

## Exposome - Advances and challenges in detection approaches

ITMO Bases moléculaires et structurales du vivant

**November, 8th to 10th 2021**

Amphithéâtre Buffon

15 rue Hélène Brion 75013 Paris

### November, 8th 2021

- ▶ **2.00 pm – 2.15 pm**      **Opening**
- ▶ **2.15 pm – 3.00 pm**      Opening conference: *Exposome Toxicology* - **Robert Barouki** – T3S – Paris
- ▶ **3.00 pm – 6.30 pm**      **Physicochemical detection**
- ▶ **3.00 pm – 3.30 pm**      *Exposome & health: Impact d'une exposition à des mélanges de substances chimiques lors du développement* - **Jean-Baptiste Fini** – Museum National d'Histoire Naturelle – Paris
- ▶ **3.30 pm – 4.00 pm**      *High resolution mass spectrometry as a tool to improve the characterization of water environmentally relevant micropollutants* - **Hélène Budzinski** – EPOC – Bordeaux
- ▶ **4.00 pm – 4.30 pm**      *Exposome research at leti: an overview of new technologies for monitoring human exposure*- **Pascal Mailley** – LETI – Grenoble
- ▶ **4.30 pm – 5.00 pm**      **Coffee break**
- ▶ **5.00 pm – 5.30 pm**      *New research infrastructure dedicated to biomonitoring of chemical compounds: France exposome* - **Michel Samson** - IRSET – Rennes & **Bruno Le Bizec** – LABERCA – Nantes
- ▶ **5.30 pm – 6.00 pm**      *The ability of sensors to assess the exposome - particular case of the air compartment* – **Nathalie Redon** – IMT Nord Europe – Douai
- ▶ **6.00 pm – 6.30 pm**      *Exposome & environment: Detection of micropollutants in the Environment : evolution of issues and challenges* - **Emmanuelle Vulliet** - ISA – Lyon

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**November, 9th 2021**

- ▶ **9.00 am – 12.30 pm**      **Bio-chemical detection**
- ▶ **9.00 am – 9.30 pm**      Exposome & health: *Exposomics in nutritional epidemiology : possibilities and insights* - **Bernard Srour** – EREN – Paris
- ▶ **9.30 am – 10.00 am**      *Functionalized nanomaterial for enzymatic-based electrochemical detection* - **Fabien Giroud** – DCM - Grenoble
- ▶ **10.00 am – 10.30 am**      *The Exposome and its early molecular signatures: results from longitudinal birth cohorts* – **Léa Maitre** – ISG – Barcelone
- ▶ **10.30 am – 11.00 am**      **Coffee Break**
- ▶ **11.00 am – 11.30 am**      *Development of biosensors based on membrane receptors sensitive to endocrine disruptors* - **Christophe Moreau** – IBS – Grenoble
- ▶ **11.30 am – 12.00 pm**      *Biomimetic optoelectronic nose for the analysis of volatile organic compounds* - **Yanxia Hou-Broutin** – SYMMES – Grenoble
- ▶ **12.00 pm – 12.30 pm**      Exposome & environment: *The exposome and mass spectrometry: raising standards* - **Gary Miller** - University of Columbia – USA
- ▶ **12.30 pm – 2.00 pm**      **Lunch break**
- ▶ **2.00 pm – 5.30 pm**      **Cellular biosensors**
- ▶ **2.00 pm – 2.30 pm**      Exposome & health: *Measuring and interpreting exposomics data in cancer epidemiology* - **Augustin Scalbert** – IARC - Lyon
- ▶ **2.30 pm – 3.00 pm**      *A quest towards appropriate cell biosensors for environmental applications : from cells to the device* - **Gérald Thouand** – GEPEA - Nantes
- ▶ **3.00 pm – 3.30 pm**      *Phage-based biosensors are versatile tools to detect bacteria in multiple environments* - **Mireille Ansaldi** – LCB – Marseille
- ▶ **3.30 pm – 4.00 pm**      **Coffee break**
- ▶ **4.00 pm – 4.30 pm**      *Bacterial biosensor; approaches for a fast and cost-effective monitoring of gut metabolites* - **Ana Zuniga** – CBS - Montpellier
- ▶ **4.30 pm – 5.00 pm**      *Development of sensitive, specific and magnetic biosensors* - **David Pignol** – BIAM – Marseille
- ▶ **5.00 pm – 5.30 pm**      *Exposome & environment: Exposure and response of aquatic microbial communities to natural and anthropogenic chemicals* - **Nicolas Creusot** – INRAE-EABX – Bordeaux
- ▶ **5.30 pm – 5.45 pm**      *Bridging biomarkers from the lab to the patient* - **Marie Anson** – AVIESAN / EIT HEALTH – Paris
- ▶ **5.45 pm – 6.45 pm**      **Round table: Discussion on the continuation of the symposium, international vision**

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### November, 10th 2021

- ▶ **9.00 am – 12.30 pm** **In vitro biosensors**
- ▶ **9.00 am – 9.30 pm** Exposome & health: *Role of exposome in the course of two chronic lung diseases - The REMEDIA project* - **Sophie Lanone** – IMRB – Paris
- ▶ **9.30 am – 10.00 am** *Harnessing CRISPR for multiplexed RNA detection* - **Chase Beisel** - Helmholtz Center for Infection Research – Germany
- ▶ **10.00 am – 10.30 am** *Development and optimization of DNA-encoded biosensors using in vitro transcription-translation systems* - **Amir Pandi** - Max Planck Institute for Terrestrial Microbiology – Germany
- ▶ **10.30 am – 11.00 am** **Coffee Break**
- ▶ **11.00 am – 11.30 am** *Single Particle Automated Raman Trapping Analysis of Breast Cancer Cell-derived Extracellular Vesicles* - **Camille De Villiers** - Imperial College – UK
- ▶ **11.30 am – 12.00 pm** *DNA circuits for versatile biosensing applications: from the detection of nucleic acids to enzymes* - **Guillaume Gines** – ESPCI – Paris
- ▶ **12.00 pm – 12.30 pm** *In vitro bioassays for detecting the human exposome* - **Beate Escher** - Center for Environmental Research Helmholtz – Germany
- ▶ **12.30 pm – 1.00 pm** **Closure: Rémy Slama – IAB – Grenoble**