NEUROLETTER
THE OFFICIAL NEWSLETTER OF PROJECT ENCEPHALON

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NEUROBYTES Sneak-Peek
Project Encephalon's very own Mobile Application

ARKADEEP MUKHOPADHYAY

Neurobytes satisfies your hunger for palatable neuroscience facts. We'll deliver short and crisp mind-bending facts right to your pockets quite often to keep you engaged in the world of neuroscience.

FEATURES
A lightweight and free android app with an intuitive UI that lets you uncover more amazing neuroscience facts as you scroll through it. Want to share it with a friend? Tap on the share button and neurobytes will allow you to share a screenshot with your friends. Project Encephalon will also occasionally alert you about the new and upcoming events so that you never miss out!

Release date
The app will soon be available on the Play Store.
THE QUEST: Ask SAC
Episode 1: Dr Samit Chakrabarty

HARSH SRIVASTAVA

The Quest is Project Encephalon's official podcast series, an adaptation of our Ask SAC (Scientific Advisory Committee) series. In our podcast, we will host various guests from around the world: researchers, academicians, entrepreneurs from neuroscience and allied fields. We shall explore topics around science, mentoring, and career development, finding inspiration and advice by listening to their life stories and challenges. We will also get to have a sneak peek into the way they think and how they are making a difference in this world.

For the first episode, we have Dr Samit Chakrabarty as our guest. Dr Samit is a systems neurophysiologist, studying plasticity and interaction between the spinal circuits and their modulators - the sensory inputs from periphery and descending inputs from the brain. Currently, he is an Assistant Professor in Neuroscience at the School of Biomedical Sciences, University of Leeds, United Kingdom. He is an alumnus of St. Xavier's College, University of Mumbai, India where he did his bachelors in Zoology and Biochemistry. He then proceeded to complete his PhD at the University of Cambridge and postdoc at Columbia university, New York and Spinal cord research centre, Winnipeg, Canada.

The first episode is now available on Spotify - The Quest | Ep 1
The Brain Awareness Week (BAW) is the global campaign to increase public awareness of the progress and benefits of brain research. Project Encephalon's Brain Awareness Week (PEBAW) will explore various aspects of neuroscience to learn about how awesome the brain is! There will be talks, competitions, and career mentorship sessions to increase the awareness of neuroscience in everyday life. Join us in September (18th, 19th, 25th, 26th) to learn more about the brain together!

*Registrations are free of cost -

18th/19th SEPT
Intriguing talks & sessions on behavior, neurodevelopment, vision, brain anatomy, research, etc.

25th SEPT
Mentorship sessions

26th SEPT
Competitions, prizes

Scan to register

Supported by
INTERNATIONAL BRAIN RESEARCH ORGANIZATION

#PEBAW
18th, 19th, 25th, 26th September 2021

Organized by
PROJECT ENCEPHALON
FROM THE DESK OF THE EDITOR
SHREYAS GADGE

Looking at the strides Project Encephalon is making, it gives me immense joy to be a part of it and work with a set of passionate and zestful volunteers, that help you dissolve so well into the organization. PE cruised through yet another month of promising neuroscience content and activities to the community. A sneak-peak into Neuro Bytes - our very own app, engaging Neuro Rants sessions, PE’s first podcast release, Neuro Notes articles, and the announcement of the Brain Awareness Week - August at PE was as eventful as it could be with a lot more to look forward to! It is an absolute delight to present to you the August edition of Neuroletter, ideated and compiled by the editorial team. This edition attempts to communicate diversity as one of the founding aspects of PE, gives a glimpse of recent happenings and aims to tighten the knot between the organisation and the community. I hope it reaches more and more neuroscience enthusiasts and we grow stronger together.

VOLUNTEER OF THE MONTH
PROFILE BY SACHIN PATALASINGH

Arkadeep is the synonym for endless energy and enthusiasm! He is always excited to take up new challenges and solve them in pretty innovative ways. He has been giving back to PE from the day he joined us as Deputy CTO.

He has done exemplary work in the technical dept and not to forget his phenomenal contribution in developing NeuroBytes, PE’s own mobile application. We can safely say that he is a code chef and he is always ready to cook something with his amazing coding skills. The amalgamation of his excellent communication skills, creativity, and amazing sense of humour makes him a really fun guy to work with.

Arkadeep Mukhopadhyay
DEPUTY CHIEF TECHNICAL OFFICER
Handwriting is a skill we have learnt to master in school and has been practiced by people since time immemorial. As all of us are slowly shifting to the digital age, handwriting is rarely being witnessed, with typing being the frontrunner for a simple leave application or even assignments of some 20 pages or so. Many of us have started feeling that handwriting is time consuming and monotonous, which might be true. However, it is still considered the most crucial means for children and adults to learn a new language or retain information in a better way. Handwriting has proven to be a good mental exercise and necessary for proper brain development. Our hands and pens are undoubtedly the perfect match for our brain!

Read the complete blog article here:
Hand and Pen: A Match Made in Heaven | NeuroNotes
NOTES

-ILLUSTRATIONS

Hand and Pen: A Match Made in Heaven

ILLUSTRATORS: JAYKRISHNAN NAIR (TSP) AND HARSHINI ANAND (PE)
A TSP X PE COLLABORATION

Write for Project Encephalon!

GUIDELINES AVAILABLE AT HTTPS://WWW.PROJECTENCEPHALON.ORG/NEURONOTES
SYNAPTIC CONNECTIONS
Project Encephalon's recent collaborations

Scientists Inc

The Science Paradox

YNAN
The first session of the month focussed on ‘The role of miRNA in synaptic plasticity’, there was a discussion on how miRNAs help in synapse formation, strengthening and pruning and its implications in long-term potentiation/long-term depression (LTP/LTD).

In the session, ‘The Glymphatic system: the brain drain is real!’, all members actively conversed about the mechanisms of the waste disposal system in the brain, its relation to sleep and its role in some neurodegenerative disorders like Alzheimer’s.

The last session, ‘Gutsy microbes and the brain’ involved discussions about the vagus nerve mediating signals from the gut to the brain along with the effects of sex-differences, stress and inflammation. The members also spoke about gut microbes being responsible for synthesizing products like tryptophan which are directly related to the brain, and how certain hormones affect the gut microbes.

NeuroRants is looking forward to host many more such interesting sessions about mechanisms of memory, overview of vision, genetic approaches of studying neuroscience, etc. in the coming months. Stay Tuned!
I feel forever indebted to my mentors and support system, and looking back, I feel it is my responsibility to pay that forward and encourage young students to never give up and keep learning because the potential to do so truly has no bounds.

Catch the article here: SiN | Karina Bistrong

Everyone comes into science with a different background and different training, and that is the beauty of it.

Catch the article here: SiN | Gregory Youdan
At Project Encephalon, we are committed to bringing everyone closer to neuroscience and allied fields regardless of their background. As a workplace, we respect all individuals and strive to eliminate our conscious and subconscious biases. We enforce a strict code of conduct and adhere to a written constitution that enshrines our commitment to making PE an inclusive workplace for our volunteers and other stakeholders. Our mission is to continue learning and improving while we move forward each day. This we believe helps us provide better services to our members.

As a signatory of the Alba Declaration on Equity and Inclusion, we are currently in different stages of implementation to execute all the significant milestones to present a more diverse and inclusive community for all our stakeholders. At Project Encephalon are on the unprecedented path of making Project Encephalon the most diverse and inclusive organization.

Cambridge scientists reverse ageing process in rat brain stem cells.

https://doi.org/10.1038/s41586-019-1484-9
ACROSS

3. Emotional center of the brain
6. Largest brain structure
8. Relatively precise and reliable DNA editing technique
11. Brain cell bodies lie here
12. Influences the body's sleep-wake cycle
14. Long single nerve fiber that transmits signals
16. Previously known to "glue" the nervous system together
18. Chemical messengers of the brain
19. The substance that encases most nerve cell axons

DOWN

1. Change in cell membrane towards more negative than it typically is
2. Critical for memory and learning
4. Sensory experience of the brain
5. Brain area responsible for speech comprehension
7. Neurotransmitter with an important role in reproduction
8. The brain floats on this
9. Finger-like branches that receive signals from other neurons
10. Neurotransmitter involved in motivation, pleasure, etc
13. The ability of the brain to change
15. The brain area responsible for speech production
17. Stage occurring after 90 minutes of sleep onset

Fill the crossword digitally here - Neurocrossword|Aug'21
CELEBRATING THE STRIDES!
Accomplishments and Accolades

SAC MEMBERS
PE'S SCIENTIFIC ADVISORY COMMITTEE

Dr Sudheendra Rao, Scientific Advisor, Organization For Rare Diseases, India
Recent Paper Published -

Dr Samit Chakrabarty, Assistant Professor in Neuroscience, University of Leeds, UK
Recent Work -
Development of new algorithms to improve analysis of EMGs to identify fatigue at the level of muscle fibres.

Dr Kunjumon Vadakkan, Associate Professor, Kerala University of Health Sciences
Recent Paper Published -

Dr Fernando de Castro, Instituto Cajal-CSIC, Spain
Received a Fellowship -
EU Marie Curie program (postdoctoral and "R" type)
Recent Paper Published -
https://doi.org/10.1002/glia.23936

Dr Shikher Chaudhary, Director, Neurons Inc Asia
Recent TED Talk on Neuromarketing
CELEBRATING THE STRIDES! Accomplishments and Accolades

**PE VOLUNTEERS**

**Dhanashri Satav, Activity Coordinator**
Selected for MRC Summer School in Brain Disorders organized by Cardiff University, UK.

**Maalavika Govindarajan, Executive Editor**
Started a PhD position in the Neuroscience Graduate Program, Pennsylvania State University Homer F. Braddock Scholarship in Biology, Chemistry, and Physics 2021-2022

**Pratibha Ahirwal, Activity Coordinator**
Started a PhD position at Technion Institute of Technology, Israel

**Yashvi Bhat, Associate Chief Marketing Officer**
Editorial intern for Annals of Neurosciences and Journal of Integrative Medicine Case Reports (JIMCR)

**Vaishnavi B Bhat, Assistant Designer**
Recent Review paper - [https://irjet.net/archives/V7/i7/IRJET-V7I7709.pdf](https://irjet.net/archives/V7/i7/IRJET-V7I7709.pdf), MITACS research internship - 2021

**Pratiksha Pawar, Deputy Chief Operating Officer**
Summer Research Fellowship at University of North Carolina Chapel Hill School of Medicine Centre of Excellence in Eating Disorders
Human memories at the molecular level are dependent on efficient release of chemicals called neurotransmitters. One critical synaptic protein which orchestrates this release in our brains is known as synaptotagmin1.

Image represents fluorescence confocal micrograph (Olympus FV1000) of 3-week-old rat cortical neurons in culture labeled for the presynaptic protein synaptotagmin1 (yellow-red) and dendritic marker MAP2 (blue). Imaged was captured using a 60-x oil immersion objective.

This image was submitted as a NeuroPiction entry. If you would like us to feature such images, head over to our website: https://www.projectencephalon.org/neuropiction

FEEDBACK MECHANISM
Give us your valuable feedback!

Just as our brain uses feedback loops to accomplish regulation and control, we as an organization that strives to bring neuroscience closer to its enthusiasts, also value the feedback mechanism. Let us know what you think about Project Encephalon and help us grow in our pursuits! Give us your feedback through the form below, we hope to publish some of it in our next issue.

PE Feedback Form