



9th NaMiSCeB Workshop

« Nano & micro systems for molecular and cellular Biology

The sweet touch »

Tuesday September 8, 2015

Seminar room - André Rassat Building
470 rue de la Chimie - 38400 Saint-Martin-d'Hères

[[Access Map](#)]

This 9th NaMiSCeB Workshop brings together students and researchers from Grenoble and beyond working at the interface between physics, engineering, chemistry and biology. It is organized to conclude Ralf RICHTER's Chair of Excellence project. Initiated in 2011, "GAG2D" was a remarkably collaborative project which relied on the interdisciplinary expertise of four Grenoble-based laboratories: DCM (which hosts the Chair of Excellence), IBS, LMGP and INAC/SPRAM. Altogether, Ralf RICHTER and his collaborators worked at understanding the role of the extracellular matrix polysaccharides - known as glycosaminoglycans (GAGs) - in the sequestration and presentation of chemokines, the molecules used by cells to communicate between each other.



MORNING PROGRAM

8.45 am: *WELCOME AND INFORMATION*

9.00 am: **David FERNIG** (University of Liverpool, UK)

The structure and functions of the cell microenvironment: from systems biology to single molecule imaging

9.35 am: **Corinne ALBIGES-RIZO** (Institut Albert Bonniot, UGA-INSERM)

Mechanical response for a tense situation between cells and extracellular matrix

10.10 am: **Sofia SVEDHEM** (Chalmers University of Technology, Göteborg, Sweden)

Sensing of cell interactions

10.45 am: *COFFEE BREAK*

11.05 am: *FLASH POSTER PRESENTATIONS*

11.25 am: *POSTER SESSION*

12.00 pm: *LUNCH BREAK & POSTERS SESSION*



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AFTERNOON PROGRAM

1.00 pm: **Pierre LABBÉ** (Département de Chimie Moléculaire, UGA-CNRS)

The GAG2D Chair of Excellence project

1.10 pm: **Dhruv THAKAR** (Département de Chimie Moléculaire, UGA-CNRS)

The sweet spot: how sugars make cells behave

1.45 pm: **Xi Qiu LIU** (Laboratoire des Matériaux et de Génie Physique, Grenoble INP-CNRS-MINATEC)

Delivery of SDF-1 α in a matrix-bound manner on cancer cell behaviors: underlying molecular mechanisms

2.00 pm: **Jessica C. F. KWOK** (University of Cambridge, UK & Institut de Biologie Structurale, UGA-CEA-CNRS)

Modulation of brain plasticity through a glycan-enriched microenvironment on the neuronal surface

2.35 pm: **Nicolas BOUCHONVILLE** (Laboratoire des Technologies de la Microélectronique, UGA-CNRS)

Micro-patterning the rigidity of the substrate reveals the multi-scaled sensitivity of living cells to mechanics

2.50 pm: **Heather DAVIES** (University of Manchester, UK)

New insights into the organization of the mucus glycoprotein matrix

3.05 pm: *COFFEE BREAK*

3.25 pm: **Claude VERDIER** (Laboratoire Interdisciplinaire de Physique, UGA-CNRS)

Forces in biological interactions measured by atomic force microscopy

4.00 pm: **Dorothe SPILLMANN** (Uppsala University, Sweden)

The many roles of glycosaminoglycans

4.35 pm: *AWARD OF NANOSCIENCE FOUNDATION POSTER PRIZES & CLOSURE*