

Sarah Ayash

DRZ Mainz

<https://www.drz-mainz.de/ag-mueller/>



Trained as a genetic engineer in Jordan, Sarah Ayash obtained her M.A. in Cellular and Molecular Neuroscience in Tübingen, Germany, with a thesis on oxytocin's impact on reward processing. Since 2016, she has been a Ph.D. student with Mainz Research School of Translational Biomedicine under the supervision of Professor Marianne Mueller. Investigating stress resilience in mice and squirrel monkeys (at Stanford University), she recently established a modified social interaction test and a social avoidance extinction treatment, suggesting a redefinition of the resilient phenotype in stressed mice.

Sarah Ayash will give us her personal take on resilience in the chronic social defeat model, to stimulate the later plenary debate.

Richard Bryant

University of New South Wales, Sydney

<http://www.psy.unsw.edu.au/contacts-people/academic-staff/scientia-professor-richard-bryant>

<http://www.startts.org.au/bios-empty-page/richard-bryant/>



Professor Richard Bryant, BA (Hons), M Psychol, PhD, FAPS, FASSA is Group Leader of the Westmead Institute's Traumatic Stress Group, which is part of its Brain Dynamics Centre. Richard Bryant is Scientia Professor of Psychology at the University of New South Wales, Sydney. He is also an Australian Research Council Laureate Fellow and Director of the Traumatic Stress Clinic at Westmead Hospital. He has published over 350 articles on trauma, anxiety, and treatment. His work has focused on the assessment and treatment of trauma reactions, as well as the cognitive and biological mechanisms underpinning traumatic stress. He is also studying the effects of complex trauma on clinical presentations, including those of refugees and torture survivors. He currently serves on the committee addressing Complex PTSD for both DSM-5 and ICD11. The Traumatic Stress Clinic provides cutting-edge, evidence-based treatments and undertakes world-class research for posttraumatic stress disorder (PTSD) and prolonged grief. The Clinic is an affiliation between a number of researchers, organisations and clinical psychologists, and is directed by Professor Richard Bryant. The Traumatic Stress Clinic is based at the Westmead Institute for Medical Research and the University of New South Wales in Sydney, Australia.

Title of presentation: Promoting Resilience in Countries with no Health Systems

Christine Denny

Columbia University, New York

<https://www.columbiapsychiatry.org/profile/christine-denny-phd>

<http://cadennylab.com/christine/>



Christine Denny's laboratory is interested in the molecular mechanisms underlying learning and memory. They have developed a novel technique to label the cells that encode individual memories in the brains of mice. They are then able to indelibly tag these neurons using fluorescent molecules. Using these mice, they have shown how a number of conditions affect memory traces in the hippocampus, specifically in the dentate gyrus and CA3 subregions. Moreover, they have been able to optogenetically inhibit these cells and show their necessity for memory expression.

Currently, they are using these mice to investigate what happens to hippocampal memory traces in normal, aged, and Alzheimer's diseased mice. By combining this unique murine line with disease models and optogenetic reporter lines, they hope to identify the altered memory circuits in these conditions and how to manipulate them in order to improve memory retrieval. They hope that these studies may halt, or even reverse, the process of Alzheimer's disease-related memory loss or cognitive ageing.

They are also interested in understanding how rapid-acting antidepressants, such as ketamine, are able to improve mood and depressive-like behavior. Ketamine has been shown to have rapid-acting and long-lasting effects in rodents and humans following stressful situations. They have identified a number of conditions in which ketamine improves behavior and are interested in identifying the molecular mechanisms by which ketamine improves mood. Current studies are aimed at utilizing ketamine in conjunction with our murine line.

Christine Denny will give us her personal take on resilience in the chronic social defeat model and be a discussant in the plenary debate.

Philippe Fauré

Centre national de la recherche scientifique (CNRS) & Sorbonne University, Paris

<http://faurelab.cnrs.fr/philippe-faure/>



Philippe Faure is Directeur de Recherche at the Centre National pour la Recherche Scientifique (CNRS) and Sorbonne University, where he leads a lab working on neurophysiology and behavior. He investigates the roles of dopamine (DA) projections from the midbrain to striatum and frontal cortex in behavioral actions controlled by reward and in the formation of habits. The dopaminergic system is also involved in drug addiction. Using a combination of behavioral analysis, in vivo and in vitro electrophysiological recordings, genetic tools and optogenetics, Faure's lab analyzes the modifications of DA network dynamics in the different steps leading to nicotine addiction, including genetic and environmental

factors, and the consequences of these modifications on decision-making. He has recently become interested in individual differences in social behavior.

Title of presentation: Social behavior and Individual traits variability

Nicole Geschwind

Maastricht University

<https://www.maastrichtuniversity.nl/nicole.geschwind>



Nicole Geschwind currently works as an assistant professor at the Department of Clinical Psychological Science, Maastricht University. Her ambition is to improve psychotherapy by systematically researching the value of a focus on positive emotions and hope in facilitating change, and by applying and testing these claims in clinical and/or experimental settings.

To this end, she is currently conducting a series of experimental and clinical studies on the effects of a positive, strengths- and solutions-focused CBT approach. Nicole obtained her PhD degree on the value of daily-life positive emotions in resilience against depression in 2011, at Maastricht University. During her PhD, she used state-of-the-art experience sampling techniques to enhance ecological validity of findings, combined with complex multi-level modelling techniques. The fact that positive emotions repeatedly emerged as potent predictors of recovery from depression has kindled her interest into positive emotions. The question how positive emotions function as facilitators of change has fascinated her ever since. After completion of her PhD, she worked as a post-doc at the Catholic University of Leuven, with the goal to learn more about experimental research methods. In the past years as an assistant professor at Maastricht University, she has been combining experimental with clinical research methods.

Title of presentation: From vulnerability to resilience against depression: the role of positive emotions

Sam Golden

University of Washington

<https://goldenneurolab.com/people/>



Sam received his BS in Neuroscience from Bates College (Lewiston, ME) in 2006, PhD in Neuroscience from the Icahn School of Medicine (New York City, NY) in 2015 under Dr. Scott J. Russo, and completed in Postdoctoral Fellowship at the National Institute on Drug Abuse (Baltimore, MD) in 2018 under Dr. Yavin Shaham. Sam joined the University of Washington Department of Biological Structure in 2019, with a co-appointment as a participating faculty in the The UW Center of Excellence in Neurobiology of Addiction, Pain, and Emotion (NAPE). Sam's scientific interests encompass understanding the psychological and neural mechanisms guiding reward processing. He is particularly interested in understanding how neuropsychiatric disorders- such as maladaptive aggression, depression and substance abuse - subvert basic reward circuitry to manifest pathological behavior. Currently, he aims to better define the intersection of aggression and motivation, and identify the cellular and circuit mechanisms that control the transition from adaptive aggression to maladaptive aggression seeking behavior.

Title of presentation: Sam Golden will give us a historical overview and his personal take on resilience in the chronic social defeat model and be a discussant in the plenary debate.

Israel Liberzon

Department of Psychiatry, Texas A&M University Health Science Center

whatif.tamhsc.edu



Dr. Liberzon's primary research interest centers on emotions, stress and stress related disorders like PTSD, particularly in the regulation and dysregulation of stress response systems. His work integrates cognitive, functional neuroimaging, neuroendocrinological and genetic approaches to study stress, emotions, cognitive-emotion interactions and the effects of emotions on decision making. In the last 15 years, under Dr. Liberzon's leadership, the TSARG had been continuously funded with multiple NIMH RO1 grants, VA Career development and NIH K awards, VA merit awards, Army and DoD grants, and more. Currently there are over 10 active federally funded grants of various kinds awarded to Trauma Stress and Anxiety Research Group members. Dr. Liberzon has mentored multiple doctoral candidates, post doctoral research fellows and junior faculty members, has published over 150 articles, and has authored and edited several book chapters and reviews including: Brain Imaging Studies of PTSD in the International Handbook of Human Response to Trauma published by AC. Plenum Publishing in 2000 and the forthcoming Neuroimaging in Post Traumatic Stress Disorder in Post Traumatic Stress Disorders by Taylor & Francis.

He serves on NIH and VA study sections, served as a reviewer for Institute of Medicine, and Department of Defense Congressional reports as well as various international funding agencies. Until recently Dr.

Liberzon served as a Chief of Mental Health Service at the Ann Arbor VA Health System, and currently he is an Associate Chair for Academic Development, and the Director of the Psychiatric Residency Research Track at the Department of Psychiatry, University of Michigan. He is a Fellow of American College of Neuropsychopharmacology, served as a president of Psychiatric Research Society, and editorial Board member for leading journals like Biological Psychiatry and Neuropsychopharmacology.

Title of presentation: Neural signatures of resilience using imaging modalities

Marianne Müller

DRZ Mainz

<https://www.drz-mainz.de/ag-mueller/>



Prof. Marianne Müller is interested in developing and exploiting translational models of stress, stress-related disorders and resilience. In a disease-focused context, she is engaged in understanding the neurobiological mechanisms of antidepressant treatments and in their improvement, through the identification of new target structures. In a health-focused context, she investigates molecular mechanisms of adaptive stress regulation and coping. She heads the central animal research project of the DFG Collaborative Research Center 1193 on Neurobiology of Resilience, which she uses to advance animal models of resilience and knowledge about resilient phenotypes.

Marianne will be a discussant in the plenary debate about animal models of resilience.

Jan-Marino Ramirez

University of Washington and Seattle Children's Research Institute

https://depts.washington.edu/chdd/iddrc/res_aff/ramirez.html

<http://depts.washington.edu/neurosurg/research/research-labs/ramirez-lab>



Dr. Ramirez has a general research interest in the neural control of rhythmic activity. In particular, he studies neural mechanisms involved in the generation of respiratory rhythms, neocortical activity, and epilepsy. Related interests include neuronal mechanisms underlying erratic breathing in Rett syndrome, familial dysautonomia, congenital hypoventilation syndrome, traumatic brain injury, and pediatric epilepsy, as well as burst firing in dopaminergic neurons, possibly linked to ADHD.

Ramirez's current work is focusing on hypoxic effects on mammalian respiratory neural networks. Various *in vivo* and *in vitro* approaches are used. In this work, experiments are performed using three *in vitro* preparations: (a) isolated brainstem-spinal cord, (b) the working heart-brainstem, and (c) the transverse slice preparation.

Title of presentation: Growing up in our overstimulating media world: insights gained from human and animal studies

Gal Richter-Levin

University of Haifa

<http://richter-lab.haifa.ac.il/>



Prof. Gal Richter-Levin obtained his PhD in Neurobiology (1992) at the Weizmann Institute, Rehovot, Israel, and then has been an HFSP postdoctoral fellow at the National Institute for Medical Research, London, UK. In 1995 he joined the University of Haifa as a senior lecturer, where he was the founder and head of the Haifa Forum for Brain and Behavior. Since 2006 he is a full professor at both the Sagol Department of Neurobiology and the Department of Psychology. He served as Dean of the Faculty of Natural Sciences, University of Haifa (2009-2013). He was the president of the Israeli Society for Biological Psychiatry (2006 – 2008) and then president of the Israel Society for Neuroscience (ISFN) (2015-2017). He is a member of the Scientific Advisory Board of the National Institute for

Psychobiology, and a member of the British-Israeli Science Council.

Prof. Richter-Levin is a world renowned expert of behavioral neuroscience, with major contributions to: the understanding of the role of stress and the amygdala in emotional modulation of memory formation; the impact of pre-puberty (juvenile) emotional experiences on stress vulnerability and stress resilience; translational animal models of stress-related psychopathologies, including Post-Traumatic Stress Disorder, Mood disorders and chronic pain. He has published over a 160 scientific papers (H Factor: 51 (Scopus)) and has supervised over 50 graduate and postgraduate students, many

of which have already developed their independent career. In 2013 he was awarded The Israeli Association for Biological Psychiatry prize for a lifetime excellence in mentoring of young researchers in basic science. He was awarded many competitive research grants, including awards from the Programme of German-Israeli Project Cooperation (DIP) (€ 1,200,000), an award from the Department of Defense (DoD), USA (\$ 1,485,000), and recently The Ministry of Science, Technology And Space, State Of Israel (MOST) grant (1,900,000 NIS).

Title of presentation: Studying neural mechanisms of stress resilience in an animal model of PTSD

Karin Roelofs

Donders Institute, Radboud University, Nijmegen

<https://www.ru.nl/english/people/roelofs-k/>



Karin Roelofs is Professor of Experimental Psychopathology and chair of the Affective Neuroscience section at the Donders Centre for Cognitive Neuroimaging and the Behavioral Science Institute, Radboud University Nijmegen. She studies psychological and neuroendocrine mechanisms underlying emotional (action) control in healthy individuals and in patients with stress-related and social-motivational disorders, such as social anxiety and aggression. She uses various brain imaging (fMRI, MEG) techniques, combined with neural stimulation (TMS, tACS) or pharmacological interventions (steroid hormones) during emotion control and decision making tasks. In addition, she studies the influence of stress on the (neural) development of emotion control in longitudinal samples, including the Nijmegen Longitudinal Study, the Nijmegen-BIBO study and a large police cohort. Her work is funded by an ERC-consolidator, NWO-VICI, NWO-creative industry and an Horizon2020 grant.

Important research questions are: How do people regulate their emotional actions? Can we improve emotion control by administering hormones, by directly influencing brain activity or by real time biofeedback? Can we predict who will develop psychopathology on the basis of freeze and fight-or-flight tendencies in longitudinal studies? Answering these questions will eventually lead to increased insight in affective disorders and promises to advance early detection of symptoms and their treatment.

Title of presentation: Neurocognitive markers of resilience to trauma: a longitudinal prospective study among police trainees

Arieh Shalev

New York University

<https://med.nyu.edu/faculty/arieh-y-shalev>



Arieh Shalev is a Barbara Wilson Professor of Psychiatry at NYU's Department of Psychiatry. He obtained his MD from Montpellier University.

Title of presentation: Resilience is the Default, How not to Miss it

Murray B. Stein

University of California, San Diego

<https://www.mayo.edu/research/faculty/stonnington-cynthia-m-m-d/bio-00077084>



Murray B Stein MD, MPH, FRCPC is Distinguished Professor of Psychiatry and Family Medicine & Public Health, and Vice Chair for Clinical Research in Psychiatry at the University of California San Diego (UCSD). He is also a Staff Psychiatrist at the VA San Diego Healthcare System. Dr. Stein graduated from the University of Manitoba and completed his residency and post-residency fellowship at the University of Toronto and at the National Institute of Mental Health in Bethesda, Maryland, USA. He subsequently completed a Master of Public Health degree at the Johns Hopkins University Bloomberg School of Public Health in Baltimore, MD.

Dr. Stein's research interests include the epidemiology, neurobiology, and treatment of anxiety and traumatic stressor-related disorders. His federally funded research has included studies of interventions for anxiety disorders in primary care, pharmacological approaches to treatment-resistant anxiety disorders, and functional neuroimaging and genomic research in anxiety and trauma-related disorders. He is Principal Investigator and Director of the Department of Defense-funded (2008-2016) INjury and TRaumatic STress (INTRuST) Consortium, which studies treatments for Posttraumatic Stress Disorder and Traumatic Brain Injury. He is also Co-Principal Investigator (with Robert Ursano MD) of Army STARRS, an NIMH-funded project (2009-2015) investigating risk and resilience factors for suicide and other deployment-related disorders; this project currently continues (2016-2019) as a longitudinal study (STARRS-LS).

Title of presentation: Genetic Perspectives on Risk and Resilience to Traumatic Stress

Cynthia Stonnington

Mayo Clinic in Arizona

<https://www.mayo.edu/research/faculty/stonnington-cynthia-m-m-d/bio-00077084>



Cynthia M. Stonnington, MD is Chair of Psychiatry & Psychology at Mayo Clinic in Arizona and the Wellness Director for Mayo Clinic College of Medicine and Sciences, Arizona campus. She completed medical school at Mayo Medical School in Rochester, Minnesota, her residency training in Psychiatry at Stanford University Medical Center, and a Clinical Research Fellowship in brain imaging at University College London's Wellcome Trust Centre for Neuroimaging. An Associate Professor of Psychiatry, she has three main research interests: applying neuroimaging and machine learning methods to predict cognitive decline in order to focus interventions at a time where individuals are likely to benefit; exploring the neuropsychiatric underpinnings of psychosomatic illness; identifying and testing interventions that can help individuals to increase their resiliency in the face of illness or risk for illness, and to develop strategies for healthcare institutions to develop the kind of supportive environment and culture that 21st century medical professionals need to thrive.

Title of presentation: "Finding your flock" to foster resilience among medical professionals