

Friday, 20th September 2024

17:00-19:00 Pre-Registration | Room: Antigone 1-2

Saturday, 21st September 2024

07:30-09:15 Registration | Room: Antigone 1-2

Room Auditorium Pasteur

09:25-09:40 Welcome and general announcements

09:40-10:30 **[PLN01] Single-cell and collective mechanisms for neural stem cell maintenance in the adult vertebrate brain**
Laure Bally-Cuif, The Institut Pasteur, Paris, France
 Chair: **Stefano Stifani** (Canada)

Symposium 1: Evolutionary emergence of human-specific features of brain developmentChairs: **Pierre Vanderhaeghen** (Belgium) / **Franck Polleux** (USA)

10:30-10:55 **[INV1.01] Recent expansion and evolutionary selection of human-specific NOTCH2NLB allele enhancing cortical neurogenesis**
Ikuo Suzuki, The University of Tokyo, Japan

10:55-11:20 **[INV1.02] Cellular crosstalk in human neurodevelopment**
Silvia Cappello, Biomedical Center, LMU Munich, Germany

11:20-11:35 **[ST1.03] Group 3 medulloblastoma stem cells reside in a neurovascular niche in the developing human cerebellum**
Olivier Saulnier, Institut Curie, Paris, France

11:35-12:00 Refreshments | Room: Antigone 1-2

Room Auditorium Pasteur

Symposium 1 (contd.): Evolutionary emergence of human-specific features of brain development

12:00-12:15 **[ST1.04] Repeated binding of CREB to DNA and dual action of CBP regulate activity-dependent gene expression in human cortical neurons**
Nobuhiko Yamamoto, Osaka University, Japan

12:15-12:40 **[INV1.05] Mitochondrial metabolism links neuronal developmental tempo and evolution**
Ryohei Iwata, KU Leuven, Belgium

12:40-13:05 **[INV1.06] Mechanisms of synaptic development: insights from human-specific genes**
Cécile Charrier, Institute of Biology of the ENS (IBENS), France

13:05-13:30 **[INV1.07] Species-specific dynamics of progenitors and synapses in the developing neocortex**
Li Wang, University of California, San Francisco, USA

13:30-14:30 Lunch | Room: Antigone 1-2

Room Auditorium Pasteur

Symposium 2: Organoid modelling of CNS development in health & in neurodevelopmental disordersChairs: **Silvia Cappello** (Germany) / **Alexandre Baffet** (France)

14:30-15:00 **[INV2.01] Organoids bring new insight into human brain development and disease**
Silvia Valesco, Murdoch Children's Research Institute, Australia

15:00-15:30 **[INV2.02] Two independent translocation modes drive neural stem cell dissemination into the human fetal cortex**
Alexandre Baffet, ¹Institut Curie/INSERM, Paris, France

15:30-15:45 **[ST2.03] Fine-tuning of cortical connectivity through a local regulation of mitochondrial functions**
Julien Courchet, Institut NeuroMyoGène, Inserm, CNRS, Université Claude Bernard Lyon 1, France

15:45-16:00 **[ST2.04] Shaping brain regional identity: FGF8-mediated gene regulation in human cerebral organoids**
Michèle Studer, Institute of Biology Valrose (iBV), France

16:00-16:30 Refreshments | Room: Antigone 1-2

Room Auditorium Pasteur

Symposium 2 (contd.): Organoid modelling of CNS development in health & in neurodevelopmental disorders

16:30-17:00 **[INV2.05] In vitro modelling of human cortical assembly in health and disease**
Fikri Birey, Emory University, USA

17:00-17:30 **[INV2.06] Novel human-tissue derived brain organoid models**
Benedetta Artegiani, Prinses Maxima Centrum, Netherlands

17:30-19:30 Poster session 1 and Welcome reception | Room: Antigone 1-2

Sunday, 22nd September 2024

Room	Auditorium Pasteur		
09:10-10:00	[PLN02] Development and evolution of visual system connectivity Alain Chédotal, The Vision Institute, Paris, France Chair: Karine Loulier (France)		
Symposium 3: Temporal and epigenetic control of neural development Chairs: Bassem Hassan (France) / Carina Hanashima (Japan)			
10:00-10:30	[INV3.01] Developmental gene expression patterns driving species-specific cortical features Esther Klingler, VIB-KU Leuven Center for Brain & Disease, Belgium		
10:30-11:00	[INV3.02] Dissecting the epigenetic regulation of cortical development in time and space Boyan Bonev, Helmholtz Center Munich, Germany		
			
11:00-11:30	Refreshments Room: Antigone 1-2		
Room	Auditorium Pasteur		
Symposium 3 (contd.): Temporal and epigenetic control of neural development			
11:30-11:45	[ST3.03] Epigenetic regulation of hippocampus development Tanja Vogel, Albert-Ludwigs-University Freiburg, Freiburg, Germany		
11:45-12:15	[INV3.04] Mitotic bookmarking preserves neural stem cell fate memory Yan Song, Peking University, China		
12:15-12:30	[ST3.05] Unequal mitochondrial segregation during mitosis initiates asymmetric fate choices in neural stem cells progeny. Evelyne Fischer, IBENS, Paris, France		
12:30-13:00	[INV3.06] Temporal control of neurogenesis Bassem Hassan, ICM Paris Brain Institute, INSERM, France		
13:00-14:00	Lunch Room: Antigone 1-2		
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 4: Cell type diversity from evo-devo perspective Chairs: Eve Seuntjens (Belgium) / Debra Lynn Silver (USA)		Symposium 5: Development of the somatosensory system Chairs: Eric Bellefroid (Belgium) / Alexandre Pattyn (France)	
14:00-14:25	[INV4.01] Tracking the deep evolutionary origins of neurons Pawel Burkhardt, University of Bergen, Norway	14:00-14:30	[INV5.01] Neurotrophin signalling in peptidergic sensory neuron development Fernanda Ledda, Fundación Instituto Leloir, IIBBA-CONICET, Argentina
14:25-14:50	[INV4.02] Neural stem cells lineages generate cellular diversity and underpin behaviour Sonia Sen, Tata Institute for Genetics and Society, India	14:30-14:45	[ST5.02] tRNAs dynamism in the developing somatosensory cortex Elena Brivio, Institut de Génétique et de Biologie Moléculaire et Cellulaire, CNRS, France
14:50-15:05	[ST4.03] Evolutionary dynamics of cellular and gene regulatory programs in the developing mammalian cerebellum Mari Sepp, ZMBH, Heidelberg University, Germany	14:45-15:15	[INV5.03] The temporal refinement of Dach1 is a key event in the development of primary somatosensory neurons Simon Desiderio, Université Libre de Bruxelles, Belgium
15:05-15:30	[INV4.04] Building bilaterian brains: Reconstructing ancient coregulators, cell types and tissues Detlev Arendt, EMBL, Germany	15:15-15:30	[ST5.04] Towards a molecular understanding of motor neuron-muscle match-making Fabio Sacher, University of Basel, Switzerland
15:30-16:00	Refreshments Room: Antigone 1-2		
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 4 (contd.): Cell type diversity from evo-devo perspective		Symposium 5 (contd.): Development of the somatosensory system	
16:00-16:25	[INV4.05] Daily remodelling of adult neuronal networks in <i>Drosophila</i> M. Fernanda Ceriani, CONICET / Leloir Institute, Argentina	16:00-16:30	[INV5.05] Leveraging single-soma deep RNA sequencing in human dorsal root ganglion neurons to explore the mechanisms of Somatosensation Wenqin Luo, University of Pennsylvania, USA
16:25-16:40	[ST4.06] Specification of sensory input neurons in the chick entopallium is regulated by thalamic activity-dependent mechanisms Ryoka Katayama, Waseda University, Japan	16:30-17:00	[INV5.06] Deciphering the multidimensional roles of glia in sculpting the nervous system Husniye Kantarci, University of Texas at Austin, USA
16:40-17:05	[INV4.07] Generating cell type diversity in the common octopus brain Eve Seuntjens, KU Leuven, Belgium		
17:05-19:00	Poster session 2 with drinks Room: Antigone 1-2		

Monday, 23rd September 2024

Room	Auditorium Pasteur		
08:40-09:30	[PLN03] Advancing neurodevelopmental research: developing human brain organoid models to investigate brain malformations Orly Reiner , Weizmann Institute of Science, Israel <i>Chair: Shubha Tole (India)</i>		
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 6: How glial cells shape the brain <i>Chairs: Sonia Garel (France) / Shubha Tole (India)</i>		Symposium 7: Development of cerebellum and cerebellar circuitry in neurodevelopmental disorders <i>Chairs: Vatsala Thirumalai (India) / Fabrice Ango (France)</i>	
09:30-10:00	[INV6.01] Neuro-glia crosstalk shapes brain morphogenesis Laurent Ngyuen , University of Liege, Belgium	09:30-10:00	[INV7.01] The sculpting of cerebellar output via synapse elimination during development Vatsala Thirumalai , NCBS, Tata Institute of Fundamental Research, India
10:00-10:15	[ST6.02] Distinct embryonic origins contribute to astrocyte diversity in the mouse neocortex. Laura Dumas , Institut for Neurosciences of Montpellier, University of Montpellier, INSERM, France	10:00-10:30	[INV7.02] Altered development in a late-onset form of ataxia Alanna Watt , McGill University, Canada
10:15-10:30	[ST6.03] Dynamic local mRNA localization and translation occurs during the postnatal molecular maturation of perivascular astrocytic processes Katia Avila Gutierrez , CIRB, Collège de France, CNRS, INSERM, Université PSL, France		
10:30-11:00 Refreshments Room: Antigone 1-2			
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 6 (contd.): How glial cells shape the brain		Symposium 7 (contd.): Development of cerebellum and cerebellar circuitry in neurodevelopmental disorders	
11:00-11:30	[INV6.04] In the belly of the microglia: towards a dynamic quantitative understanding of how microglia phagocytose and digest neurons Francesca Peri , University of Zurich, Switzerland	11:00-11:15	[ST7.03] Identification of novel genes and pathways essential for neural development Alana Amelan , The Hebrew University of Jerusalem, Israel
11:30-12:00	[INV6.05] Microglia diversity: are there specialized sub-classes of microglia? Hiyaa Ghosh , Tata Institute of Fundamental Research, India	11:15-11:45	[INV7.04] A single cell atlas to unveil the diversity of mouse cerebellar astrocytes: insights into their molecular identities, development, and functions Ludovic Telley , Université de Lausanne, Switzerland
		11:45-12:00	[ST7.05] A Role of the NDD-associated gene <i>Arid1b</i> in mouse Purkinje cell development and cerebellum function Yang Zhou , McGill University, Canada
12:00-12:30	[INV6.06] Microglia in early brain wiring: from circuit wiring to structural integrity Sonia Garel , Institute of Biology of the École normale supérieure, France	12:00-12:30	[INV7.06] Golgi Cell inhibitory synapse development is regulated by Cadherin-13 Fabrice Ango , Institut des Neurosciences de Montpellier, INSERM, France
Room	Auditorium Pasteur		
12:30-13:00	ISDN Business Meeting		
12:30-13:30 Boxed Lunch Room: Antigone 1-2			
13:30-18:00 Free Time			
18:15-23:55 Gala Dinner and poster awards Coaches depart from Le Corum, Level 0 at 18:20			

Tuesday, 24th September 2024

Room	Auditorium Pasteur		
08:30-09:20	[PLN04] Developmental mechanisms shaping cortical interhemispheric connectivity and function Linda Richards, WUSTL, USA Chair : Fiona Francis (France)		
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 8: Forces and mechanosensation in the development of the nervous system Chairs: Kristian Franze (UK) / Victor Borrell (Spain)		Symposium 9: Glial pathophysiology and plasticity in neurodevelopment Chairs: Baptiste Lacoste (Canada) / Karine Loulier (France)	
09:20-09:50	[INV8.01] Pushing and pulling in the developing brain wall Takaki Miyata, Nagoya University, Japan	09:20-09:50	[INV9.01] Cellular and molecular mechanisms of astrocyte-interneuron communication in health and disease Dolores Irala, St Jude Children's Research Hospital, USA
09:50-10:05	[ST8.02] Perivascular neurons instruct three-dimensional vascular lattice formation via Piezo2-mediated contact Kenichi Toma, Kyoto University, Japan	09:50-10:05	[ST9.02] Mitigating reactive gliosis through the ablation of a chromatin modifier in astrocytes. Platon Megagiannis, McGill University, Canada
10:05-10:35	[INV8.03] Forces at play: deciphering the role of Piezo1 in neural development Medha Pathak, University of California, Irvine, USA	10:05-10:35	[INV9.03] Role of astrocytes in cerebrovascular maturation Baptiste Lacoste, University of Ottawa, Canada
10:35-11:00 Refreshments Room: Antigone 1-2			
Room	Auditorium Pasteur	Room	Antigone 3
Symposium 8 (contd.): Forces and mechanosensation in the development of the nervous system		Symposium 9 (contd.): Glial pathophysiology and plasticity in neurodevelopment	
11:00-11:30	[INV8.04] Generation and sensing of forces during axon guidance and neuronal migration Naoyuki Inagaki, Nara Institute of Science and Technology, Ikoma, Japan	11:00-11:15	[ST9.04] ER stress underlies aberrant NSC fate decisions that cause malformations of cortical development Lisa Julian, Simon Fraser University, Canada
11:30-11:45	[ST8.05] Mechanotransduction regulation of interneuron migration during cortical development Miriam Javier Torrent, GIGA institute, University of Liège, Belgium	11:15-11:45	[INV9.05] Alteration of tonic inhibition in neurodevelopmental disorder Bo-Eun Yoon, Dankook University, Republic of Korea
11:45-12:00	[ST8.06] Axon guidance during CNS regeneration is required for specific brain innervation Julia Schaeffer, Univ. Grenoble Alpes, Inserm, U1216, France	11:45-12:00	[ST9.06] Maternal microbiome disruption is impacting early-life brain barriers: insights from caesarean section mouse offspring Valentine Turpin, APC Microbiome Ireland, , Department of Anatomy and Neuroscience, Ireland
12:00-12:30	[INV8.07] The mechanical regulation of neuronal development Kristian Franze, University of Cambridge, United Kingdom. Friedrich-Alexander University Erlangen-Nuremberg, Germany	12:00-12:30	[INV9.07] Oligodendroglia heterogeneity in response to DNA damage: impact on neurodevelopment and adult brain functions Enrica Boda, University of Turin, Italy
12:30-13:30 Lunch Room: Antigone 1-2			
Room	Auditorium Pasteur		
Symposium 10: Regulation of inhibitory neuron development Chairs: Goichi Miyoshi (Japan) / Fiona Francis (France)			
13:30-14:00	[INV10.01] Cortical inhibitory neurons exhibit cell-type specific maturation programme Lynette Lim, Leuven Brain Institute, KU Leuven, Belgium		
14:00-14:15	[ST10.02] Olfactory bulb anomalies in KBG syndrome mouse model and patients Kara Goodkey, University of Alberta, Canada		
14:15-14:30	[ST10.03] Pregnancy-responsive pools of adult neural stem cells for transient neurogenesis in mothers Zayna Chaker, Institute of Functional Genomics of Lyon, CNRS, ENS, France		
14:30-15:00	[INV10.04] Role of RAS/MAPK hyperactivity during cortical GABAergic interneuron development Daniel Vogt, Michigan State University, USA		
15:00-15:30	[INV10.05] Transcriptional regulation of cortical interneuron development Nicoletta Kessar, Wolfson Institute of Biomedical Research, UCL, United Kingdom		
15:30-16:00	[INV10.06] An early postnatal critical period for the development of inhibitory neurons in social circuit regulation Goichi Miyoshi, Gunma University Graduate School of Medicine, Japan		
16:00-16:15	Closing remarks		