

# Program Journées plénières GDR 'Physique de la cellule au tissu'

Carry le Rouet 17-20 octobre 2010

## ***Sunday, Oct. 17***

14h- 15h : Plenary lecture - R. Phillips (Caltech USA)  
Biology by the numbers

15h – 15h45: invited lecture : Frédéric Darios (UPMC, Paris)  
Regulation of synaptic vesicle exocytosis by sphingosine

15h45- 16h10 : E. Coudrier  
Control of organelle shape by myosin 1b

### **16h 10– 16h40 : Pause café**

16h40 – 17h 05 M. Versaevel  
Mechanical Regulation of Nuclear Shape by Intracellular Pincer Forces

17h05 – 17h30 G. Romet-Lemonne  
Observation of individual actin filaments reveals that ATP hydrolysis is a random mechanism

17h30 – 17h55 M Balland  
Orienting Traction Forces in Micropatterned Cells Allow High Throughput Force Measurement

## ***Monday, Oct. 18***

8h30 – 9h15 : invited lecture J. Vic Small (Institute of Molecular Biotechnology, Vienna, Austria)  
Pushing with actin filaments

9h15-9h40 : A. Asnacios  
Real-time single-cell response to stiffness"

9h40-9h45 : ANDOR

9h45-10h10 J. Dupire  
Mouvement Chaotique de Globules Rouges dans un Ecoulement sinusoidal

### **10h10-10h40 Pause café**

10h40-11h35 : invited lecture : P. Swain (Edinburgh,UK)  
Some strategies for cellular decision-making

11h35 – 12h20 : flash Posters

## **Repas**

14h45 -15h10 J. Fouchard  
Focal contacts dynamics during early cell spreading"

15h10 – 15h15 ZEISS

15h15 – 15h40: A. Labernadie  
Podosome stiffness variations analysed by atomic force microscopy in living macrophages

15h40 – 16h00: L. Golé  
Relation between Cell Adhesion and Cell Migration: Modeling and Experiments Using Dictyostelium

**16h00          Pause café**

16h – 19h :          en parallèle  
poster session, exhibitions  
Présentations de stages et de thèses avec les étudiants en M2

***Tuesday, Oct. 19***

8h45 – 9h15 :    K. Guevorkian  
Reinforcement and shivering of cellular aggregates

9h15- 9h40 :    S. Chevalier  
Creating Biomimetic Surfaces through Covalent and Oriented Binding of Proteins

9h40 – 10h05    J. Fattaccioli  
Functionalized Emulsion Droplets : A New Material That Brings Open Questions on the Specific Adhesion to Biomimetic Substrates

10h05 – 10h30    T. Pujol  
Mechanical characterization of actin gels by a magnetic colloids technique

**10h30 – 11h          Pause café**

11h– 12h : Discussions scientifiques

**Repas**

14h30-15h15 :    invited lecture : O. Pourquié (Strasbourg)  
Physical principles in embryonic development

15h15 – 15h40    L. Le Goff  
The mechanics of a growing epithelium"

15h40 -15h45 NIKON

15h45 – 16h10 M. Abkarian  
A novel mechanism for malaria parasite egress from the red blood cell"

16h10 – 16h35 F. Montel  
Tumeur et micro-environnement : effet de la pression sur la croissance tumorale

**16h35 – 17h05 : Pause café**

17h05 – 19h : poster session, exhibitions, best poster

### ***Wednesday, Oct. 20***

8h30 – 9h15 : invited lecture : M. Dreyfus (IPBC, Paris)

ARN hélicases: mécanisme d'action et fonctions biologiques / RNA helicases: mechanism of action and biological functions.

9h15- 9h40 C. Moskalenko,

Chromatin structure and dynamics: histone variants and remodeling complexe

9h40 – 10h05 T. Plenat,

A novel DNA chip for single molecule analysis

10h05 – 1030 F. Farina

Etude par molécule unique du transport des acides nucléiques dans le cytoplasme, dans le cadre des nouvelles thérapies contre le cancer

**10h30 – 11h : Pause Café**

11h-11h25 : J. M. Allain

Single molecules manipulation using a microfluidic flow: study of the interaction between biomolécules

11h25 – 11h50 L. Limozin

Minimal encounter time and separation determine surface attached ligand-receptor binding

**11h50 Fin des journées**