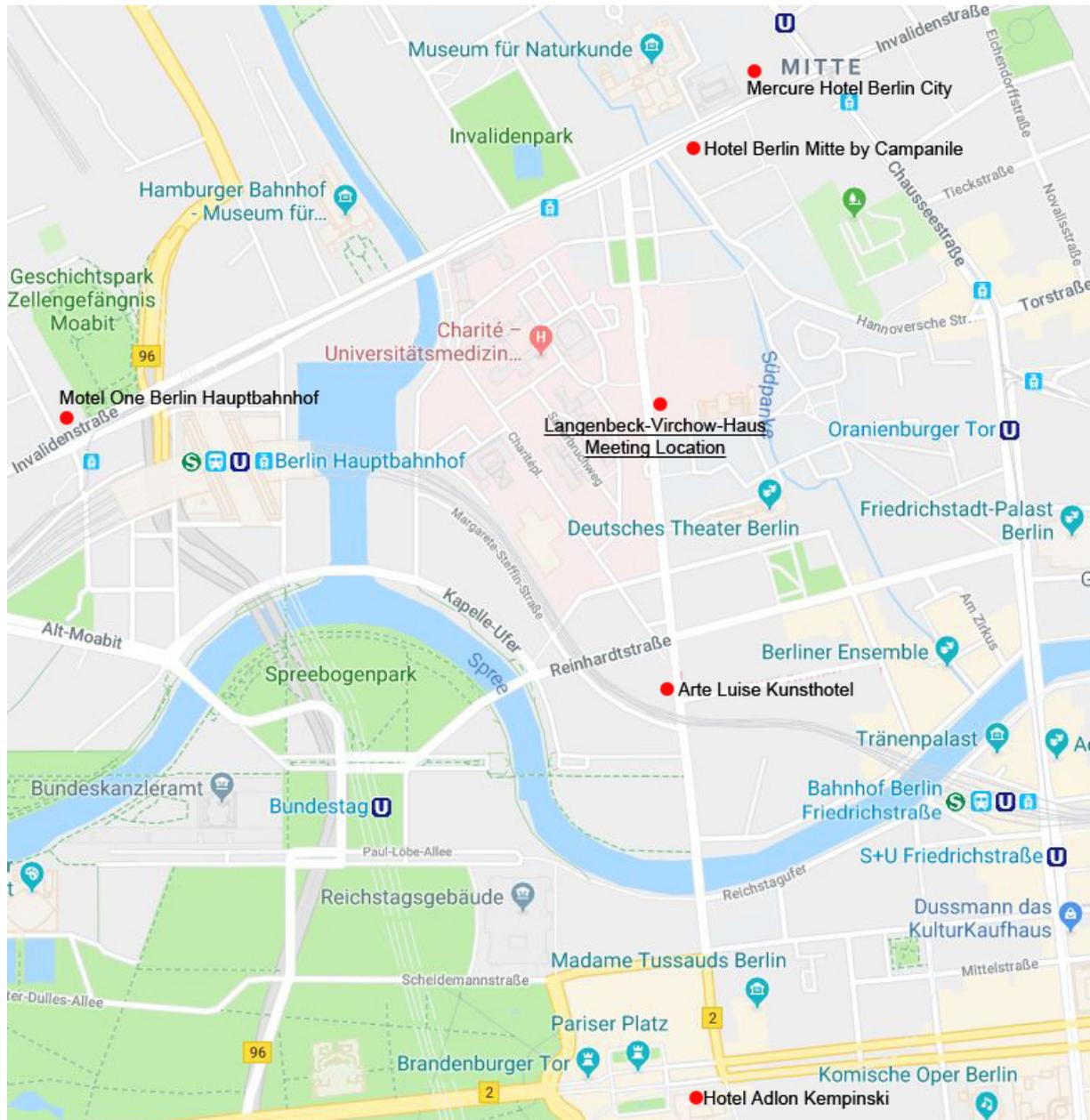
Tickets and information for public transportation, route planner: <https://www.bvg.de/en/>

Meeting location and Hotels:

Langenbeck-Virchow-Haus, Charité Universitätsmedizin Berlin, Luisenstrasse 58/59, 10117 Berlin.

The bus stop 'Charité Campus Mitte' is located right in front of the Meeting location; from Tegel airport the TXL shuttle bus goes directly to the Langenbeck-Virchow-Haus

The closest Metro station is Oranienburger Tor

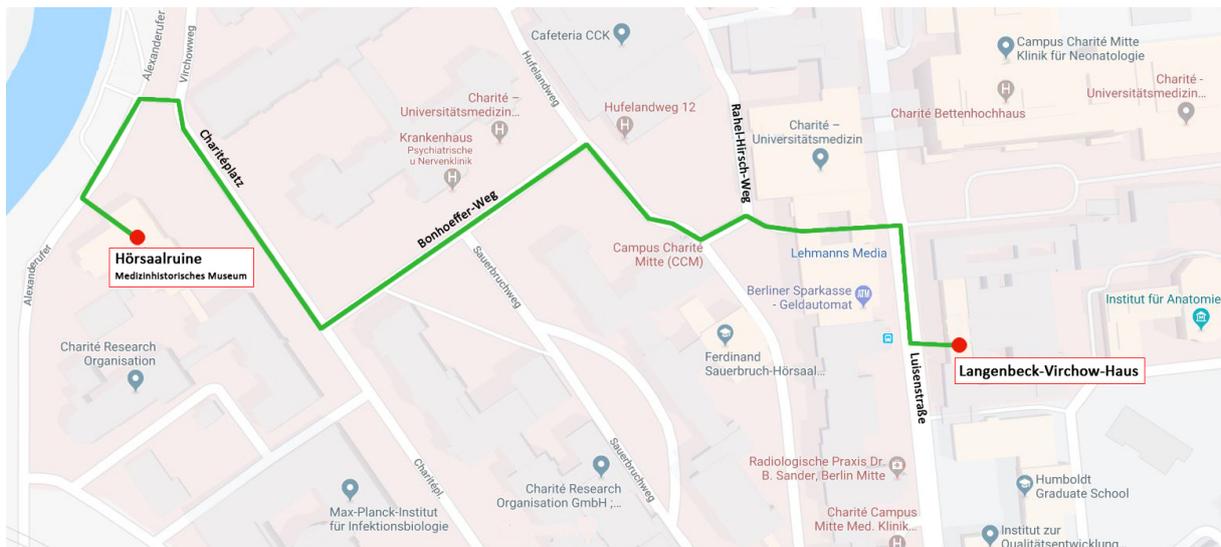


Walking distance from the meeting location to some of the suggested hotels

Hotel Adlon Kempinski	14 Minutes
Arte Luise Kunsthotel	6 Minutes
Motel One Berlin Hauptbahnhof	16 Minutes
Hotel Berlin Mitte by Campanile	6 Minutes
Mercure Hotel Berlin City	8 Minutes

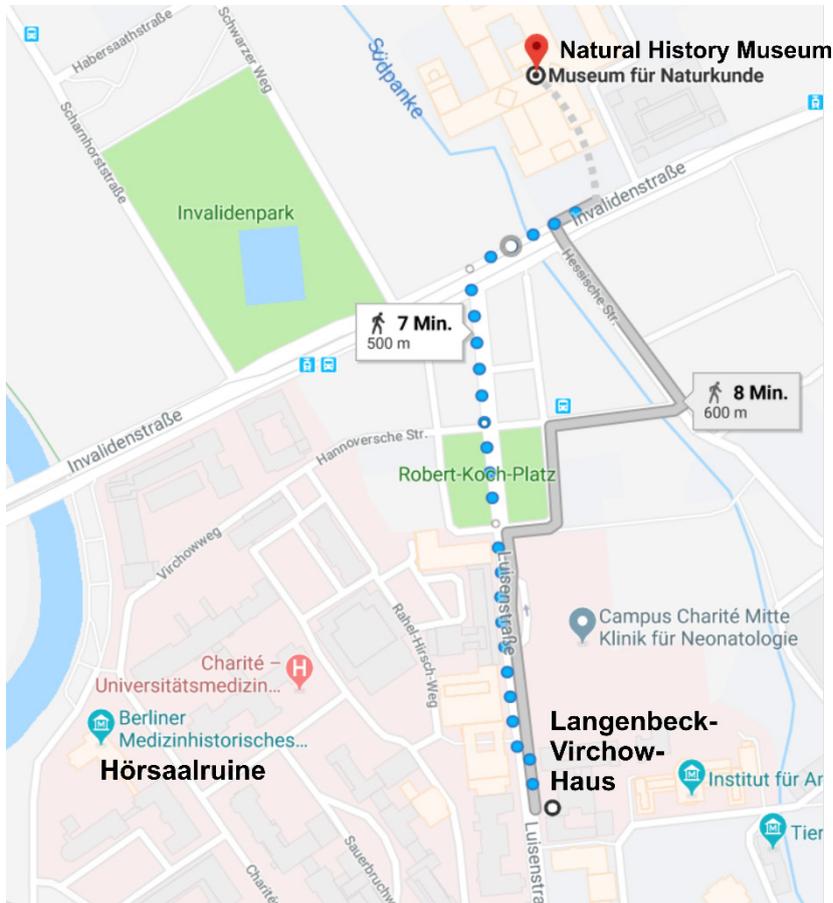
Within the Charite: Between the Hörsaalruine (HSR) and the Langenbeck-Virchow-Haus (LVH)

The walk between the different locations in the Charite is given on the following map.



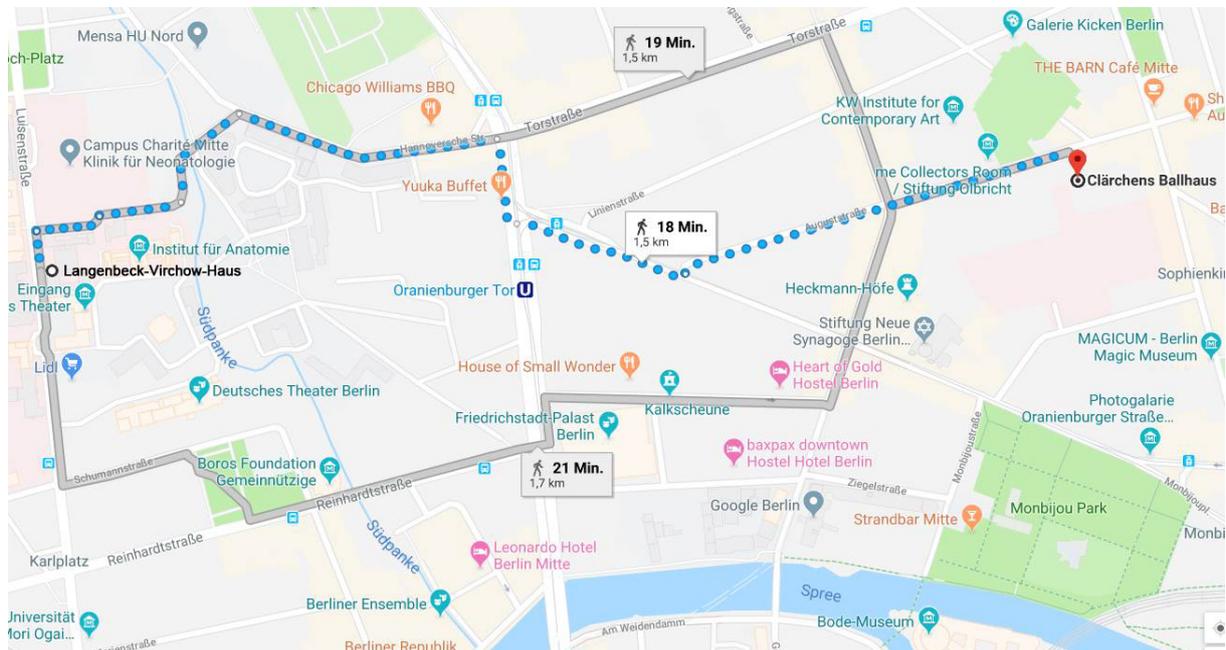
From the Conference location to the Natural History Museum (Museum für Naturkunde Berlin)

In the Natural History Museum the Welcome reception will take place. Do not forget to use the refreshment break after the Norman Cousin Lecture in the LVH between 18:00 and 18:45 to prepare yourself for the Welcome reception. Then, walk over!



From conference location to banquet location

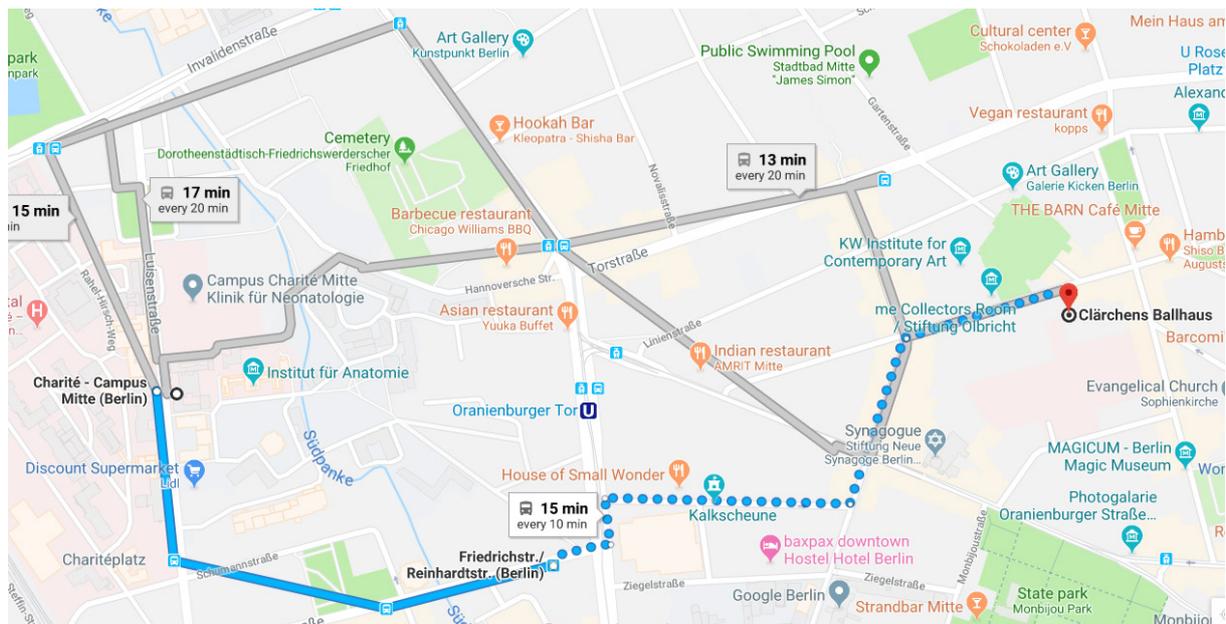
The banquet will be held at Clärchens Ballhaus, which is located at Auguststraße 24, 10117 Berlin. It is accessible by walking (aprox. 20 minutes)



To the banquet by bus

The bus stop is located in front of the conference location.

Take bus no. 147, direction 'U Märkisches Museum'. Leave the bus after 3 stops at station 'Friedrichstraße/Reinhardtstraße'. Then walk in driving direction until 'Friedrichstraße' and turn left. Take first street to the right 'Johanniststraße'. Walk till 'Tucholskystraße' where you turn left. Walk till Auguststraße where you turn right. After approx. 100 meter you find Clärchens Ballhaus on the right.



Restaurants

Budget (Lunch/Dinner)

\$\$-\$\$ Dada Falafel: Middle Eastern. Linienstr. 132, 10115 Berlin
<http://dadafalafel.de>

\$\$ Restaurant im Deutschen Theater: German, located below the German Theater (Deutsches Theater). Relaxed atmosphere, particularly during the day when the actors get their lunch there, can get busy in the evening during intermissions and after shows. Schumannstraße 13a, 10117 Berlin.
<https://www.kantine-dt.de/>

Drinks

\$\$ Böse Buben Bar. Laid back cafe/bar with an edge. Marienstraße 18, 10117 Berlin
<http://www.boesebubenbar.de/>

\$\$ Ständige Vertretung: German food and drinks by the river (nice but a bit touristy). Schiffbauerdamm 8, 10117 Berlin <https://www.staev.de/berlin-mitte.html>

Mid-range (Lunch/Dinner)

\$\$-\$\$\$ Kartoffelkeller: German. Albrechtstraße 14B, 10117 Berlin
<http://www.kartoffelkeller.com>

\$\$-\$\$\$ Boccondivino: Italian. Albrechtstraße 18, 10117 Berlin.
<https://www.boccondivino.de/de/index.html>

\$\$-\$\$\$ Volver: Spanish/Tapas. Reservation recommended. Luisenstraße 41, 10117 Berlin
<https://www.volver-tapas.berlin/>

Premium (Dinner)

\$\$\$ Ganymed: French, with views of the river Spree. Schiffbauerdamm 5, 10117 Berlin
<https://ganymed-brasserie.de/le-restaurant/>

\$\$\$\$ Grill Royal: Famous Berlin steak house. Reservations strongly recommended! Friedrichstraße 105b, 10117 Berlin <http://grillroyal.com/>

Activities and sightseeing

The official Website of Berlin: <https://www.berlin.de/en/>

Official Website of Berlin Tourism: <https://www.visitberlin.de/en>



Berlin Tour by Public Bus Line 100

An insiders' tip to explore Berlin easily and on budget is to take the public bus line number 100. A ride on this double decker bus is a "Must Do" for each tourist. The tour starts at Zoo station in the City West and ends at Alexanderplatz in the City East.



Brandenburger Tor

Brandenburg Gate is Berlin's most famous landmark. A symbol of Berlin and German division during the Cold War, it is now a national symbol of peace and unity



Berliner Dom

The Protestant Berlin Cathedral on Museum Island in the Mitte district is Berlin's largest church and one of the major sights in the city's center



Checkpoint Charlie

Checkpoint Charlie was the best-known border crossing between East and West Berlin during the Cold War. At the height of the Berlin Crisis in 1961 U.S. and Soviet tanks faced each other here.



East Side Gallery

The East Side Gallery, one of Berlin's most popular sights, is a former section of the Berlin Wall. Artists have turned it into the largest open-air gallery in the world with over one hundred paintings



Fernsehturm

The tower visit is one of the absolute highlights of this city and worthwhile several times. Here you can enjoy the whole of Berlin in one place and a perfect combination of interesting history, exciting architecture, great views, good food and friendly service.

Especially during the high season a reservation a few days in advance is recommended for your visit without any waiting period. You can book your tickets without queuing at: www.tv-turm.de



Gendarmenmarkt

Once, soldiers marched here, but today Berliners and tourists stroll across the square. It's said to be the most beautiful public square in Berlin, and perhaps the most beautiful north of the Alps. The ensemble of the concert house and two church buildings embellished with towers is in perfect harmony.



Hackesche Höfe

A rare example of art nouveau architecture in Berlin, the courtyard complex Hackesche Höfe in the Mitte district is a vibrant urban quarter combining art, work, gastronomy and entertainment



Holocaust-Mahnmal

The Memorial to the Murdered Jews of Europe or Holocaust Memorial near Brandenburg Gate commemorates the up to six million Jewish victims of the Nazi Holocaust



[Jüdisches Museum](#)

The Jewish Museum is one of the most striking examples of contemporary architecture in Berlin. The three buildings, two of which were designed by Libeskind, display two millennia of German-Jewish history



[Kaiser-Wilhelm-Gedächtniskirche](#)

Kaiser Wilhelm Memorial Church at Breitscheidplatz is one of Berlin's most famous landmarks. The ruin of the old church has been converted into a war memorial



[Neue Synagoge](#)

The New Synagogue on Oranienburger Straße was the main synagogue of the Berlin Jewish community. An important architectural monument of late 19th century Berlin, it is now home to the Centrum Judaicum



[Reichstag](#)

The Reichstag building with the famous glass dome is one of the most frequently visited sights in Berlin. It is seat of the German parliament, the Bundestag



[Schloss Charlottenburg](#)

This is the largest and most magnificent palace in Berlin – a highlight for any Berlin visitor. The park of Charlottenburg Palace is Berlin's most beautiful baroque garden. A splendid and stately green refuge in the city.

The Boat Cruise in Berlin, Meeting of the GEBIN & PNIRS, June 4-8, 2019

This lovely boat cruise on Berlin waterways, like the River Spree and its Canals goes through the heart of the City. It connects many famous places that can be seen from the boat. Explore the main attractions in the city from the water including the government district, Bellevue Palace, Berlin Cathedral, the Reichstag building, and the Federal Chancellery and Museum Island. On this tour, you will get to learn about the intriguing history of Berlin and see all the major attractions from the comfort of a river cruise. Enjoy a boat tour along the River Spree and admire both the Berlin skyline and the beautiful river landscape.

	
<p>Museumsinsel/<i>Museum Island</i></p>	<p>Humboldthafen/<i>Humboldt port</i></p>
	
<p>Berliner Dom/<i>Berlin Cathedral</i></p>	<p>Berlin-Spandauer-Schiffahrtskanal/ <i>Berlin-Spandau shipping channel</i></p>
	
<p>Nikolaiviertel/<i>Nikolai quarter</i></p>	<p>Charlottenburger Verbindungskanal/ <i>Charlottenburg connecting channel</i></p>
	
<p>Reichstag/<i>Parliament</i></p>	<p>Haus der Kulturen der Welt/ <i>House of World Cultures</i></p>
	
<p>Regierungsviertel/<i>Government district</i></p>	<p>Friedrichstraße</p>