

Oral Program

Tuesday 22 nd May 2018	
08:30-19:00	Registration <i>Room: Entrance Hall</i>
<i>Room:</i>	<i>Noh Theatre</i>
09:15-09:30	Welcome and general announcements
09:30-10:30	[PLN01] Fate and freedom within developing neocortical circuits Denis Jabaudon, <i>Université of Geneva Medical School, Switzerland</i>
10:30-11:00	Refreshments <i>Room: Reception Hall 1 & Conference Room 3-4</i>
11:00-12:00	Workshop 1: Marmoset provides a new paradigm of Neuroscience—Activity of Brain/MINDs in Japan Sponsored by
	
11:00-11:05	Workshop Overview , H. Okano ¹ , ¹ <i>RIKEN Center for Brain Science, Japan</i> , ² <i>Keio University School of Medicine, Japan</i>
11:05-11:25	Disease modeling and brain mapping using genetically modified marmosets H. Okano ¹ , ¹ <i>RIKEN Center for Brain Science, Japan</i> , ² <i>Keio University School of Medicine, Japan</i>
11:25-11:45	Digital gene atlas of neonate common marmoset brain T. Shimogori, <i>RIKEN Center for Brain Science, Japan</i>
11:45-12:05	Multiscale functional imaging in the marmoset visual cortex K. Ohki, <i>The University of Tokyo School of Medicine, Japan</i>
12:05-13:45	Lunch <i>Room: Reception Hall 1 & Conference Room 3-4</i>
<i>Room:</i>	<i>Noh Theatre</i>
13:45-15:00	Symposium 1: Modeling neurodevelopment and developmental brain disorders: from Primate to human PSC-based 2D and 3D models Sponsored by
	Chair: Guo-li Ming, <i>University of Pennsylvania, USA</i>  Otsuka Pharmaceutical Co., Ltd.
13:45-14:15	[Inv.01] Human brain organoids on a chip to model normal development and disease E. Karzbrun, S.R. Cohen, J.H. Hanna, O. Reiner*, <i>Weizmann Institute of Science, Israel</i>
14:15-14:45	[Inv.02] Deciphering species-specific properties of human corticogenesis P. Vanderhaeghen ^{1,2} , ¹ <i>VIB/KULeuven Brain and Disease Research Center, Belgium</i> , ² <i>Université Libre de Bruxelles, Belgium</i>
14:45-15:00	[ST.01] Trisomy 21 perturbs the eye cup and retinal pigment epithelium development in cerebral organoids derived from human iPSCs P. Goh ¹ , I. Alic ² , A. Murray ² , G. Gough ² , H.Y. Chen ³ , I. Barisic ⁴ , Y-H. Loh ³ , D. Nizetic ^{*1,2} , ¹ <i>Queen Mary University of London, UK</i> , ² <i>Lee Kong Chian School of Medicine, NTU, Singapore</i> , ³ <i>A*STAR Genome Institute of Singapore, Singapore</i> , ⁴ <i>Children's Hospital Zagreb, Croatia</i>
15:00-15:30	Refreshments <i>Room: Reception Hall 1 & Conference Room 3-4</i>
15:30-16:45	Symposium 1 (contd.): Modeling neurodevelopment and developmental brain disorders: from Primate to human PSC-based 2D and 3D models Sponsored by
	Chair: Guo-li Ming, <i>University of Pennsylvania, USA</i>  Otsuka Pharmaceutical Co., Ltd.
15:30-16:00	[Inv.03] Building Rett syndrome monkey models using gene editing Y. Sun, <i>University of California at Los Angeles, USA</i>
16:00-16:30	[Inv.04] Modelling Zika virus-induced microcephaly using hiPSC based cellular models G. Ming, <i>University of Pennsylvania, USA</i>
16:30-16:45	[ST.02] Engineering human CNS morphogenesis: controlled induction of singular neural rosette emergence G.T. Knight*, B.F. Lundin, N. Iyer, L.M. Ashton, W.A. Sethares, R.L. Willett, R.S. Ashton, <i>University of Wisconsin–Madison, USA</i>
16:45-18:15	Poster session 1 with drinks <i>Room: Reception Hall 1 & Conference Room 3-4</i>
18:15-18:30	Assemble for Noh
18:30-19:20	Noh workshop Room: Noh theatre

Wednesday 23 rd May 2018		
08:00-14:00	Registration Room: Entrance Hall	
Room	Noh Theatre	
08:30-09:30	[PLN02] Reelin, Cajal-Retzius cells and the synapsid-diapsid divide André Goffinet, <i>Université of Louvain, Belgium</i>	
09:30-10:15	Workshop: A guide to publishing in journals by Stefano Stifani, <i>McGill University, Canada</i> (ISDN Secretary General)	
10:15-10:45	Refreshments Room: Reception Hall 1 & Conference Room 3-4	
Rooms	Noh Theatre	Conference Room 1-2
10:45-13:15	Symposium 2: Development and plasticity of sensory pathways Chair: Mriganka Sur, <i>Simons Center for the Social Brain, Massachusetts Institute of Technology USA</i>	Symposium 3: Neurodevelopment and psychiatric disorders Chair: Stefania Maccari, <i>University of Lille, CNRS, France</i>
10:45-11:15	[Inv.05] Critical periods in prefrontal cortex maturation: role of neural activity and serotonin neurotransmission P. Gaspar ^{*1,2} , A. Teissier ^{1,2} , M. Soiza-Reilly ^{1,2} , ¹ Inserm, France, ² Sorbonne Universités, France	10:45-11:20 [Inv.09] Epigenetic animal model of early stress S. Maccari ¹ , ¹ University of Lille, France, ² Sapienza University of Rome, Italy
11:15-11:45	[Inv.06] Cortical progenitor-specific mechanisms control thalamocortical innervation and cortical cell fate S. Tole, <i>Tata Institute of Fundamental Research (TIFR), India</i>	11:20-11:55 [Inv.10] Sex differences in Ketamine's antidepressant effect M. Kabbaj, <i>Florida State University, USA</i>
11:45-12:15	[Inv.07] Development of nociceptive topognosis A. Kania ^{1,2} , ¹ McGill University, Canada, ² Université de Montréal, Canada	11:55-12:30 [Inv.11] The evolutionary conserved mechanisms for the regulation of social conflict by the habenula H. Okamoto, <i>RIKEN Center for Brain Science, Japan</i>
12:15-12:45	[Inv.08] Rules of plasticity in visual cortex neurons and circuits M. Sur, <i>Simons Center for the Social Brain, Massachusetts Institute of Technology, USA</i>	12:30-12:45 [ST.05] Maternal metabolic and dietary environmental influences on the behavior of nonhuman primate offspring E.L. Sullivan ^{*1,2} , J.R. Thompson ¹ , M. DeCapo ¹ , J.L. Bagely ¹ , V.H. Roberts ¹ , A.E. Frias ¹ , C.D. Kroenke ¹ , C.T. Roberts ¹ , D. Fair ³ , ¹ Oregon National Primate Research Center, USA, ² University of Oregon, USA, ³ Oregon Health & Science University, USA
12:45-13:00	[ST.03] Patterned, but not synchronous spontaneous activity of developing olfactory neurons regulates olfactory receptor-specific axon sorting A. Nakashima ^{*1} , N. Ihara ¹ , Y. Ikegaya ^{1,2} , H. Takeuchi ^{1,3} , ¹ University of Tokyo, Japan, ² National Institute of Information and Communications Technology, Japan, ³ Japan Science and Technology Agency (JST), PRESTO, Japan	12:45-13:00 [ST.06] Long-term exercise rescued stress-induced cortical dendritic spine loss and improved learning function K. Chen, Y. Zheng, R. Han, J. Wei, C. Ren, K.F. So, L. Zhang*, <i>Jinan University, China</i>
13:00-13:15	[ST.04] Non-cell autonomous Otx2 homeoprotein regulates visual cortex plasticity through Gadd45b J. Apulei ^{*1} , N. Kim ¹ , D. Testa ¹ , J. Ribot ¹ , D. Morizet ¹ , C. Bernard ¹ , L. Jourdain ² , C. Blugeon ² , A. Di Nardo ¹ , A. Prochiantz ¹ , ¹ College de France, France, ² Ecole Normale Supérieure, France	13:00-13:15 [ST.07] Activity-dependant mechanisms for prefrontal cortex maturation A. Teissier ^{*1,2} , C. LeMagueresse ¹ , B. Andrade da Costa ³ , A. da Stasi ⁴ , A. Bacci ⁴ , V. Vaidya ⁵ , P. Gaspar ¹ , ¹ Institut du Fer à Moulin U839, France, ² Centre de Psychiatrie et Neurosciences U894, France, ³ Ciências Biológicas, Recife PE, Brazil, ⁴ Institut du Cerveau et de la Moelle épinière UMRS1127, France, ⁵ Tata Institute of Fundamental Research, India
13:15-14:00	Boxed Lunch Room: Reception Hall 1 & Conference Room 3-4	
14:00-19:30	Free time (On your own)	
19:30-22:00	Conference gala dinner at Hotel Nikko Nara	

Thursday 24 th May 2018		
08:30-20:00	Registration Room: Entrance Hall	
Rooms	Noh Theatre	Conference Room 1-2
09:00-10:00	Symposium 4: Mechanisms of circuit formation and degeneration Chair: Aaron Gitler, <i>Stanford University, USA</i>	Symposium 5: Cell migration and layer formation in the developing cerebral cortex Chair: Kazunori Nakajima, <i>Keio University School of Medicine, Japan</i>
09:00-09:25	[Inv.12] The X-linked intellectual disability gene DHH9 and the formation of neural circuits J. Shimell, B. Shah, B. Jovellar, S.X. Bamji*, <i>University of British Columbia, Canada</i>	09:00-09:15 [ST.09] The preplate stream: neurons generated earliest in the pallium migrate ventrally to mechanically bend radial fibers and expand the neocortex K. Saito, M. Okamoto, T. Miyata*, <i>Nagoya University, Japan</i>
09:25-09:50	[Inv.13] Novel signaling mechanisms for glutamatergic synapse formation and maintenance Y. Zou, <i>University of California, USA</i>	09:15-09:45 [Inv.14] Transient moving organizers: life and death in cortical development A. Pierani, <i>Paris Descartes University, France</i>
09:50-10:00	[ST.08] Microbiome influences prenatal and adult microglia in a sex-specific manner M.S. Thion ^{*1} , D. Low ² , A. Silvin ² , J. Chen ² , P. Grisel ¹ , J. Schulte-Schrepping ³ , R. Blecher ⁴ , T. Ulas ³ , P. Squarzon ¹ , G. Hoeffel ^{2,5} , ¹ Ecole Normale Supérieure, CNRS, INSERM, PSL Research University, France, ² Agency for Science, Technology and Research (A*STAR), Singapore, ³ Genomics and ImmunoreUniversity of Bonn, Germany, ⁴ Weizmann Institute of Science, Israel, ⁵ Aix-Marseille Université, CNRS, INSERM, France	09:45-10:00 [ST.10] Synaptic transmission from subplate neurons controls radial migration of neocortical neurons C. Ohtaka-Maruyama ^{*1} , M. Okamoto ² , K. Endo ¹ , M. Oshima ³ , N. Kaneko ^{1,3} , K. Yura ^{3,4} , H. Okado ¹ , T. Miyata ² , N. Maeda ¹ , ¹ Tokyo Metropolitan Institute of Medical Science, Japan, ² Nagoya University Graduate School of Medicine, Japan, ³ Ochanomizu University, Japan, ⁴ Waseda University, Japan
10:00-10:30	Refreshments Room: Reception Hall 1 & Conference Room 3-4	
10:30-12:00	Symposium 4 (contd.): Mechanisms of circuit formation and degeneration Chair: Aaron Gitler, <i>Stanford University, USA</i>	Symposium 5 (contd.): Cell migration and layer formation in the developing cerebral cortex Chair: Kazunori Nakajima, <i>Keio University School of Medicine, Japan</i>
10:30-11:05	[Inv.15] Reverse autistic defects in MECP2 transgenic mice by neural circuitry specific genome editing Z. Qiu, <i>Chinese Academy of Sciences, China</i>	10:30-11:00 [Inv.17] Control of neuronal layer formation during cerebral cortical development K. Nakajima, <i>Keio University School of Medicine, Japan</i>
11:05-11:25	[ST.11] Neural activity-dependent transcription factor Npas4 plays a crucial role in neuronal survival after ischemic stroke H. Takahashi, R. Asahina, M. Fujioka, A. Tsuboi*, <i>Nara Medical University, Japan</i>	11:00-11:30 [Inv.18] Regulation of cerebral cortex folding by controlling neuronal migration via FLRT adhesion molecules R. Klein, <i>Max-Planck-Institute of Neurobiology, Germany</i>
11:25-12:00	[Inv.16] Expanding mechanisms and therapeutic targets for neurodegenerative disease A.D. Gitler, <i>Stanford University, USA</i>	11:30-12:00 [Inv.19] Microglia and prenatal inflammation in the development of cortical circuits M. Thion ¹ , CA. Mosser ² , D. Low ³ , P. Grisel ¹ , P. Squarzon ¹ , E. Audinat ² , F. Ginhoux ³ , S. Garel ^{*1} , ¹ Ecole Normale Supérieure, IBENS, INSERM U1024, CNRS UMR 8197, France, ² INSERM U1128, Université Paris Descartes, France, ³ Singapore Immunology Network (SigN), Agency for Science, Technology and Research (A*STAR), Singapore
Rooms	Noh Theatre	
12:00-12:30	ISDN Business meeting	
12:30-14:00	Lunch Room: Reception Hall 1 & Conference Room 3-4	

Room	Noh Theatre	
14:00-15:00	[PLN03] Parental stress and epigenetic programming of offspring neurodevelopment Tracy Bale, <i>University of Pennsylvania, USA</i>	
15:00-16:00	Symposium 6: Development and plasticity of vocal communication systems in human and non-human models Chair: Sarah Woolley, <i>McGill University, Canada</i>	
15:00-15:10	Introduction to the session -Sarah Woolley	
15:10-15:40	[Inv.20] Rhythm in music, language and the brain: Comparative and developmental approaches J.R. Iversen, <i>University of California San Diego, USA</i>	
15:40-16:10	[Inv.21] Development and plasticity of perception in vocal communication S.C. Woolley, <i>McGill University, Canada</i>	
16:10-16:40	Refreshments <i>Room: Reception Hall 1 & Conference Room 3-4</i>	
16:40-18:00	Symposium 6 (contd.): Development and plasticity of vocal communication systems in human and non-human models Chair: Sarah Woolley, <i>McGill University, Canada</i>	
16:40-17:10	[Inv.22] Vocal learning bats: A new path towards understanding the neurogenetics of language S.C. Vernes ^{1,2} , ¹ Max Planck Institute for Psycholinguistics, The Netherlands, ² Donders Institute for Brain, Cognition and Behaviour, The Netherlands	
17:10-17:30	[ST.12] Practice makes perfect: song proficiency of male zebra finches traces back to the structural properties of the brain J. Hamaide* ¹ , K. Lukacova ^{1,2} , M. Verhoye ¹ , A. Van der Linden ¹ , ¹ University of Antwerp, Belgium, ² Slovak Academy of Sciences, Slovakia	
17:30-18:00	[Inv.23] Marmoset as a model system for studying neural basis of vocal communication X. Wang ^{1,2} , ¹ Johns Hopkins University, USA, ² Tsinghua University, China	
18:00-19:30	Poster session 2 with drinks <i>Room: Reception Hall 1 & Conference Room 3-4</i>	
Friday 25 th May 2018		
08:00-18:00	Registration <i>Room: Entrance Hall</i>	
Rooms	Noh Theatre	Conference Room 1-2
08:30-10:30	Symposium 7: Oligodendrocyte/neuron interactions Chair: Wendy Macklin, <i>University of Colorado School of Medicine, USA</i>	Symposium 8: Genome editing applications in understanding function and pathology of the nervous system Chair: Ryohei Yasuda, <i>Max Planck Florida Institute for Neuroscience, USA</i>
08:30-09:00	[Inv.24] Loss of mTORC2 signaling in cortical neurons reduces CNS myelination W.B. Macklin*, A. Palandri, H. Hathaway, K. Bercury, <i>University of Colorado School of Medicine, USA</i>	08:30-08:55 [Inv.28] In vivo genome editing for studying neuronal plasticity R. Yasuda, <i>Max Planck Florida Institute for Neuroscience, USA</i>
09:00-09:30	[Inv.25] Oligodendrocytes myelinate axons by sensing neuronal subtypes and/or sensory inputs with individual variance in selectivity K. Ikenaka, <i>National Institute for Physiological Sciences, Japan</i>	08:55-09:20 [Inv.29] Creating neuronal disease models using genome editing E. Sasaki, <i>Central Institute for Experimental Animals, Japan</i>
09:30-10:00	[Inv.26] How do glia regulate myelinating potential? B. Harty, K. Monk*, <i>The Vollum Institute, Oregon Health and Science University, USA</i>	09:20-09:45 [Inv.30] Development of targeted gene knock-in method in non-dividing cells K. Suzuki* ^{1,2} , Y. Tsunekawa ³ , M. Yamamoto ⁴ , R. Hernandez-Benitez ⁴ , J. Wu ⁴ , F. Matsuzaki ³ , J.C.I. Belmonte ⁴ , ¹ Institute for Advanced Co-Creation Studies, Japan, ² Osaka University, Japan, ³ RIKEN Center for Developmental Biology, Japan, ⁴ Salk Institute for Biological Studies, USA

10:00-10:30	[Inv.27] Exosomes in oligodendrocyte-neuron interaction C. Müller ¹ , W-P. Kuo-Elsner ¹ , K. Miebach ¹ , M. Auber ¹ , A. Scheller ² , F. Krichhoff ² , E-M.K. Albers ^{*1} , ¹ <i>Johannes Gutenberg University Mainz, Germany</i> , ² <i>University of Saarland, Germany</i>	09:45-10:10 [Inv.31] Epigenome editing in neurons with dCAS9 fusion proteins L-F. Chen, M. Gómez-Schiavon, D.A. Gallegos, M.G. Yang, B. Kalmeta, A.S. Zhou, M. Hazlett, J.V. Deng, M. Gemberling, C.A. Gersbach, N.E. Buchler, A.E. West*, <i>Duke University, USA</i>
		10:10-10:30 [Inv.32] Harnessing novel RNA-targeting CRISPR systems for transcriptome engineering J.S. Gootenberg ^{*1,2} , O.O. Abudayyeh ¹ , D.B.T. Cox ¹ , P. Essletzbichler ¹ , M.J. Kellner ¹ , B. Franklin ¹ , S. Han ¹ , A. Ting ¹ , F. Zhang ¹ , ¹ <i>Broad Institute of MIT, USA</i> , ² <i>Harvard University, USA</i>
10:30- 11:00	Refreshments Room: Reception Hall 1 & Conference Room 3-4	
11:00-11:30	Symposium 7 (contd.): Oligodendrocyte/neuron interactions Chair: Wendy Macklin, <i>University of Colorado School of Medicine, USA</i>	Symposium 8 (contd.): Genome editing applications in understanding function and pathology of the nervous system Chair: Ryohei Yasuda, <i>Max Planck Florida Institute for Neuroscience, USA</i>
11:00-11:15	[ST.13] Increased miR-124-3p in microglial exosomes following traumatic brain injury inhibits neuronal inflammation and contributes to neurite outgrowth via their transfer into neurons X.T. Ge ^{1,2} , S. Huang ^{*1} , J.Y. Wen ¹ , H.C. Wang ² , J.N. Zhang ¹ , P. Lei ¹ , ¹ <i>Tianjin Medical University General Hospital, China</i> , ² <i>Duke University, USA</i>	[ST.15] Studying endogenous Nav1.7 channel dynamics in a human in vitro model system L. McDermott*, G. Weir, D. Bennett, <i>University of Oxford, UK</i>
11:15-11:30	[ST.14] The ectodomain shedding of NRG1 underlies spatial and temporal regulation of synaptogenesis and myelination of developing motor neurons F. Sato ¹ , M. Tabuchi ¹ , A. Kamezaki ¹ , K. Asakawa ² , K. Kawakami ² , A. Sehara-Fujisawa ^{*1} , ¹ <i>Kyoto University, Japan</i> , ² <i>National Institute Genetics, Japan</i>	[ST.16] Direct <i>in vivo</i> glia-to-neuron conversion in the postnatal mouse cerebral cortex S. Péron ^{*1} , N. Marichal ¹ , L. Torres Masjoan ¹ , M. Karow ^{1,2} , B. Berninger ¹ , ¹ <i>Johannes Gutenberg University Mainz, Germany</i> , ² <i>Ludwig Maximilian University Munich, Germany</i>
Room	Noh Theatre	
11:30-13:00	Mini symposium: Neural stem-progenitor cells in the embryonic, early postnatal, and adult mammalian brain Chair: Yukiko Gotoh, <i>The University of Tokyo, Japan</i>	
11:30-12:10	[Inv.33] Regulation of embryonic and adult neural stem cell fate N. Yuizumi, N. Kuwayama, Y. Kishi, Y. Gotoh*, <i>The University of Tokyo, Japan</i>	
12:10-13:00	[Inv.34] Origin and retention of neural stem cells in the adult brain A. Alvarez-Buylla, <i>University of California, USA</i>	
13:00-14:15	Lunch Room: Reception Hall 1 & Conference Room 3-4	
Room	Noh Theatre	
14:15-16:00	Symposium 9: Cell lineage and neural diversity in the cerebral cortex Chair: Songhai Shi, <i>Memorial Sloan Kettering Cancer Center, USA</i>	
14:15-14:42	[Inv.35] Novel regulators of neurogenesis- from centrosomes to nucleoli M. Götz ^{1,2} , G.C. Ortega ^{1,2} , M. Esgleas ^{1,2} , S. Falk ^{*1,2} , ¹ <i>Helmholtz Center Munich, Germany</i> , ² <i>Ludwig-Maximilians-University, Germany</i>	
14:42-14:57	[ST.17] Dynamic gene expressions during neural development H. Shimojo*, R. Kageyama, <i>Kyoto University, Japan</i>	
14:57-15:12	[ST.18] Neurogenic differentiation by hippocampal neural stem and progenitor cells is biased by NFIX expression L. Harris ¹ , O. Zalucki ¹ , T. Burne ¹ , J. Heng ² , R. Gronostajski ³ , M. Piper ^{*1} , ¹ <i>The University of Queensland, Australia</i> , ² <i>Curtin University, Australia</i> , ³ <i>State University at Buffalo, USA</i>	
15:12-15:39	[Inv.36] Molecular mechanisms of neural stem cell lineage progression S. Hippenmeyer, <i>Institute of Technology, Austria</i>	

15:30-16:00	Refreshments <i>Room: Reception Hall 1 & Conference Room 3-4</i>
16:00-17:30	Symposium 9 (contd.): Cell lineage and neural diversity in the cerebral cortex Chair: Songhai Shi, <i>Memorial Sloan Kettering Cancer Center, USA</i>
16:00-16:27	[Inv.37] A developmental program of multipotent progenitors for generating diverse neocortical interneurons K.T. Sultan ^{1,2} , W.A. Liu ^{1,2} , D.J. Jorg ^{1,3} , Z. Li ¹ , X-J. Zhang ¹ , O. Dean ¹ , B.D. Simons ³ , S-H. Shi ^{*1} , ¹ <i>Memorial Sloan Kettering Cancer Center, USA</i> , ² <i>Weill Cornell Medical College, USA</i> , ³ <i>University of Cambridge, USA</i>
16:27-16:54	[Inv.38] Developmental diversification of GABAergic neurons in the telencephalon C. Mayer ^{1,2} , R. Bandler ^{2,3} , A. Saunders ³ , F. Krienen ³ , S. McCarroll ³ , R. Satija ⁴ , G. Fishell ^{*2,3} , ¹ <i>MPI Neurobiology Martinsreid, USA</i> , ² <i>Stanley Center at the Broad, USA</i> , ³ <i>Harvard Medical School, USA</i> , ⁴ <i>New York University, USA</i>
16:54-17:21	[Inv.39] Murder in the cortex express: a balancing act in the assembly of cortical networks O. Marin, <i>King's College London, UK</i>
17:21-18:00	Poster awards and closing remarks