



6th Biosensor Group Meeting, Orsay, 12-13 Mai 2016

Faculté des Sciences d'Orsay, Bâtiment des Colloques (Bat 338)

Thursday 12 May

14h - Session Mechanical Sensors, Cell Migration and Polarisation

Plenary 40+5 :

- **Carsten Grashoff (MPI Biochemistry, Munich)** How cells feel tissue stiffness - Second-generation tension sensors to quantify piconewton forces in cells.

Communications 20+5 :

- **Nicolas Borghi (IJM, Paris)** Mechanotransduction from cell surface to nucleus: roles of E-cadherin in catenin signalling .

- **Marc Tramier (IGDR, Rennes)**: Fluctuations of actomyosin-generated tensions on cadherin are similar between dividing and non-dividing epithelial cells in early *Xenopus laevis* embryo.

- **Adil Bakayan (BioEmergences, Gif sur Yvette)**: Visualizing and analyzing biological tension forces and their distribution

16h30 - Commercial Presentation

- **Hélène Delobel (Nikon, Champs-sur-Marne)**: Innovative microscopy solutions for live cell imaging

16h45 Pause/Posters

17h30 - Session Analytical Imaging for Biosensing

Communications 20+5 :

- **Robert Pansu (ENS Cachan)** From lifetimes to concentrations in a FLIM image : the case of a precipitation reaction.

- **Vincent Gielen (LNBA, KU Leuven)** Superresolution fluorescence microscopy of biomolecular interactions using photochromic biosensors and complementation.

- **Marcelina Cardoso dos Santos (IEF, Orsay)** : Time-Gated Terbium to Quantum Dots FRET Imaging for Intra- and Extracellular Biosensing.

19h30 - Conference Dinner

Interactive dinner with Monsieur Jacques (feat.)

Organized at Proto204 Creative Campus <http://proto204.co>

Friday 13 May

9h15 - Session Biosensors, Chemistry & Probes

Plenary 40+5 :

Ranieri Bizzarri (NEST, Nanoscience Institute, Pisa) New Optical probes and Imaging Strategy for Biology and Biomedicine.

Communications 20+5 :

- **Francisco Fueyo-González (Instituto de Química Medica, CSIC, Madrid)**
Novel quinolimine-based solvatochromic and tunable fluorophores : development of CDK5 probes.

- **Marion Peyressatre (IBMM, Univ. Montpellier)** : Development of a fluorescent peptide biosensor for probing CDK5 activity and monitoring the efficacy of new therapeutics in glioblastoma.

11h00 - 11h30 Pause

- **Arnaud Gautier (UMR 8640, ENS, Paris)** : A genetically encodable fluorogen-based reporter for advanced biomolecular imaging.

- **Juan Antonio Gonzalez Vera (IBMM, Univ. Montpellier)** : Lanthanide-based peptide biosensor to monitor CDK4/cyclin D kinase activity.

12h30-14h30 - Buffet/Posters

14h30 - Biosensors for Cell Signaling : applications and recent developments

Communications 20+5 :

- **Ibrahim Bedioune (UMR-S 1180 INSERM, Chatenay)** Regulation of cytoplasmic and nuclear PKA activity by beta 1 and beta 2-adrenergic receptors in cardiac myocytes.

- **Dahdjim Betolngar (IBPS, UPMC, Paris)** NMDA transiently increases PDE1 activity in various brain regions

- **Giulia Bertolin (IGDR, Univ. Rennes)**: FRET biosensor reveals the spatiotemporal activation and the functions of Aurora A in living cells.

- **Benjamin Cappe (IRC, Ghent University)** Spatio-temporal aspects and function of MLKL at plasma membrane during necroptosis.

- **Alexis De Angeli (I2BC, CNRS Gif-sur-Yvette)** : Sensing anion concentrations in Arabidopsis cells

Posters

- **Florian Sizaire (IGDR, Univ. Rennes)** Kinase activity biosensors: understanding the molecular mechanisms of activation of Aurora A and its interactome by FRET-FLIM
- **Nathalie Bouquier (IGF, CNRS Montpellier)** Activatable Cell-Penetrating Peptides (ACPPs) as biosensors of neuronal Matrix Metalloproteinase-9 activity.
- **Cédric Yapo (IBPS, UPMC Paris)** Adaptative responses to Dopamine signaling in the striatum of ageing and parkinsonian mice.
- **François Sipieter (IRC, Ghent University)** Spatio-temporal dynamic of MAPK/ERK during necroptosis.
- **Liang Zhang (INSERM, Chatenay Malabry)**, Role of PDE1 in controlling intracellular cAMP concentration in rat aortic smooth muscle cells and adult rat ventricular myocytes.
- **Claire Beauvineau (Institut Curie, Orsay)** A new fluorescent probe for identification of new ligands of G4- quadruplexes
- **Dorota Kostrz (LPN, Marcoussis)** Engineering FRET pairs to study the dynamics of protein conformational changes with a frequency-domain perturbative technique involving temperature oscillations
- **M. Pellerano (Institut Curie, Orsay)** Vinyltriphenylamines as fluorescent probes in biological applications