

Agenda

DEVELOPING HUMAN BRAIN WORKSHOP

Location: IIT Madras

Date: 9th Monday - 13th Friday, December 2024

Time: 09:00 AM to 05:00 PM

List of Speakers:

- 1 **Achira Roy**, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), IN
- 2 **Bhavana Muralidharan**, Institute for Stem Cell Science and Regenerative Medicine (InStem), IN
- 3 **Dhananjay Huilgol**, Duke University, USA
- 4 **Jagannathan N. R.**, Chettinad Hospital & Research Institute, IN
- 5 **Jaikishan Jayakumar**, Sudha Gopalakrishnan Brain Center (SGBC), IN
- 6 **Kathleen Millen**, University of Washington, USA
- 7 **Keerthi Ram**, Healthcare Technology Innovation Centre, IN
- 8 **Luis Puelles**, University of Murcia, ES
- 9 **Mihail Bota**, Sudha Gopalakrishnan Brain Centre (SGBC), IN
- 10 **Paul Manger**, University of the Witwatersrand, SA
- 11 **Rebecca Folkerth**, NYU Grossman School of Medicine, USA
- 12 **Richa Verma**, Sudha Gopalakrishnan Brain Center (SGBC), IN
- 13 **Shubha Tole**, Tata Institute of Fundamental Research (TIFR), IN
- 14 **Suzanaerculano- Houzel**, Vanderbilt University, USA
- 15 **Veronica Martinez Cerdeno**, University of California Davis, USA
- 16 **Vidita Vaidya**, Tata Institute of Fundamental Research (TIFR), IN

Session Descriptions:

Breakout Sessions: These are interactive, small-group discussions with experts, designed to foster in-depth engagement.

Show and Tell (S&T) Sessions: Students and early-career researchers (both from the Centre and external participants) will give a short presentation 15–20 minutes of their work, followed by interactive group discussions.

Beyond the Brain: Join us for a fun and entertaining gathering where experts interact with young researchers on non-technical questions—from personal experiences to the quirks of research life. Expect laughs, surprises, and a peek behind the scenes of academia!

DEVELOPING HUMAN BRAIN WORKSHOP

Day 1

Location: IIT Madras

Date: 9th Monday, December 2024

Time: 09:00 AM to 05:00 PM

TIME	SESSION	VENUE
09:00 AM - 09:15 AM	Welcome Address and Workshop Overview	Terrace Hall
09:15 AM - 10:00 AM	Talk 1: Richa Verma Developing Human Brain in the 2nd Trimester - Introducing DHARANI	Terrace Hall
10:00 AM - 11:00 AM	Talk 2: Luis Puelles Prosomeric Model of the Vertebrate Brain	Terrace Hall
11:00 AM - 11:30 AM	Tea Break	Terrace Hall
11:30 AM - 12:00 PM	S&T: Karthika Pandurangan Development of the Human Hypothalamus in the 2nd Trimester	Terrace Hall
12:00 PM - 01:00 PM	Talk 3: Kathleen Millen Development of Human Cerebellum	Terrace Hall
01:00 PM - 02:00 PM	Lunch	Terrace Hall
02:00 PM - 03:00 PM	Talk 4: Rebecca Folkerth Epilepsy: Neuropathology and Developmental Aspects	Terrace Hall
03:00 PM - 03:30 PM	S&T: Sriram V Harnessing Large Language Models for Neuroscience Knowledge Exploration	Terrace Hall
03:30 PM - 05:00 PM	Breakout session/Tea Break	Terrace Hall

DEVELOPING HUMAN BRAIN WORKSHOP

Day 2

Location: IIT Madras

Date: 10th Tuesday, December 2024

Time: 09:00 AM to 05:00 PM

TIME	SESSION	VENUE
09:00 AM - 10:00 AM	Talk 5: Suzana Herculano Houzel What brains are made of	Terrace Hall
10:00 AM - 10:30 AM	Talk 6: Achira Roy Investigating Mechanisms Underlying Developmental Hydrocephalus	Hybrid
10:30 AM - 11:00 AM	Tea Break	Terrace Hall
11:00 AM - 12:00 PM	Talk 7: Keerthi Ram Computational Processing of Brain Section Images in DHARANI Dataset	Terrace Hall
12:00 PM - 01:00 PM	Talk 8: Veronica Martinez Cerdeno Interneuron Role in Autism	Terrace Hall
01:00 PM - 02:00 PM	Lunch	Terrace Hall
02:00 PM - 03:00 PM	Talk 9: Shubha Tole How to Make a Hippocampus	Terrace Hall
03:00 PM - 03:20 PM	S&T: Vishal Rajesh Lolam Modelling early onset hydrocephalus in Nf1 KO mouse	Terrace Hall
03:20 PM - 04:10 PM	Breakout session	Terrace Hall
04:10 PM - 05:00 PM	Beyond the Brain	Terrace Hall
05:00 PM	Tea Break	Terrace Hall

DEVELOPING HUMAN BRAIN WORKSHOP

Day 3

Location: IIT Madras

Date: 11th Wednesday, December 2024

Time: 09:00 AM to 05:00 PM

TIME	SESSION	VENUE
09:00 AM - 10:00 AM	Talk 10: Kathleen Millen Human cerebellar development gone awry – pathogenesis of malformations and medulloblastoma	Terrace Hall
10:00 AM - 11:00 AM	Talk 11: Vidita Vaidya Early Stress and Accelerated Aging	Terrace Hall
11:00 AM - 11:30 AM	Tea Break	Terrace Hall
11:30 AM - 12:00 PM	S&T: Pratik R. Chaudhari Early life adversity programs accelerated aging	Terrace Hall
12:00 PM - 01:00 PM	Talk 12: Luis Puelles Human Hypothalamus	Terrace Hall
01:00 PM - 02:00 PM	Lunch	Terrace Hall
02:00 PM - 03:00 PM	Talk 13: Mihail Bota Neuroinformatic Approaches to the Human Brain	Terrace Hall
03:00 PM - 03:30 PM	S&T: Shalaka Arun Masurkar Journey from dysregulated genes in medulloblastoma to the phase separation of p53	Terrace Hall
03:30 PM - 05:00 PM	Breakout session	Terrace Hall
05:00 PM	Tea Break	Terrace Hall

DEVELOPING HUMAN BRAIN WORKSHOP

Day 4

Location: IIT Madras

Date: 12th Thursday, December 2024

Time: 09:00 AM to 05:00 PM

TIME	SESSION	VENUE
09:00 AM - 10:00 AM	Talk 14: Veronica Martinez Cerdeno Fragile X Tremor Ataxia Syndrome Findings in Human Tissue	Terrace Hall
10:00 AM - 11:00 AM	Talk 15: Jagannathan N R Role of MR in Brain Development	Terrace Hall
11:00 AM - 11:30 AM	Tea Break	Terrace Hall
11:30 AM - 12:00 PM	S&T: Amal Dhivahar S & Janani Devi V The Universal Scaling Law & MRI Challenges	Terrace Hall
12:00 PM - 01:00 PM	Talk 16: Bhavana Muralidharan Dissecting Molecular Mechanisms of Neurodevelopmental Chromatinopathies	Terrace Hall
01:00 PM - 02:00 PM	Lunch	Terrace Hall
02:00 PM - 02:40 PM	Talk 17: Paul Manger A Comparative Neuroanatomist's View of the Human Brain - Is it Special or Just Another Brain?	Hybrid
02:40 PM - 03:00 PM	S&T: Rakshika Raveendran Development of the Amygdala and Hippocampal Formation in the 2nd Trimester Human Brain	Terrace Hall
03:00 PM - 03:30 PM	S&T: Srilekha P Understanding the epistatic interaction of LSD1 and LHX2 in the developing mouse cortex	Terrace Hall
03:30 PM - 05:00 PM	Breakout session/Tea Break	Terrace Hall

DEVELOPING HUMAN BRAIN WORKSHOP

Day 5

Location: IIT Madras

Date: 13th Friday, December 2024

Time: 09:00 AM to 05:00 PM

TIME	SESSION	VENUE
09:00 AM - 10:00 AM	Talk 18: Dhananjay Huilgol Generating Neuronal Diversity in the Mouse Cerebral Cortex	Terrace Hall
10:00 AM - 11:00 AM	Talk 19: Jaikishan Jayakumar Single Cell Analytics of the Developing Human Brain	Terrace Hall
11:00 AM - 11:30 AM	Tea Break	Terrace Hall
11:30 AM - 12:30 PM	Breakout Session	Terrace Hall
12:30 PM - 01:00 PM	S&T: Ayantika Das Unsupervised Brain Region Classification and Artifact Restoration Using AI Models	Terrace Hall
01:00 PM - 02:00 PM	Lunch	Terrace Hall
02:00 PM - 02:40 PM	Talk 20: Rebecca Folkert Epilepsy: Neuropathology and Developmental Aspects	Terrace Hall
02:40 PM - 03:10 PM	S&T: Rakesh Nanjappa Multimodal Imaging of Adult Human Brain	Terrace Hall
03:10 PM - 03:30 PM	Closing Remarks by Mohanasankar Sivaprakasam	Terrace Hall
03:30 PM - 04:30 PM	Lab Visit/Tea Break	Terrace Hall