



Scientific Program

Friday, July 7, 2023

10:00 - 18:00 **Introductory Course**

Saturday, July 8, 2023

8:30 – 11:30 **Workshop I**

Glial engineering and gliotechnologies: advanced materials, tools and approaches to unveil the role of glia in brain physiology, diseases and in social behavior

Organizers: Benfenati, Valentina (Bologna, Italy); Raucci, Maria Grazia (Napoli, Italy)

Speakers: Antognazza, Maria Rosa (Milano, Italy); O'Neill, Kate, (College Park, USA); De Pitta, Maurizio; (Toronto, Canada); Pego, Ana Paula (Porto, Portugal); Perea, Gertrudis (Madrid, Spain); Benfenati, Valentina (Bologna, Italy)

11:30 – 12:15 **Lunch Break**

12:15 – 12:30 **Opening**

12:30 – 13:30 **Plenary Lecture I**

Chair: Magdalena Götz

Freda Miller (Michael Smith Laboratories, The University of British Columbia, Vancouver, Canada)

From development to repair - how growth factors and stem cells build the nervous system

13:30 – 16:30 **Poster Session I**

16:30 – 18:30 **Symposia I**

Symposium 1

Multimodal analysis of glia-mediated regeneration

Organizers: Blackshaw, Seth (Baltimore, USA); Llorens-Bobadilla, Enric (Stockholm, Sweden)

Speakers: Blackshaw, Seth (Baltimore, USA); Llorens-Bobadilla, Enric (Stockholm, Sweden); Tanaka, Elly M. (Vienna, Austria)

Symposium 2

Building the nervous system: critical roles for microglia prior to pruning

Organizers: De Biase, Lindsay (Los Angeles, USA); Thion, Morgane (Paris, France)

Speakers: De Biase, Lindsay (Los Angeles, USA); Keller, Annika (Schlieren, Switzerland); Thion, Morgane (Paris, France); Van Aelst, Linda (Cold Spring Harbor, USA)

Symposium 3

Astrocyte diversity drives specificity in the making, regulation and dysfunction of brain circuits

Organizer: Volterra, Andrea (Lausanne, Switzerland)

Speakers: Fahri-Tselnicker, Isabella (College Station, USA); Habib, Naomi (Jerusalem, Israel); Morcom, Laura (Cambridge, UK); Volterra, Andrea (Lausanne, Switzerland)

Symposium 4

Glial cells of the gut: from neural stem cells to regulators of homeostasis

Organizers: Boesmans, Werend (Diepenbeek, Belgium); Cirillo, Carla (Toulouse, France)

Speakers: Boesmans, Werend (Diepenbeek, Belgium); Cirillo, Carla (Toulouse, France); Pachnis, Vassilis (London, UK); Rao, Meenakshi (Boston, USA)

Symposium 5

Regulation of neuroinflammation in CNS remyelination

Organizers: DeSilva, Tara (Cleveland, USA); Huang, Jeffrey (Washington, USA)

Speakers: DeSilva, Tara (Cleveland Heights, USA); Dombrowski, Yvonne (Belfast, Northern Ireland); Huang, Jeffrey (Washington, DC, USA); Reich, Daniel (Bethesda, USA)

18:30 – 19:00 Coffee Break

19:00 – 20:00 **Plenary Lecture II**

Chair: Leda Dimou

Michael Wegner (Institute for Biochemistry, FAU Erlangen-Nürnberg, Germany)

Organizing and adapting the gene regulatory network in myelinating glia

Sunday, July 9, 2023

8:30 – 9:30 **Plenary Lecture III**

Chair: David Lyons

Anne Schaefer (Icahn School of Medicine at Mount Sinai, New York, USA)

The operational principles of neuron-microglia

10:00 – 12:00 **Symposia II**

Symposium 6

How microglia sense and regulate neuronal activity

Organizer: Wu, Long-Jun (Rochester, USA)

Speakers: Nabekura, Junichi (Okazaki, Japan); Strasburger, Haley (New York, USA); Semtner, Marcus (Berlin, Germany); Wu, Long-Jun (Rochester, USA)

Symposium 7

Using non-mammalian models to uncover fundamental roles of glia in circuit development

Organizers: Ackerman, Sarah (Saint Louis, USA); Fernandes, Vilaiwan (London, UK)

Speakers: Ackerman, Sarah (Saint Louis, Missouri, USA); Czopka, Tim (Edinburgh, UK); Fernandes, Vilaiwan (London, UK); Singhvi, Aakanksha (Seattle, USA)

Symposium 8

Molecular and cellular regulation of myelination throughout life (Special Trainee symposium)

Organizers: Adès, Noémie (Paris, France); Thornton, Michael (Aurora, USA)

Speakers: Adès, Noémie (Paris, France); Braaker, Philipp (Edinburgh, UK); Lyer, Manasi (Stanford, USA); Kukanja, Petra (Stockholm, Sweden); Thornton, Michael (Aurora, USA)

Symposium 9

Mechanisms of glia-neuron crosstalk maintaining neural homeostasis

Organizer: Saab, Aiman S. (Zurich, Switzerland)

Speakers: Bolaños, Juan P. (Salamanca, Spain); Cooper, Melissa (New York, USA); Edgar, Julia M (Glasgow, UK); Saab, Aiman S. (Zurich, Switzerland)

Symposium 10

Do astrocytes really regulate cerebral blood flow?

Organizers: Gourine, Alexander (London, UK); Filosa, Jessica (Augusta, USA)

Speakers: Filosa, Jessica (Augusta, USA); Gordon, Grant (Calgary, Canada); Gourine, Alexander (London, UK); Mishra, Anusha (Portland, USA)

12:00 – 13:00 **Lunch Break**

13:00 – 16:00 **Poster Session II**

16:00 – 18:00 **Symposia III**

Symposium 11

The many faces of Schwann cells: new roles and different perspectives

Organizers: Scherschel, Katharina (Düsseldorf, Germany); Gomez-Sanchez, Jose A. (San Juan de Alicante, Spain)

Speakers: Gomez-Sanchez, Jose A. (San Juan de Alicante, Spain); Scherschel Katharina (Düsseldorf, Germany); Sommer, Lukas (Zurich, Switzerland); Weiss, Tamara (Austria)

Symposium 12

The circuit logic of myelination - when, where, and why

Organizers: Xin, Wendy (San Francisco, USA); Hughes, Ethan (Aurora, USA)

Speakers: Hughes, Ethan (Aurora, USA); Kole, Maarten (Amsterdam, Netherlands); Sampaio Baptista, Cassandra (Glasgow, Scotland); Xin, Wendy (San Francisco, USA)

Symposium 13

mRNA localization and translation in glial cells: local events with broad roles

Organizer: Cohen-Salmon, Martine (Paris, Paris)

Speakers: Baleriola, Jimena (Leioa, Spain); Dougherty, Joseph (St. Louis, USA); Meng-Meng, Fu (Bethesda, USA); Silver, Debby (Durham, USA)

Symposium 14

The tripartite synapse under metabolic stress

Organizers: Rose, Christine R. (Düsseldorf, Germany); Henneberger, Christian (Bonn, Germany and London, UK)

Speakers: Farkas, Eszter (Szeged, Hungary); Henneberger, Christian (Bonn, Germany and London, UK); Rose, Christine R. (Düsseldorf, Germany); Ullah, Ghanim (Tampa, USA)

Symposium 15

Heterogeneity and function of microglia in brain stem cell niches

Organizer: Szele, Francis (Oxford, UK)

Speakers: Adorjan, Istvan (Budapest, Hungary); Llorens-Martin, Maria (Madrid, Spain); Marco, Prinz (Freiburg, Germany); Szele, Francis (Oxford, UK)

18:00 – 19:00 **Plenary Lecture IV**

Chair: Nicola Allen

Shane Liddelow (NYU Grossman School of Medicine, New York, USA)

Novel reactive astrocyte sub-states and function

Monday, July 10

8:30 – 9:30 **Plenary Lecture V**

Chair: Gonçalo Castelo-Branco

Ragnhildur Thora Karadottir (Department of Veterinary Medicine, Madingley Road Cambridge, UK)

Neuronal activity modulates myelin plasticity and regeneration

10:00 – 12:00 **Symposia IV**

Symposium 16

The role of Schwann cell metabolism in regulating neuronal function and viability

Organizers: Carter, Bruce (Nashville, USA); Yoon, Sung Ok (Columbus, USA)

Speakers: Carter, Bruce (Nashville, USA); Milbrandt, Jeffrey (St. Louis, USA); Tricaud, Nicolas (Montpellier, France); Yoon, Sung Ok (Columbus, USA)

Symposium 17

Understanding the role of cell-cell interactions involving microglia in CNS homeostasis and neuroinflammation

Organizers: Liblau, Roland (Toulouse, France); Waisman, Ari (Mainz, Germany)

Speakers: Greter, Melanie (Zurich, Switzerland); Liblau, Roland (Toulouse, France); Odoardi, Francesca (Göttingen, Germany); Waisman, Ari (Mainz, Germany)

Symposium 18

Understanding the role of oligodendrocytes in neurodegenerative disorders: human and animal studies

Organizers: Pouladi, Mahmoud (Vancouver, Canada); Williams, Anna (Edinburgh, UK)

Speakers: Williams, Anna (Edinburgh, UK); Schulze-Hentrich, Julia (Tübingen, Germany); Pouladi, Mahmoud (Vancouver, Canada); Ling, Shuo-Chien (Singapore, Singapore)

Symposium 19

Bioengineering meets glia: biomaterials applications to study glia and glial-associated disorders (Special Trainee Symposium)

Organizers: Carvalho, Eva (Porto, Portugal); Saracino, Emanuela (Bologna, Italy)

Speakers: Al-Waeel, Mansoor (Galway, Ireland); Auquier, Marie (Ottignies-Louvain-la-Neuve, Belgium); Carvalho, Eva (Porto, Portugal); Eigel, Dimitri (Dresden, Germany); Saracino, Emanuela (Bologna, Italy); Seijas-Gamardo, Adrián (Maastricht, Netherlands)

Symposium 20

Wrapping memories with myelin

Organizer: Dubey, Mohit (Amsterdam, Netherlands)

Speakers: Depp, Constanze (Göttingen, Germany); Dubey, Mohit (Amsterdam, Netherlands); Ewers, Michael (Berlin, Germany); Bussey, Timothy (Cambridge, UK)

12:00 – 13:00 Lunch Break

13:00 – 16:00 Poster Session III

16:00 – 18:00 Symposia V

Symposium 21

Transcriptional control of myelination and repair

Organizer: Jacob, Claire (Mainz, Germany)

Speakers: Jacob, Claire (Mainz, Germany); Moyon, Sarah (New York, USA); Tapinos, Nikos (Providence, USA); Cabedo, Hugo (Alicante, Spain)

Symposium 22

Reprogramming glial cells into neurons: a new avenue for brain repair

Organizers: Heinrich, Christophe (Lyon, France); Parmar, Malin (Lund, Sweden)

Speakers: Berninger, Benedikt (London, UK); Heinrich, Christophe (Lyon, France); Karow, Marisa (Erlangen, Germany); Parmar, Malin (Lund, Sweden)

Symposium 23

Disentangling neuroinflammation and neurodegeneration using induced pluripotent stem cells: spotlight on glia

Organizers: Matsas, Rebecca (Athens, Greece); Koistinajo, Jari (Helsinki, Finland)

Speakers: Cowley, Sally (Oxford, UK); de Strooper, Bart (Leuven, Belgium); Koistinaho, Jari (Helsinki, Finland); Matsas, Rebecca (Athens, Greece)

Symposium 24

The many roles of microglia in brain development

Organizers: Paolicelli, Rosa Chiara (Lausanne, Switzerland); Matteoli, Michela (Rozzano, Italy)

Speakers: Gressens, Pierre (Paris, France); Matteoli, Michela (Rozzano, Italy); Neniskyte, Urte (Vilnius, Lithuania); Paolicelli, Rosa Chiara (Lausanne, Switzerland)

Symposium 25

Sculpting of neuronal circuit function by the structural plasticity of astrocytes

Organizers: Zhou, Min (Columbus, USA); Olsen, Michelle (Blacksburg, USA)

Speakers: Lee, Hyun Kyoung (Houston, USA); Olsen, Michelle (Blacksburg, USA); Stephan, Jonathan (Düsseldorf, Germany); Zhou, Min (Columbus, USA)

Tuesday, July 11

8:30 – 9:30

Plenary Lecture VI

Chair: Alfonso Araque

Marc Freeman (Oregon Health & Science University, The Vollum Institute, Portland, USA)

Modulation of astrocyte signaling during circuit activity

10:00 – 12:00

Symposia VI

Symposium 26

Glia-Glia interaction in brain physiopathology

Organizers: Verkhratsky, Alexei (Manchester, UK); Yi, Chenju (Shenzhen, China)

Speakers: Lee, C Justin (Daejeon, Korea); Noda, Mami (Fukuoka, Japan); Verkhratsky, Alexei (Manchester, UK); Yi, Chenju (Shenzhen, China)

Symposium 27

Oligodendrocyte progenitor cell fates and interactions with neurons in the adult and developing brain

Organizers: Nishiyama, Akiko (Storrs, USA); Boda, Enrica (Orbassano, Italy)

Speakers: Boda, Enrica (Orbassano, Italy); Cheadle, Lucas (Cold Spring Harbor, NY, USA); Nguyen, Laurent (Liège, Belgium); Nishiyama, Akiko (Storrs, Connecticut, USA)

Symposium 28

Lipid metabolism as major determinant of CNS remyelination

Organizers: Saher, Gesine (Göttingen, Germany); Hendriks, Jerome (Hasselt, Belgium)

Speakers: Hendriks, Jerome (Hasselt, Belgium); Kooij, Gijs (Amsterdam, Netherlands); Saher, Gesine (Göttingen, Germany); Simons, Mika (Munich, Germany)

Symposium 29

Oligodendrocyte precursors shape brain circuits

Organizer: Bai, Xianshu (Homburg, Germany)

Speakers: Angulo, Maria Cecilia (Paris, France); Bai, Xianshu (Homburg, Germany); Steinhäuser, Christian (Bonn, Germany); Tong, Xiaoping (Shanghai, China)

Symposium 30

Glial senescence in neurodegeneration

Organizer: Gomez-Nicola, Diego (Southampton, UK)

Speakers: Baker, Darren (Rochester, USA); Bechmann, Ingo (Leipzig, Germany); Gomez-Nicola, Diego (Southampton, UK); Spillantini, Maria Grazia (Cambridge, UK)

12:00 – 12:45 **Lunch Break**

12:45 – 13:45 **Plenary Lecture VII**

Chair: Helmut Kettenmann

Michelle Monje (Howard Hughes Medical Institute, Stanford University, USA)

Neuron-glial interactions in health and disease: from cognition to cancer

13:45 – 14:00 **Closing remarks**