



DAY 1 - APRIL 2, 2025

## 8:30 AM Registration opening

### 9:00 AM - 12:00 AM Exhibitor's Demonstrations in Room 1-2

- **Bionomous** : EggSorter
- **Tecniplast** : Tritone XS presentation
- **ViewPoint** : Behavioral high throughput Zebrafish Systems' presentation
- **wFluidx** : Zebrafish Embryo Genotyping unit (ZEG)

### 9:30 AM - 12:00 AM

- **3i Intelligent Imaging** : Osnath Ossayag will organize an all optical demo from 9:30 AM - 12PM. The meeting point is 9:20 AM at the front desk of the Paris Brain Institute.

**Please note that lunch on Wednesday is not included.**



DAY 1 - APRIL 2, 2025

## DEVELOPMENT

Auditorium 12:30 PM - 3:00 PM

**CRISTINA PUJADES** : Cell lineage reconstruction reveals the differential temporal contribution of neurog1-expressing progenitors to the hindbrain glutamatergic and GABAergic functional circuits

**MIGUEL MORENO MATEOS** : RNA-targeting CRISPR-Cas optimizations and screenings to understand early development of vertebrates

**ELKE OBER** : Organ size: Mechanosensing controls liver growth

**LAUREN SAUNDERS** : Reverse genetics at single-cell resolution reveals lineage-specific programs in shared tissues

**TANYA WHITFIELD** : 3D cell shape changes during epithelial morphogenesis in the developing zebrafish inner ear

**PASCALE BOMONT** : Neurofilament dynamics in health and neurodegenerative diseases

**KARUNA SAMPATH** : Pinning down oocyte polarity and the germlasm

**BERTA ALSINA** : Pioneer neurons and chemokines in inner ear axon guidance

**SHAHAD ALBADRI** : Redox signaling in retinal stem cell differentiation

**JULIEN VERMOT** : Mechanosensitive cell hydraulics control endocardial morphogenesis

Coffee Break/Exhibition

3:00 PM - 3:30 PM

## DISEASE MODELING 1

Auditorium 3:30 PM - 5:15 PM

**ANTONELLA LAURI** : Modelling rare brain disorders in zebrafish: functional genomics in vivo to assist clinical decisions and unravel druggable pathways.

**BETTINA SCHMID** : A novel TDP-43 animal model to identify the first steps in ALS disease pathogenesis

**MIGUEL GODINHO FERREIRA** : Organ Communication in aging of zebrafish

**YUKO NISHIWAKI** : Genetic mutations of cone phototransduction gene pde6c cause cone degeneration through the elevation of cytoplasmic Ca<sup>2+</sup> levels

**CAGHAN KIZIL** : A novel mechanism of APOE $\epsilon$ 4-associated blood-brain barrier dysfunction in Alzheimer's disease

**CORINNE HOUART** : Dual functions of a single gene coordinates Fate Decisions And Metabolism

**JAN PHILIPP JUNKER** : Transcriptional diversity and cellular plasticity in neuroblastoma

## COMMUNITY DISCUSSION

5:15 PM - 6:30 PM

COCKTAIL ON SITE

6.30 PM - 7:30 PM

**NEUROBIOLOGY**

**Auditorium 9:00 AM - 10:30 AM**

**INBAL SHAINER** : Transcriptomic neuron types vary topographically in function and morphology

**ROBERT HINDGES** : Early visual experience elicits cellular and functional plasticity in the retina and alters behaviour

**JASON RIHEL** : A cell-intrinsic circadian clock enhances wake-related brain clearance

**ALESSANDRO FILOSA** : Neuronal circuits mediating the modulatory action of a cytokine on acute stress

**EMRE YAKSI** : Thalamocortical-like circuits transform and integrate sensory information in the zebrafish telencephalon

**GIL LEVKOWITZ** : Neuropeptide oxytocin facilitates its own brain-to-periphery uptake

**Coffee Break/Exhibition**

**10:30 AM - 11:00 AM**

**IMMUNOLOGY**

**Auditorium 11:00 AM -12:30 PM**

**PEDRO HERNANDEZ CERDA** : Interleukin-22 in enteroendocrine cells controls early-life gut motility through interactions with the microbiota in zebrafish

**ANNA BARRON** : Metabolic Reprogramming as a Driver of Microglial Differentiation in Brain Development and Disease

**JEAN-PIERRE LEVRAUD** Direct and immune-mediated impact of neuroinvasive viruses on the developing brain

**FILIPA SIMOES** : Decoding immune-related spatial heterogeneity in the regenerating heart

**TOMASZ PRAJSNAR** : Streptococcus pneumoniae is targeted by two non-canonical autophagy pathways within zebrafish macrophages

**SURESH JESUTHASAN** : Solitary chemosensory cells in zebrafish skin: evidence for a role in host-microbiota interactions

**LUNCH & POSTER SESSION 1**

**12:30 PM - 3:00 PM**

**3:00 PM - 4:30 PM**

**DISEASE MODELING 2 - Auditorium**

**EVOLUTION AND COMPARATIVE STUDIES - Room 1-2**

**JUSTYNA ZMORZYNSKA** : Modeling TSC-associated neuropsychiatric disorders using zebrafish

**JENS KROLL** : Modeling Diabetes and Diabetes-induced microvascular organ complications in zebrafish

**MARCO SCHIAVONE** : RNA sequencing and living zebrafish biosensors reveal the cascade of events underlying DMD pathogenesis

**CHIARA GABELLINI** : Relevance of ATM-dependent regulation of autophagy in Ataxia Telangiectasia: integrating patient-derived cells and zebrafish disease models

**JEROEN DEN HERTOOG** : RASopathies are associated with defects in lymphangiogenesis

**JATIN NAGPAL** : Mechanistic dissection of microbiome-brain communication using zebrafish as a model system

**MICHAEL DORRITY** : Quantitative analysis of developmental timing in whole embryos

**HERWIG BAIER** : The shell-dwelling cichlid Lamprologus ocellatus: a new model system for neuroethology, behavioral ecology, and cognitive neuroscience

**GERMAN SUMBRE** : Evolutionary repurposing of the visual optic tectum in blind cavefish

**LUTGARDE ARCKENS** : Functional integration of new neurons following traumatic brain injury in the African turquoise killifish: a viral vector and behavioral study

**NADIA MERCADER** : A paternal cardiac lesion induces cardiac adaptation in offspring

**MAXIMILIAN FURTHAUER** : De novo induction of zebrafish chiral morphogenesis by unconventional type 1 Myosins

**Coffee Break/Exhibition**

**4:30 PM - 5:00 PM**

**COCKTAIL ON SITE**

**5:00 PM - 6:30 PM**

**DEVELOPMENT 2**

**Auditorium 9:00 AM - 10:30 AM**

**SOOJIN RYU** : Preparing for future stress- how early Glucocorticoid exposure alters hypothalamic cells

**PATRICK MULLER**: Probing the duality of temperature and osmotic strength on developmental tempo using deep learning

**ZHAOXIA SUN** : Zebrafish Motile Cilia Mutants Reveal co-Translational Assembly of Axonemal Dynein Heavy Chains

**NATHALIE JURISCH YAKSI** : The neuromodulatory function of cerebrospinal fluid

**CAROLINE HILL** : Shaping Fgf/Erk signalling dynamics via the cell cycle

**ALEXANDER SCHIER** : Single-cell multiomics and spatial transcriptomics for embryogenesis

**Coffee Break/Exhibition**

**10:30 AM - 11:00 AM**

**TECHNOLOGY**

**Auditorium 11:00 AM - 12:30 PM**

**URS BOHM**: Optical recording of spinal cord dynamics with voltage imaging

**THOMAS JUAN** : A recombinase-activated ribozyme to knock down endogenous gene expression in zebrafish.

**MONICA BELTRAME** : TICK, a temperature-inducible K+ channel, as a new tool to induce behavioral changes in zebrafish

**SUMEET PAL SINGH** : CellCousin: A Novel Ablation Tool Reveals Transdifferentiation as a Key Mechanism of Liver Regeneration During Growth Spurts

**OR SHAHAR** : Cell-type-specific protein dynamics during seizures

**GIACOMO MISEROCCHI** : 3D culture transplantation in zebrafish embryos: an innovative approach to study in vivo tumor dynamics

**LUNCH & POSTER SESSION 2**

**12:30 PM - 3:00 PM**

**3:00 PM - 4:30**

**BEHAVIOR - Room 1-2**

**ELIM HONG** : Cholinergic signaling promotes functional organization in the habenula of zebrafish larvae

**THOMAS FRANK** : A Brain-Wide Map of Neuronal Dynamics in Chemosensory Processing and Behavior

**ARMIN BAHL** : Behavioral algorithms of ontogenetic switching in larval and juvenile zebrafish brightness preferences

**GEORGES DEBREGEAS** : Stabilizing swimming speed in the presence of sensorimotor delays

**ETHAN SCOTT** : Brain-wide circuitry underlying altered auditory habituation in zebrafish models of autism

**TAKESHI YOSHIMATSU** : Visual competition between the central and peripheral visions

**CARDIOVASCULAR**

**Auditorium**

**STEFANIA NICOLI** : Elevated Mitochondrial Activity during Embryogenesis Increases Adult Cerebrovascular Anomalies

**FELIX GUNAWAN** : The basement membrane regulates morphogenesis and biomechanical features of the cardiac valves

**RASHMI PRIYA** : Break to Build: ECM Fractures Pattern the Developing Myocardium

**WIEBKE HERZOG** : Mechanisms of Wnt and STP Signaling Pathway Interactions during Brain Angiogenesis

**DEBORAH YELON** : Regionalized regulation of actomyosin organization influences cardiomyocyte cell shape changes during chamber curvature formation

**NAOKI MOCHIZUKI** : Cadherin-6-dependent zippering of endothelial cells during the connection of endocardial and venous sheets

**Coffee Break/Exhibition**

**4:30 PM - 5:00 PM**

**VOLKER BORMUTH** : Biomechanics and Neural Substrates Underlying Dual Postural Control Strategies in Larval Zebrafish

**JUSTIN KENNEY** : Neural basis for individual differences in fear memory recall in adult zebrafish

**KASKA KOLTOWSKA** : Deciphering the chromatin landscape and regulatory logic behind lymphatic endothelial cell fate using a multi-omics approach.

**SNEZANA KOJIC** : The ankrd1a participates in the regulation of muscle cell differentiation during adult zebrafish skeletal muscle repair zebrafish

**KEYNOTE 2 : VALENTINA EMILIANI - Auditorium**

**6:00 PM - 7:00 PM**

**GALA DINNER ON THE BOAT**

**7.45 PM - 11:00 PM**



DAY 4 - APRIL 5, 2025

## CANCER

Auditorium 9:00 AM - 10:00 AM

**YI FENG** : Oncogenic Ras activation in permissive somatic cells triggers rapid onset phenotypic plasticity and elicits a tumour-promoting neutrophil response

**MARIANNE VOZ** : Unraveling the Distinct Pathways of Pancreatic Cancer Progression from Acinar and Ductal Cells through Single-Cell RNA Sequencing

**MARINA MIONE** : Leveraging Single cell RNA sequencing to elucidate novel pathological mechanisms in tumor models in zebrafish

**MARTA POPOVIC** : The repair of DNA-protein crosslinks: Creating new disease models and identifying molecular causes underlying human diseases

Coffee Break/Exhibition

10:00 AM - 10:30 AM

## REGENERATION

Auditorium 10:30 AM - 12:30 PM

**ERIC LIAO** : Comprehensive genome wide identification and functional study of epithelial-mesenchymal transition genes that regulate cleft pathogenesis and regeneration

**JAN KASLIN** : Hydrodynamic forces promote neural stem cell activity in the regenerating zebrafish spinal cord

**DONGHUN SHIN** : The role of FGF signaling in liver progenitor cell-mediated liver regeneration

**ARICA BEISAW** : Investigating mechanisms of cardiomyocyte invasion of injured tissue during cardiac regeneration

**LIEVE MOONS** : Fueling CNS repair: the evolutionary role of local glycolysis in axonal regeneration

**LAURE BALLY-CUIF** : Linking individual cell heterogeneities and population dynamics for adult neural stem cell maintenance

**MICHAEL BRAND** : Combining unbiased single-cell RNA sequencing and spatial transcriptomics to study the regeneration response after zebrafish traumatic brain injury

**BEN SHI-LEI LAI** : : Harnessing immune response to promote cardiac regeneration

END OF THE MEETING - 12:30 PM