

Newsletter

Issue 16, 2022

Dear Members,

I would like to start the June Newsletter with a few updates on our society:

- 1. Our new <u>website</u> is fully functional and includes an easy procedure to become a member. A key feature is that everyone can pay their membership dues using any major credit card. We also kept the original PayPal option. In the spirit of our inclusive society, we (the executive committee members) decided to keep the yearly membership dues very low (40 Eur for students and post-docs and & 100 Eur for full members). Please encourage your lab members and friends to become members.
- 2. The new site also includes a new feature (bottom of the main page) that allows donations to the society. We are committed to using 100% of the donated money to support travel awards for trainees and early career scientists from under-represented countries (e.g., Eastern Europe, Africa, Middle East, and South America, Asia), and under-represented populations from North America and Western Europe.
- 3. Regarding the latter, under the leadership of Shelly Flagel (our president-elect), we have established a committee whose goal is to promote diversity and inclusion at EBPS. The current members of the committee are: Brianna George (USA), Anand Gururajan (Australia), Leah Mayo (Canada), Margarita Moreno (Spain), Rudy Schreiber (Netherlands), Mohammed Shoaib (UK), Karen Szumlinski (USA), and Marco Venniro (USA). If you have any suggestions or would like to be involved, please contact Shelly. I guarantee a quick response because she answers emails faster than anyone I know.
- 4. We have two upcoming events in June and July. The first is our <u>EBPS workshop</u> in Rome on June 24-26(see article by Marco Venniro). The second is our satellite <u>FENS symposium</u> with other European societies on July 9 in Paris.
- 5. The major event for 2023 is our biannual meeting in Mannheim on August 23-26 at Mannheim Palace. The meeting is organized by Rainer Spanagel. The deadline for symposia submission is January 15th 2023 and April 1 for abstracts/posters. We will provide additional details about the meeting in the coming months via our Twitter account.
- 6. In collaboration with our society journal, Psychopharmacology, we initiated a <u>Twitter account</u> for the journal. The account is managed by Steve Mahler who also created a <u>YouTube channel</u> where he features interviews with Psychopharmacology editors and authors. Steve is as good an interviewer as Anderson Cooper!
- 7. In another collaboration with Psychopharmacology, we have organized a special issue to commemorate the scientific contributions of the late <u>Dr. Nadia Chaudhar</u>i. Her courageous and transparent fight with ovarian cancer, combined with her creative efforts to support diversity and inclusion causes, was an

inspiration to numerous people around the world. The special issue will feature empirical papers and reviews of Dr. Chaudhari's mentors, colleagues, and mentees, and is scheduled to appear later this year or early next year.

- 8. Our society has no office or paid personnel who run our operation. As such, our operation depends on the dedication of volunteers. From this perspective, I would like to thank several members of our executive committee. Our communication officer Anand Gururaian who maintains the website, the membership list, and our Twitter account. And on top of this, he led the group who organized the satellite FENS symposium. Marco Venniro (organizing committee co-chair of the EBPS workshop) whose relentless efforts and unparalleled fund-raising skills will result in a highly successful workshop with over 150 participants and many travel awards to trainees. Rainer Spanagel (the EBPS 2023 meeting secretary) who has already spent numerous hours planning our next biennial meeting during uncertain times in Europe. Amy Milton, our general secretary, who runs our meeting and makes sure that all action items are completed. Louk Vanderschuren and Shelly Flagel, our past and future presidents, who are familiar with EBPS history and operation much more than I am. They are always there to provide sound advice and start new initiatives (Item 3). Finally, special thanks to Mohammed Shoaib, our Treasurer, who has done an outstanding job managing EBPS finances. Under his leadership, our base funds have grown by approximately 50% during the last several years.
- 9. As some of you have noticed, unlike some other European scientific societies, we did not issue an official "condemnation" of Russia's aggressive attack on Ukraine. We had a discussion among the executive committee members and decided not to do this. We felt that as horrific as this attack is, we witness numerous world events that we and the society members strongly object to. These include human right violations and attacks on democratic values by elected (or non-elected) officials in many countries, racist attitudes towards and the marginalization of ethnic, racial, and sexual minority populations across the globe, and the systematic denial of rights, including reproductive, of women. A center piece of the EBPS constitution is that we, as a society, should not be involved in politics. Thus, we felt that making an official statement on the Ukraine's situation, and not on the many other injustices around the world, is not something that we should do. Nonetheless, we hope that you know that, as individuals, we stand by and support Ukraine, as well as the victims of the all too numerous recent disturbing events around the world.

Finally, please feel free to contact me any time (including weekends) if you have any suggestions on how to improve our society.

Yavin Shaham EBPS President

EBPS Biennial Workshop Rome, June 24-26, 2022

Spanning the Spectrum of Social Behaviour: towards more translationally relevant animal models

Anyone living on the Earth right now and paying even little attention to the news could be forgiven for being scared out of their skin. Who are the main culprits? The multiple international crises, responsible for a decline of co-operation and trust between societies, and the Covid epidemic responsible for the "loneliness pandemic". As neuroscientists, what should we expect in the near future? Given the well-established correlation between social stress and mental health risk, the answer is straightforward: a surge of neuropsychiatric conditions.

For decades our understanding of neuropsychiatric disorders has been primarily based on preclinical studies using animal models. However, despite 50 years of progress in our fundamental understanding of human biology and the emergence of powerful new technologies, the translation of this knowledge into effective new treatments and health measures has been limited. We believe that this impasse is partly due to limitations in animal models, such as the omission of social factors, which play a major role in the etiology of human psychiatric disorders.

Social factors include ethologically complex behavior with a spectrum ranging from positive affiliative social interaction to agitation and aggression. Recently, to improve the translational utility of rodent models, these behaviors have increasingly been incorporated into preclinical animal models to study their effect on neuropsychiatric disorders and their underlying neural mechanisms.

The overall aim of this workshop is to bring together researchers investigating social factors with behavioral neuroscientists investigating neuropsychiatric disorders to create a forum focused on using translationally relevant social behaviors to investigate neuropsychiatric disorders

On the first day, we will have an informal gathering of all participants to break the ice and get to know each other. We also have a power hour discussion led by **Leslie Ramsey** to highlight the challenges women and under-represented minorities face in science and support their professional growth by providing an open forum for discussion and mentoring

On the second day, we will have our *first keynote by Louk Vanderschuren* followed by sessions on The Importance of Social Behaviour in Addiction Neuroscience, Affiliate Social Reward, and Social Play in Rats and Affiliate Social Reward in Mice and Voles. The day will be capped off by our *second keynote by Nora Volkow*. The final day includes *keynotes by Alon Chen, Lique*

Coolen and sessions on Aggression as a Social Reinforcer in Rodents and Technologies to Advance the Study of Complex Social Behaviour. There will also be a data blitz sessions where some of our junior participants will be given the opportunity to present their research and get important feedback from their peers.

Our hope is that this workshop will set the stage for future collaborative studies to utilize social behaviors to help bridge the translational gap between animal models and their clinical analogs, thereby improving strategies for identifying novel therapeutic targets for the successful treatment of neuropsychiatry disorders.

The workshop will be held at the <u>Acquario Romano</u> in Rome, an historical building designed by Ettore Bernich in 1885 which was once an aquarium. We recommend to reserve a ticket for the "formal dining gala experience" in Palazzo Brancaccio a beautiful and historic location that is reflective of the beauty and the splendor of the millenarian history of the Eternal City.

We are looking forward to seeing you in Rome. The Organizing Committee (Workshop website)









Save the Date

FENS Mini-Conference, 9th July, 2022, Paris

This year, EBPS has a leading role in organising the FENS Mini-Conference in collaboration with EBBS, IBANGs and EMCCS. The overall theme of this event will be Understanding Behaviour: Molecular, Cellular & Systems Approaches. There will four sessions, with each session featuring talks by junior and established researchers to speak on the complexity of bridging brain and behaviour and on the relevance of the behavioural studies in neuroscience research, describing the most advanced theoretical and methodological approaches to behavioural phenotyping. Our session titled, "*Neural Circuits of Behaviour*" will feature three speakers (see below). We anticipate that our Mini-Conference will be an exciting event bringing together established leaders and junior researchers from our four societies for a day of amazing science and networking opportunities. Registration is only €25 till the 9th of June and close on the 16th of June. Click HERE for the full program and link to registration.



Professor Nuno Sousa - The Neuromatrix of the Stressed brain

Stressful stimuli in healthy subjects activate a consistent and reproducible set of brain regions; yet, the notion that there is a single and constant stress neuromatrix is not sustainable. In this talk longitudinal data in rodents will be presented to highlight the impact of chronic maladaptive stress on the fine structure of the brain and in its behavioral and functional outcomes; in parallel, it reveals the existence of brain connectomic signatures of resistance versus vulnerability to stress exposure that may guide interventional strategies. Finally, human data will be shown to demonstrate how these approaches can inform on the pathophysiology of several neuropsychiatric conditions.



Dr Puja Parekh - Prefrontal Circuit Mechanisms Underlying Stress Effects on Effort-based Decision Making.

Deficits in effort valuation (EV), a cost-benefit analysis comparing the magnitude of anticipated rewards with required effort, may contribute to anhedonia in stress-related disorders. The prefrontal cortex supports EV, however, distinct circuits may encode varying aspects of learned reward and effort expectations to modulate behavior. We developed a novel head-fixed EV task for simultaneous 2-photon calcium imaging of corticostriatal, corticoamygdalar and corticoinsular projection neurons and quantified anticipatory and consummatory licking behavior. We find that mice show behavioral sensitivity to reward and effort conditions at baseline and exposure to chronic psychosocial stress biases responding toward low-effort reward-seeking in susceptible. Moreover, stress reduces the accuracy of decoding rewarded trials from corticoamygdalar and corticoinsular population activity during the anticipatory period, and increases effort trial decoding from corticostriatal neurons during the intertrial interval, potentially providing a feedback signal to guide future behavior.



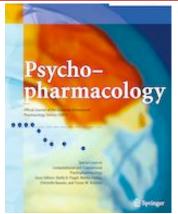
Dr Sophia Levis - Sex specific circuit mechanisms of disordered reward seeking caused by early life adversity.

Early life adversity (ELA) is linked with vulnerabilities to emotional disorders that involve disruption of the brain's reward circuits, including depression and substance use disorder. However, the specific circuit nodes that are influenced by ELA remain poorly understood. We employed a transdisciplinary approach to dissecting neural circuit mechanisms of ELA-induced reward seeking dysfunction. Specifically, we combined a robust model of ELA with sophisticated behavioral methods, molecular analyses, tract tracing, and multi-region analysis of neuronal activation, and discovered sex-divergent consequences of ELA on the reward circuit: females are prone to addiction-like behaviors whereas males instead develop an anhedonic phenotype. Underlying mechanisms include sex-dependent alterations in gene expression of select opioid receptors and neuronal activation in the nucleus accumbens and its glutamatergic afferents. Our unique transdisciplinary approach thus establishes novel mechanisms by which developmental stressors alter reward circuit function, and identifies new targets for future interventions.

Job Alert

Behavioural Neuroscientist - Flagel Lab (Michigan, USA) NIH-funded postdoctoral position is available in Dr. Shelly Flagel's laboratory at the University of Michigan, in Ann Arbor. Research in the Flagel Lab aims to uncover the neural circuitry underlying individual differences in cue-motivated behaviors that are of relevance to addiction, impulse control disorders, and other psychiatric conditions. Techniques used include chemogenetics, optogenetics, behavioral pharmacology and microdialysis. Behavioral assays include Pavlovian conditioning and drug self-administration. In addition, we are using "deep phenotyping" and machine learning to better understand complex behaviors of interest and to more precisely examine brain-behavior relationships. There will be ample opportunities to work closely with and mentor undergraduates and graduate students. In the Flagel Lab we value collaboration and work as a team to promote a diverse and inclusive environment. If interested, please send a CV and cover letter to Dr. Shelly Flagel.

Journal News





As EBPS members, we would like to remind you that you are entitled to free access to Psychopharmacology as well as the European Journal of Neuroscience via your personal pages on the EBPS website.

Psychopharmacology call for contributions for a special issues on "Innovating translational models of affective disorders" Submission deadline, Oct 22, 2022. More info.

European Journal of Neuroscience call for contributions on: "Functions and modalities of acetycholine signaling in the mammalian brain." Submission deadline, September 12, 2022. More info.

"New trends in the empirical study of consciousness: measures and mechanisms." Submission deadline, October 12, 2022. More info

FENS Calendar

6th World Parkinson Congress 7-10/6/2022, In person, Spain, Link

EBPS Biennial Workshop 24-26/6/2022, In person, Rome, Link

The Brain Conference: Genetics & Mechanisms of Complex Disorders - Highlighting Migraine 26-29/6/2022, In person, Denmark, Link

AREADNE 2022 Research in Encoding and Decoding of Neural Ensembles
28/6/2022-2/7/2022, In person, Greece, Link

Neuro 2022

30/6/2022-3/7/2022, Hybrid, Japan, <u>Link</u>

FENS Mini-Conference 9/7/2022, In person, Paris, <u>Link</u>

FENS Forum 9-13/7/2022, In person, Paris, Link

International Congress of Neuroendocrinology 7-10/8/2022, In person, Scotland, Link

2022 World Neuroscience & Psychiatry Conference 9-10/9/2022, In person, Hybrid, Bangkok, Link

Is your membership current?

Just a reminder to check that your membership is current and if not, please renew <u>here</u>. Full membership remains at €100 and the student fee at only €40. The benefits are numerous and include discounted registration at this year's Braga conference!

EBPS Committee

Executive Committee:

President - Yavin Shaham (US)
President Elect - Shelly Flagel (US)
Past President - Louk Vanderschuren (NL)
General Secretary - Amy Milton (UK)
Treasurer - Mohammed Shoaib (UK)
Meeting Secretary - Rainer Spanagel (DE)
Past Meeting Secretary - Rudy Schreiber (NL)

Ex-Officio:

Psychopharmacology Rep - Christelle Baunez (FR)

Full Committee:

Gavan McNally (AU)
Daniele Caprioli (IT)
Veronique Deroche (FR)
Michela Marinelli (US)
Markus Heilig (FI)
Marco Venniro (US)
Karen Szumlinksi (US)
Anand Gururajan (AU)