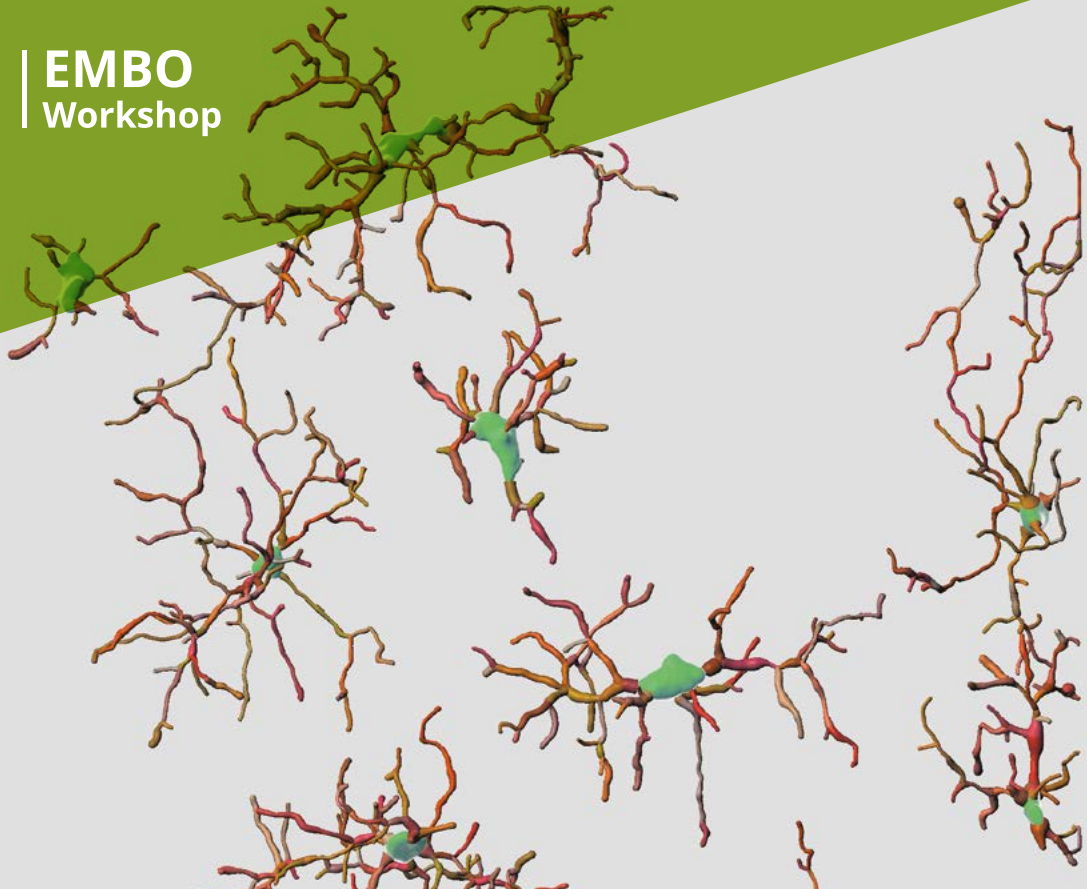


EMBO
Workshop



Microglia in health and disease

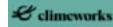
21-24 May 2024
Genoa, Italy



under the Patronage



Meeting sustainability



On behalf of the attendees, we have donated 1,750€ to Climeworks Solutions (<https://climeworks.com/>) to contribute towards the sustainability of our meeting. You can contribute too!

What is Climeworks Solutions?

Climeworks Solutions is a spin-off of the Professorship of Renewable Energy Carriers (PREC) at ETH Zurich, whose research program is aimed at the advancement of the thermal and chemical engineering sciences applied to renewable energy technologies.

How does it work?

Direct air capture supports nature by scaling CO₂ removal. Trees are critical in the fight against climate change for their ability to remove CO₂ from the atmosphere. However, as land space is limited, we also need solutions like direct air capture. On 0.42 acres, our Orca plant can capture up to 4000 tons of CO₂ from the air annually. That's almost 1000x more effective than trees on the same land.

Direct air capture is a technology that captures CO₂ directly from the air. Climeworks combines its direct air capture technology with permanent underground storage (direct air capture and storage = DAC+S) to lock the air-captured CO₂ away so it can no longer contribute to global warming. Direct air capture is one of today's most promising carbon removal technologies. They are continually researching and developing ours with a world-class team of over 150 engineers.

How can I contribute?

You can do a one-time donation or your amount of choice here:



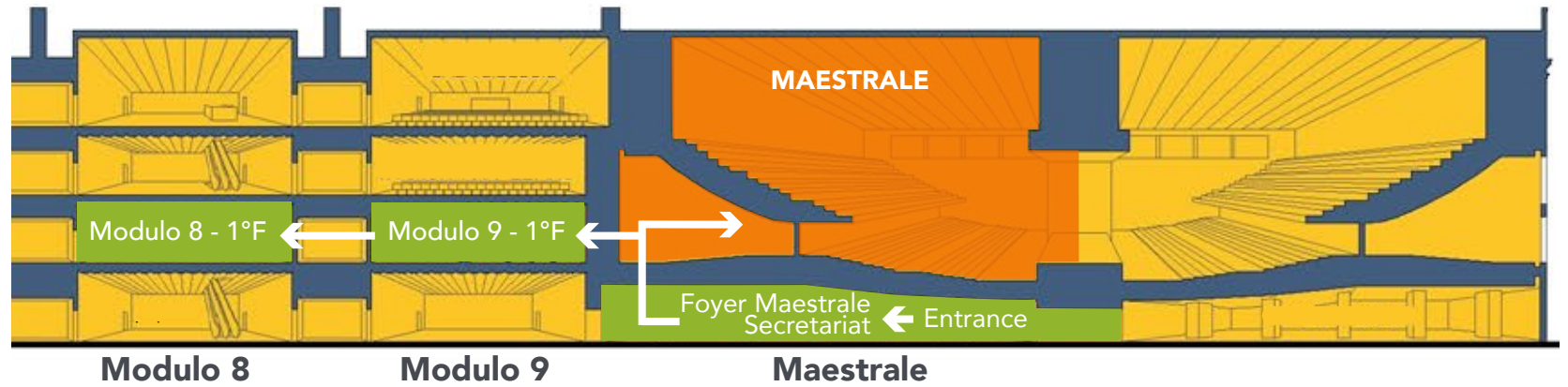
Microglia in health and disease

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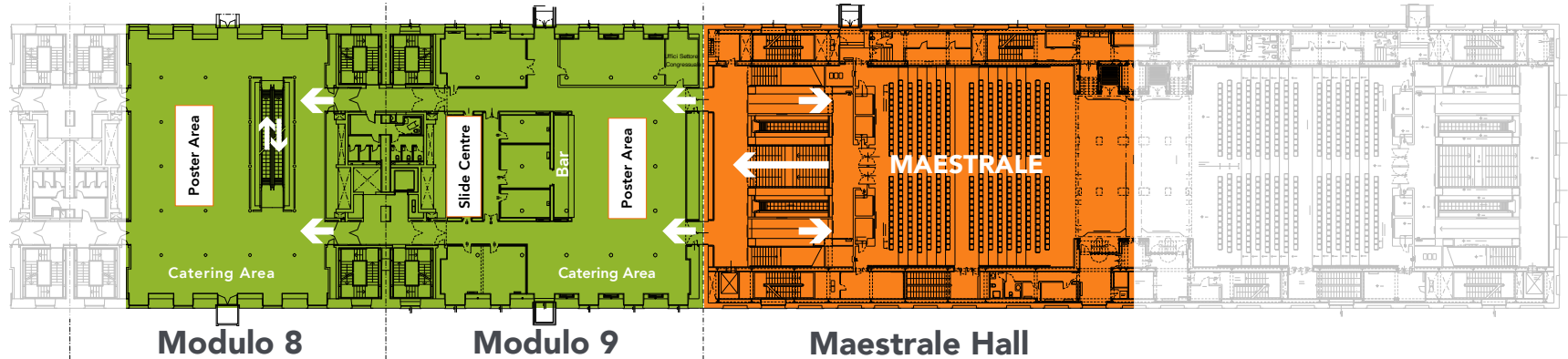
SITE OF THE WORKSHOP

 MAIN HALL

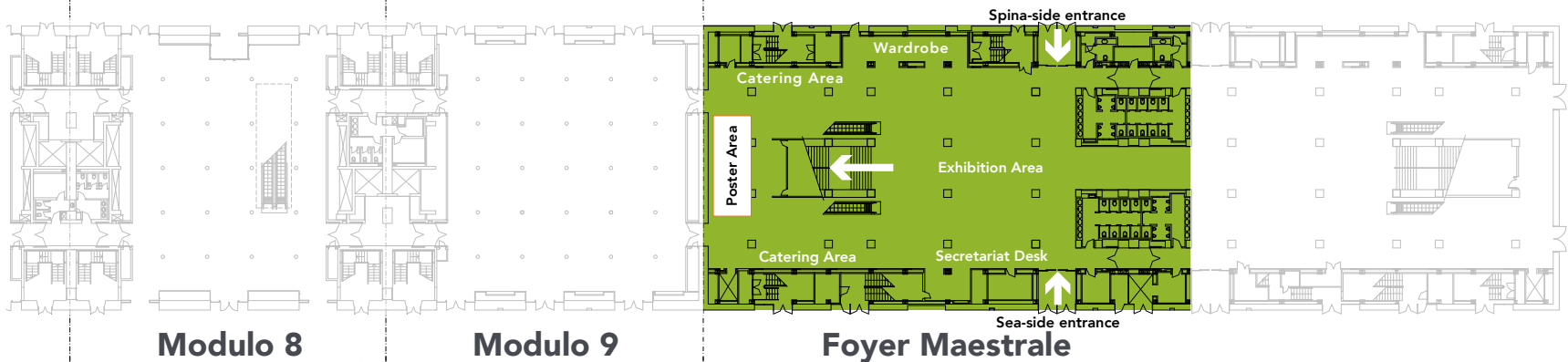
 POSTER AREA
EXHIBITION
CATERING AREA



1ST FLOOR
MAIN HALL
POSTER
CATERING AREA



GROUND FLOOR
SECRETARIAT DESK
EXHIBITION
POSTER
CATERING AREA



Day 1 | 21 May 2024

12:00 Registration

13:15 Opening Remarks

13:30 Keynote lecture
Roles of microglia in early brain development **Sonia Garel**

SESSION 1 | Functional Genomics

14:30 DAP12 deficiency and microglia in human early-onset dementia
Marco Colonna

15:00 Human microglia diversity in development and disease **Bart Eggen**

15:30 *Coffee break & Meet the Speakers*

16:00 Microglia in retinal degeneration **Daniel Saban**

16:30 Go with your gut: microbiota meet microglia **Marco Prinz**

17:00 Developing New Models to Connect Human Microglia States to Function in Health and Disease **Beth Stevens**

17:30 Clonal hematopoiesis-associated, age-related motoric deficits caused by murine monocyte-derived microglia **Lior Schori**

17:45 Microglial TDP-43 controls myelination and represses cryptic exons of Tyrobp in mice **Anne Claire Compagnion**

18:00 *Welcome reception & Meet the Speakers*

18:30 *Poster session 1*

20:00 End of the day



Day 2 | 22 May 2024

SESSION 2 | Microglial regulation of neural circuits

- 9:00** Microglia mitochondrial complex I deficiency during development induces glial dysfunction and early lethality **Bella Mora-Romero**
- 9:15** Chronic lipid accumulation in microglia impairs post-stroke functional recovery **Steffanie Heindl**
- 9:30** Control of neuronal activity by microglial P2Y12 somatic junctions **Adam Denes**
- 10:00** Microglia and wiring of neocortical inhibitory circuits **Morgane Thion**
- 10:30** *Coffee break & Meet the Speakers*
- 11:00** Social deficits arising from postnatal immune activation in tuberous sclerosis **Alcino Silva**
- 11:30** Microglial TREM2 in the regulation of synapses and circuits **Michela Matteoli**
- 12:00** Chemogenetic activation of Gq in microglia leads to deficits in synaptic plasticity and neuronal communication **Marie-Luise Brehme**
- 12:15** Microglial DISC1 Prevents Excessive Synaptic Elimination and Cognitive Dysfunction **Chloë Trippaers**
- 12:30** 3Brain symposium: Microglia impact on neuronal network **Alejandra Carreira**
- 12:45** *Lunch box*
- 13:00** Nomenclature panel discussion



SESSION 3 | Microglia and metabolic functions

- 14:00** Sex differences in microglia in autism models **Susanne Wolf**
- 14:30** Exosomal-mediated communication between microglia and neurons **Claudia Verderio**
- 15:00** Nutrient-Driven Microglial Metabolic Reprogramming and its Impact on Mouse Behavior **Agnes Nadjar**
- 16:00** Visit to Genoa historical center (upon request)
- 19:00** *Poster session 2 | Aperò*
- 20:30** End of the day

Day 3 | 23 May 2024

SESSION 4 | Microglia in Neurodegeneration

- 9:00** Control of microglial proliferation **Diego Gomez-Nicola**
- 9:30** Disease-Associated Microglia: A Universal Immune Sensor of Neurodegeneration **Ido Amit**
- 10:00** Microglial phagocytosis of myelin debris **Mikael Simons**
- 10:30** *Coffee break & Meet the Speakers*
- 11:00** Lysosomes regulate myeloid cell states and immune responses **Leon Tejwani**
- 11:15** Microglial activation mediated by the loss of NPC1 leads to neurodegeneration **Sabina Tahirovic**
- 11:30** **Flash talks**
 - Using therapeutic anti-A β antibodies to modulate the human microglial responses to A β pathology **Giulia Albertini**



- Fabp5 mediates lipid metabolism to drive microglia phenotype transition and neuroinflammation following stroke **Yan Li**
- Senescent microglia conserved in aging and Alzheimer's disease exhibit elevated TREM2 protein levels **Noa Rachmian**
- SorLA limits inflammatory properties of microglia during glioma progression **Paulina Kaminska**
- Galectin-3 role in the interaction of microglia and amyloid-beta in vitro **Lluís Camprubí**
- Multicolor fate mapping of microglia reveals clonal expansion, heterogeneity, and cell-cell interactions after ischemic stroke. **Majed Kikhia**
- Fibrillar amyloid-beta induces cellular stress and alters protein degradation in microglia **Alison Carlisle**
- An in vitro Platform to Generate Human Brain Macrophages by Assembling a Vascularized Cerebral Organoid Niche with Hematopoietic Progenitors. **Amin Yarmand**
- Unraveling Microglial Dynamics in Glioma: a Fate Mapping Approach for the Identification of Disease-Associated Microglia **Jiawen Qian**
- Manipulation of the mononuclear phagocyte system via CSF1R to understand endogenous mechanisms and augmentation of post-stroke neuroplasticity **Colin Crawford**

12:30 *Lunch box & Meet the Editors*

SESSION 5 | Models and Methodologies

13:30 Keynote lecture

Neuronal and glial 3D chromatin architecture informs the cellular etiology of brain disorders **Daniel Geschwind**



14:30 Flash talks

- Development of a proteogenomic tool to characterize human microglia at the single cell level **Verena Haage**
- ARG1-expressing microglia show a distinct molecular signature and modulate postnatal development and function of the mouse brain. **Vassilis Stratoulis**
- A novel organoid-based platform to decode regional diversity of human microglia phenotypes **Irene Santisteban Ortiz**
- Microglial Rac1 is Essential for Experience-Dependent Cognitive Performance **Tiago Almeida**
- Conditional knockout of the cytoskeletal proteins ADF and Cofilin-1 in microglia affects microglial morphology and function **Marie Roggan**
- Microglia derived from ApoE4 iPSCs exhibit cell cycle dependent senescence **Jasmin Revanna**
- Microglia-derived Insulin-like Growth Factor 1 is critical for neurodevelopment **Dominika Rusin**
- A human-specific modifier of microglial function **Carlos Diaz Salazar Albelda**
- Mapping 3D genome architecture of single mammalian microglial cells **Yunji Seo**
- The Impact of High Fat Diet on Microglial Cells and Social Behavior in Mice: Implications for Diet-Induced Changes in Brain Function **Sara Cornuti**

15:00 *Coffee break & Meet the Speakers*



- 15:30** iPSC-derived human microglia **Sally Cowley**
- 16:00** Microglial depletion paradigms **Bo Peng**
- 16:30** Tracking microglial states in development and disease **Tristan Li**
- 16:45** Microglia brainization: the shift from initial colonization to adult-like dynamics, morphology and function in the postnatal hippocampus and cerebellum **Marta Pereira-Iglesias**
- 17:00** *Poster session 3*
- 18:30** End of the day
- 20:00** *Conference reception and party*

Day 4 | 24 May 2024

SESSION 6 | Microglial interaction with other cell types

- 9:00** Microglia and macrophage ontogeny **Elvira Mass**

EMBO YI Lecture
- 10:00** Early life high fructose exposure disrupts microglia function and impedes neurodevelopment **Justin Perry**
- 10:15** Peripheral nervous system microglia regulate neuronal soma size throughout evolution **Hanjie Li**
- 10:30** *Coffee break & Meet the Speakers*
- 11:00** Microglial development in zebrafish **Zilong Wen**
- 11:30** Control of neuronal efferocytosis **Francesca Peri**
- 12:00** *Ben Barres Award*
- 12:15** Closing and Departure



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