

# Brain in the Body

NEUROSCIENCE AT INSTITUT PASTEUR

November 25th 2024

Amphithéâtre Duclaux, Institut Pasteur Paris, France

## OPENING REMARKS

8:30- 9:00

C. ZURZOLO, U. MASKOS & PM LLEDO

## PLENARY LECTURE

9:00-9:45

Tony WYSS-CORAY

Young blood for old brains

## NEURODEVELOPMENT AND DISORDERS

9:45-10:10

Thomas BOURGERON

The genetic architecture of autism: from medicine to neurodiversity

Pauline SPEDER

Drosophila neural stem cells enter a protective state under acute systemic stress

Miria RICCHETTI

Neural organoids to model a disease that combines neurodevelopmental and neurodegenerative defects

## CELL BIOLOGY APPLIED TO NEUROPATHOLOGIES

10:10-10:30

Chiara ZURZOLO

Inflammation, autophagy and mitochondrial dysfunction regulate tunneling nanotube (TNT)-mediated microglia-neurons crosstalk in neurodegenerative diseases

Claire PUJOL

Tackling the complexity of mitochondrial diseases

Sandrine ETIENNE-MANNEVILLE

Cytoskeletal crosstalk: from cell mechanics to glioblastoma progression

## COFFEE BREAK

10:30 - 11:00

## AUDITORY SYSTEM AND DISORDERS

11:00-11:30

Sedigheh DELMAGHANI

Navigating the complexity of causes behind progressive hearing impairment

Didier DULON

The importance of otoferlin alternative splicing isoforms in auditory hair cell synaptic transmission

Paul AVAN

Sound-processing disorders in the human auditory pathways: challenges for their detection

Nicolas WOLFF

Molecular organisation of the Usher2 complex related to deafness and blindness

## MENTAL DISORDERS

11:30-12:00

Morgane BESSON

Nicotinic modulation of vulnerability to mental disorders

Stefano SUZZI

Deciphering body periphery-to-brain communication in depression

Justus NINNEMANN

Impact of chronic inflammation on sickness behaviors

Pierre-Jean CORRINGER

Designing allosteric modulators of the 5th subunit of nicotinic receptors

## PLENARY LECTURE

12.00-12.45

Thomas SCHWARZ

Mitochondria dynamics from neuronal cell biology to translational science

## LUNCH & POSTER SESSION

12:45 - 14:45

## IMMUNITY AND INFECTION

14:45-15:15

Sylvain LEVALLOIS

Neuroleptospirosis impact on microglia and cerebral functions

Aleksandra DECZKOWSKA

Immune-brain communication via the CSF

Guilherme DIAS DE MELO

Long Covid in the hamster model

Maroun ABI YOUNES

Exploring the neurological deficits of viral infection in the zebrafish central nervous system

## AUDITORY SYSTEM AND DISORDERS (2)

15:15-15:45

Brice BATHELLIER

Toward auditory cortical implants for hearing restoration

Saaid SAFIEDDINE

Gene therapies for restoring hearing in deaf children: are we there?

Nicolas MICHALSKI

The cerebrovascular system: the missing link between hearing loss and dementia?

Florent HAISS

Sensory coding and correlates of decision making in primary sensory cortex

## COFFEE BREAK

15:45 - 16:15

## TECHNICAL HIGHLIGHTS

16:15 - 16:35

Yannick GOULAM HOUSSEN

A facility for head-mounted two-photon microscopy in freely moving animals

Alexandre BLANC

A computational model of the drosophila larval locomotor system

## PLENARY LECTURE

16:35-17:20

Jane FOSTER

Advancing human microbiome research in the context of psychiatry

Jean-Pierre CHANGEUX

Louis Pasteur et les neurosciences à l'Institut Pasteur

## FINAL DISCUSSION

17:30-17:50

Chiara ZURZOLO & Uwe MASKOS

## COCKTAIL & POSTERS

17:50-19:30





# Brain in the Body -Posters (1/3)

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## 1- AÏDA YAKHLEF SANCHEZ

Characterization of inflammatory mechanisms underlying progressive and age-related hearing impairments: insights from clarins

## 2- Ali EL CHEIKH

Development of Sensorimotor Synchronization in children

## 3- ALLAN MULLER

Conservation of sensory coding in the primary auditory cortex during NREM sleep

## 4- ANA BLAS-MEDINA

Microbial signals shape postnatal development of the choroid plexus and the brain

## 5- ANNA PEPE

Mechanisms of tau spreading related to Alzheimer's disease progression

## 6- AMY BLONDEAU

Perception and imprinting of the lung's immune challenges in the brain

## 7- ASTRID NILSSON

Neuromodulation at the single neuron scale: from experiments to neural models

## 8- CHIARA CIMMARUTA

Unraveling the pathogenesis of Cockayne Syndrome: insights from patient-derived neural organoids

## 9- CHLOÉ BOUARAB

Investigating the role of  $\alpha 5$  containing nicotinic acetylcholine receptors in eating disorders

## 10- CLAIRE-HELENE DE BADTS

BLA circuits underlying emotional biases in a male and female mouse model for depression

## 11- ELI BARTHOME

Contribution of regulatory variants to brain related traits

## 12- ELVIRA INFANTE

Mechanoregulation of glioblastoma cell survival

## 13- ETIENNE GOSSELIN

Massive perturbation of sound representations by anesthesia in the auditory brainstem

## 14- GABRIELA FERREIRA DE MEDEIROS

Unravelling the role of prefrontal  $\alpha 7$  nicotinic acetylcholine receptors in inhibitory control: a behavioral investigation using touchscreen technology

## 15- JEAN DAVID RANDRIANALY

Toxicity of  $A\beta$  (intracellular pool) in Alzheimer's disease toward new therapeutic approaches development

## 16- LÉA HAMON

Investigation of the role of GDF11 as a potential blood-brain barrier rejuvenating factor

## 17- ALESSIO QUARESIMA

The role of the intermediate filament protein Nestin in Glioblastoma cell behaviour

## 18- LUCAS PRADEAU-PHÉLUT

Role of Synemin in glioblastoma cell invasion

## 19- MAËLWENN HAMON

An invertebrate model to identify virulence and neuro-damaging factors during pathogenic infection by *Toxoplasma Gondii*

## 20- MAGDALENA PEREYRA

Role of mTORC1 on prefrontal inhibitory plasticity during memory consolidation

## 21- MARIÁNGELES KOVACS-ARÉVALO

Deciphering the contribution of the aging of the skull bone marrow to brain aging and neurodegeneration in Alzheimer's Disease.



# Brain in the Body -Posters <sup>(2/3)</sup>

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## 22- MAURICIO SAENZ

Differential hearing restoration in the DFNB9 mouse model through AAV gene therapy with human and mouse cDNA

## 23- MAXENCE CORNILLE

In vivo study of truncated and zero-layer mutations of the C-terminus of SNAP25 reveals its direct role in auditory hair cell ribbon synaptic exocytosis

## 24- MICHIEL VAN DER ZWAN

The study of the human specific nicotine receptor subunit, CHRFB7A, in hiPSC derived microglia

## 25- MINXING ZHANG

Impact of SARS-CoV-2 infection on neurogenesis and neurodegeneration

## 26- MUGE SENARISOY

Clarin-1 and Clarin-2, key tetraspan players in inner ear mechano-electrical transduction

## 27- NADÈGE MARIN

Biometric evaluation of the effects of background music listening on emotional and autonomous responses

## 28- NAJATE BENAMER

Peripheral gene therapy restores hearing and central auditory processing in an atypical DFNB9 mouse model

## 29- ALEX BARBIER CHEBBAH

Embedding-based generative models for connectome analysis

## 30- NICOLAS LAVILLE

Do neural stem cells communicate with each other in the developing Drosophila central nervous system?

## 31- NOÉMI GONÇALVES

Rough sounds processing: effects on autonomic, behavioral and neural responses in population with heightened sensitivity to sounds

## 32- PALLABI BHATTACHARYYA

miR-124 mediated regulation of actin remodeling pathways affecting TNT formation in Parkinson's disease models

## 33- RANABIR CHAKRABORTY

Mitochondrial dysfunction as a cue for tunneling nanotube-mediated intercellular communication between neurons and microglia

## 34- SANDRINE VITRY

Gene Therapy for Clarin-2, a New Deafness Gene in Humans and Mice

## 35- SARA KHALILIAN

The role of aTAT1-mediated Microtubule Acetylation in Glioblastoma Cellular Responses to Radiotherapy

## 36- SEPIDEH IRANFAR

Dual AAV gene therapy restores cochlear function and auditory processing capabilities in a DFNB16 mouse model

## 37- TALYA C. INBAR

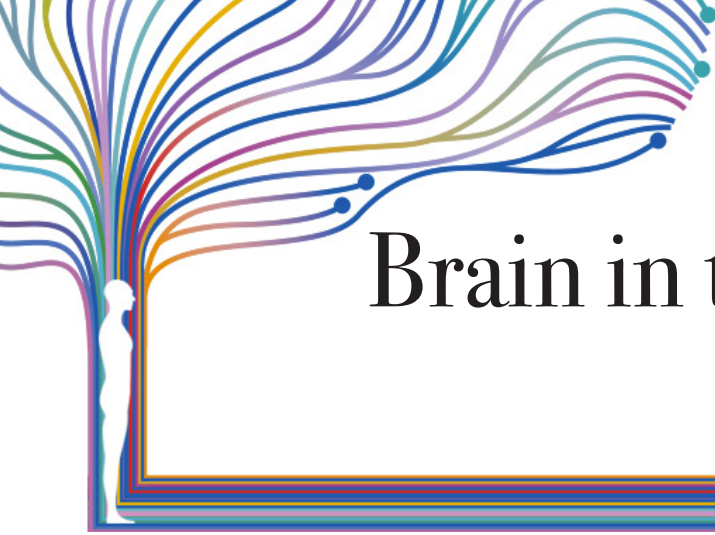
Optimizing the simultaneous identification of the three type I spiral ganglion neuron subtypes in models of genetic forms of deafness.

## 38- TAMARA MATIJEVIC

Brain function regulation by circadian rhythm at the choroid plexus.

## 39- TANGUY DELMAS

Are presycusis patients better audio-visual integrators?



# Brain in the Body -Posters <sup>(3/3)</sup>

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## 40- THEA CHRYSOSTOMOU

Assessing the presence and functionality of tunneling nanotubes in vivo using novel genome integrating tools

## 41- VALENTINE THOMAS

Unraveling the interplay between Tau aggregates and autophagy-lysosomal dysfunction

## 42- VALERIA VALENTE

Deciphering the role of HIPK2 in TDP-43-mediated neurodegeneration

## 43- WEI LI

Deficits in spike timing and transmission of auditory information in a mouse model lacking ribbon synapses

## 44- WILSON MENA

Functional and Morphological Analysis of Interhemispheric Neurons in Somatosensory Cortex: A Study using Two-Photon Ca<sup>2+</sup> Imaging and high-Resolution Light Sheet Microscopy in the Expanded Brain

**45- YAGO PAZOS BOUBETA** Understanding the influence of the gut microbiome on the mesolimbic system and its response to nicotine.

## 46- ZAKARIA MOUGIN

Genotype-phenotype correlations in Phelan-McDermid syndrome : an on-going study

## 47- EMMA DUCOS

Altered Neural Entrainment in Young Adults with APOE4: Towards Early Identification of Alzheimer's Risk