



# INSTITUT DE LA VISION

# Scientific Day

**AUDITORIUM – Sorbonne Université - Jussieu**

4 Place Jussieu, 75005 Paris

**Thursday 29 November, 2018**

# AGENDA – SCIENTIFIC DAY

---

## Thursday 29 November, 2018

---

08h30 - 08h45 **Welcome coffee and hanging of Session I posters**

08h45 - 10h15 **« TOOLS »**

Chairs : Oriol Ros + Chang Liu

*7 minutes / each presentation + 3 minutes / questions*

1. Functional mapping of the primary cortical visual areas with ultrafast ultrasound imaging,  
**Fabrice Arcizet** (Eq S. Picaud)
2. Online spike sorting for high-density microelectrode arrays to estimate the local sensitivity of retinal ganglion cells,  
**Baptiste Lefebvre** (Eq R. Brette)
3. Interrogating visual circuits in vivo via holography,  
**I-Wen Chen** (Eq V. Emiliani)
4. Multiplexed temporally focused light shaping for high-resolution multi-cell targeting,  
**Clement Molinier** (Eq V. Emiliani)
5. Bridging the gap between mesoscopic and microscopic imaging of sensory responses,  
**Davide Boido** (Eq S. Charpak)
6. The spatial-temporal dynamics of neurovascular coupling,  
**Ravi Rungta**, (Eq S. Charpak)
7. Temperature in Cells - Microscale Measurement and Control,  
**Chang Liu**, (Eq G. Tessier)
8. Laser Doppler holography to reveal human retinal and choroidal blood flow,  
**Leo Puyo** (Eq M. Paques)
9. Towards Adaptive Optics-assisted Laser Photocoagulation retinal surgery,  
**Pedro Mécé**, (Eq M. Paques)

10h15 - 10h45 **Coffee break & Posters Session I**

10h45 – 11h55 « **APPLICATIONS & PRECLINICAL** »  
Chairs : Fabrice Arcizet + Diep Nguyen  
*7 minutes / each presentation + 3 minutes / questions*

10. Carbon based materials as electrodes for visual prosthesis,  
**Diep Nguyen** (Eq S. Picaud)
11. Vision-based mid-air gesture recognition in uncontrolled environments,  
**Jean-Mathieu Maro** (Eq R. Benosman)
12. Healthy aging impairs photon absorption efficiency of cones,  
**Daphné Silvestre** (Eq. A. Arleo)
13. Impact of blue light on the ocular surface and nociception,  
**Veronika Marek** (Eq Baudouin / Melik)
14. Spleen-derived monocytes in subretinal inflammation,  
**Cristophe Roubéix** (Eq F. Sennlaub)
15. Implication of Various Stress Pathways in the Phenotype of Prpf31-Mutant Mice,  
**Abdallah Hamieh** (Eq E. Nandrot)
16. Restoration of visual function by transplantation of optogenetically engineered photoreceptor precursors,  
**Marusa Lampic** (Eq J. Duebel)

**11h55 – 12h20** **Présentation du projet « FOrE Sight » qui vient d'être labellisé "Instituts Hospitalo-Universitaires" (IHU).  
José-Alain Sahel (en français)**

12h20 – 13h40 **Lunch break & Posters Session I and posters hanging for next session**

13h40 - 14h40 « **DEVELOPMENT** »  
Chairs : Marcela Garita + Alice Louail  
*7 minutes / each presentation + 3 minutes / questions*

17. Revisiting the role of DCC in Visual system development,  
**Robin Vigouroux** (Eq A. Chedotal)
18. Cooperation between retinal ganglion cells shapes the connectivity of the visual system,  
**Alice Louail** (Eq X. Nicol)
19. Studying axon guidance and neuronal migration with selective interference of second messenger function in vivo,  
**Oriol Ros** (Eq X. Nicol)

20. Redox signaling controls the switch between cell proliferation and differentiation in the vertebrate retina,  
**Shahad Albadri**, (Eq F. Del Bene)

21. The Role of Plexinb2 in Cerebellar Granule Neuron Development,  
**Eljo von Battum** (Eq A Chedotal)

22. A novel genome-integrating vector system for cell and developmental biology studies,  
**Takuma Kumamoto**, (Eq J. Livet)

14h40 -16h00 **Coffee break & Posters Session II**

16h00 -16h50 **« PHYSIOPATHOLOGY AND THERAPY »**

Chairs : Divya Ail + Cecile Mejecase

7 minutes / each presentation + 3 minutes / questions

23. Impact of lactate transport deficit in age-related macular degeneration,  
**Laurence Klipfel** (Eq T. L veillard)

24. The development of a therapy for retinitis pigmentosa based on the nucleoredoxin like-1 gene,  
**Emmanuelle Clerin**, (Eq T. L veillard)

25. Development of a gene therapy approach for complete congenital stationary night blindness,  
**Juliette Varin** (Eq Audo / Zeitz)

26. Towards a better understanding of the role of ITM2B in the retina taking cells derived from iPS cells as a model,  
**Juliette Wohlschlegel** (Eq Audo / Zeitz)

27. Transforming organoids to transform cell therapy,  
**Marcela Garita** (Eq D. Dalkara)

**16h50 – 17h15** **Presentation of the « FOrE Sight » project, labelled "Instituts Hospitalo-Universitaires" (IHU).  
Jos -Alain Sahel (in English)**

## Poster Session I

Chair Laurence Klipfel

1. Retinal dysfunction in mice model of Alzheimer disease. Louiza Arouche (Eq S. Picaud)
2. Implication of the RPE circadian clock in the phenotype of Pprf31-mutant mice. Elora Vanoni (Eq E. Nandrot)
3. Uncovering the transition zone in photoreceptors by expansion microscopy. Anna Verschueren (Eq S. Picaud)
4. Effect of light on retinal circadian rhythms. Ali Mteyrek (Eq S. Picaud)
5. Predicting the visual acuity reachable for blind patients treated with optogenetic therapy. Ulisse Ferrari (Eq S. Picaud)
6. Multiplexed temporally focused light shaping for high-resolution multi-cell targeting. Nicolo Accanto (Eq V. Emiliani)
7. Transfer functions between mesoscopic and microscopic imaging responses to odour : ultrafast ultrasound and two-photon imaging in the mouse olfactory bulb. Ali Kemal (Eq S. Charpak)
8. Real-time spectroscopy of moving nanoparticles based on Holographic microscopy. Minh Chau Nguyen (Eq G. Tessier)
9. Morphometric study of retinal vessels in high-resolution imaging. Edouard Koch (Eq M. Paques)
10. Deep neural networks for aberrations compensation in digital holographic imaging of the retina. Julie Rivet (Eq M. Paques)
11. Characterization of Monocyte Derived Macrophages in Diabetic Retinopathy. Guillaume Blot (Eq F. Sennlaub)
12. Effect of high lipid exposure on Müller glial cells. Aude Couturier (Eq F. Sennlaub)
13. Impact of conditioned medium of corneal epithelial cells exposed to benzalkonium chloride on trigeminal neurons. Michael-Adrien Vitoux (Eq Baudouin / Melik)
14. Lipidomic analysis of human epithelial corneal cells exposed to benzalkonium chloride or hyperosmolarity. Romain Magny (Eq Baudouin / Melik)
15. Increased corneal sensitivity and corneal nerve fiber activity is associated with peripheral and central neuroinflammation in a novel mouse model of dry eye disease. Darin Fakih (Eq Baudouin / Melik)
16. A multicolor toolbox to study progenitor cell lineage and neuronal layout in the avian retina. Franck Maurinot (Eq Livet)

## Poster Session II

Chair Nicolo Accanto

1. A 3D/2D stepwise retinal differentiation protocol to isolate human induced pluripotent stem cell-derived retinal ganglion cells for future stem cell-based therapies. Oriane Rabesandratana (Eq O. Goureau)
2. Characterization of an in vitro model of Retinitis Pigmentosa using human induced pluripotent stem cells. Amelie Rodrigues (Eq O. Goureau)
3. Differential activation of retinal ganglion cells with optogenetic stimulations. Francesco Trapani (Eq R. Brette)
4. Whole exome sequencing identified PATJ (Pals1-Associated Tight Junction protein) variants associated with a sporadic cone-rod dystrophy and cerebellar syndrome. Cecile Mejecase (Eq Audo / Zeitze)
5. Gene Therapy to restore the phototransduction cascade in cones during retinal degeneration. Cardilla-Joe Simon (Eq D. Dalkara)
6. A key element of the directionality of the metabolic flux between rod and cone photoreceptors. Geraldine Milley-Puel (Eq T. Léveillard)
7. The role of the Rod derived Cone Viability Factor metabolic and redox signaling in building memory functions, its maintenance during aging and its disturbance in Alzheimer's disease. Mariangela Corsi (Eq T. Léveillard)
8. Mode of action of RdCVF and its origin. Najate Ait-Ali (Eq T. Léveillard)
9. Effects of pupillary responses to luminance and attention on visual spatial discrimination. Suzon Ajasse (Eq R. Benosman)
10. Identification of clinical and cognitive markers of Low Vision management effectiveness in adults with age related macular degeneration. Marine Raphanel (Eq A. Arleo)
11. Geometric vs. Landmark based spatial navigation involved distinct cerebral networks. Stephen Ramanoel (Eq A. Arleo)
12. Electrical impact of the axon initial segment geometry. Sarah Goethals (Eq R. Brette)
13. Physiology of cooperating retinal ganglion cells in eye-specific segregation. Martijn Sierksma (Eq X. Nicol)
14. Precise base editing by CRISPR/Cas9 in zebrafish. Marion Rosello (Eq F. Del Bene)
15. Characterisation of the transcriptome of commissural neurons and its regulation by midline crossing. Sergi Roig (Eq A. Chedotal)
16. Axonal regeneration in the visual system. Antoine Mialot (Eq A. Chedotal)
17. Uncoupling axon guidance and neuronal migration in Robo3-deficient inferior olivary neurons. Juan Antonio Moreno Bravo (Eq A. Chedotal)

(B) 27 63 86 87

arrêt IMA / Saint-Germain  
Cardinal Lemoine

(B) 27 63

arrêt Université Paris 6

(B) 27 63

arrêt Cuvier

