

# Mechanobiology

## in cell biology and developmental biology

BSCDB autumn meeting **NEW LOCATION**  
October 28-29, 2021 - meeting center "Zebrastraat Center" Ghent - Belgium

### Organizers

Liesbet Geris, ULg and KU Leuven  
Elizabeth A. Jones, KU Leuven  
Isabelle Migeotte, ULB  
Jolanda van Hengel, UGent  
An Zwijsen, KU Leuven

### Confirmed speakers

Ulla-Maj Fiuza – Barcelona – SP  
Kristian Franze – Cambridge – UK  
Sylvain Gabriele – Mons – BE  
Georg Halder – Leuven – BE  
Takashi Hiragi – Heidelberg – DE  
Benoit Ladoux – Paris – FR  
Benoit Landrein – Lyon – FR  
Sandra Loerakker – Eindhoven – NL  
Kim van der Heiden – Rotterdam – NL  
Julien Vermot – London – UK



Autumn meeting 2021

<https://www.bsddb.be/autumn-meeting-2021>

Image ref.: M.-M. Vaeyens @ KU Leuven, [www.mech.kuleuven.be/mechanobiology](http://www.mech.kuleuven.be/mechanobiology)





**Autumn meeting:  
MECHANOBIOLOGY  
CELL BIOLOGY AND DEVELOPMENT**

**October 28-29, 2021 (Ghent)**

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**Covid-19 related issues**

All attendees will be requested to show their valid CovidSafe certificate at the entrance. The meeting venue is spacious with good ventilation. Face masks should be worn in the venue.

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***Sponsors:***





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*Final Program*

**Thursday – October 28, 2021**

10:00 Registration and welcome coffee  
10:30 Welcome

**Session 1**

- 10.40 **Georg Halder** (KU Leuven, VIB, BE)  
*Hippo signaling, mechanobiology, and growth control*
- 11.10 **Sylvain Gabriele** (UMons, BE)  
*Physical confinement and cell-cell interactions regulate in concert epithelial cell migration velocity*
- 11:40 **Kim van der Heiden** (ErasmusMC, the Netherlands)  
*Tissue engineering a human atherosclerotic plaque model to study plaque rupture mechanics*
- 12.10 **Poster flash talks** (No. 1-12)

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12.40 – 14:00 Lunch + poster presentation (No. 1-12)  
13:30 – 14:00 General Assembly BSCDB

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**Session 2**

- 14.00 **Julien Vermot** (Imperial College London, UK)  
*Force sensitive signals during the process of valve formation*
- 14.30 **Sandra Loerakker** (Eindhoven University of Technology, the Netherlands)  
*Mechanical regulation of cardiovascular regeneration*
- 15.00 Selected oral presentation **Margo Daems** (KU Leuven, BE)  
*The role of SMAD1/5/9 signalling in early arterial differentiation*
- 15.15 Selected oral presentation **Ljuba Ponomarev** (KU Leuven, BE)  
*The context-dependent regulation of lymphatic vessel maturation by the BMP pathway*

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15.30 – 16.00 Coffee break

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### Session 3

- 16:00 **Ulla-Maj Fiuza** (Pompeu Fabra University Barcelona, SP)  
*Contact area-dependent cell communication and the morphological invariance of ascidian embryogenesis*
- 16:30 Selected oral presentation **Jeffrey Aalders** (U Gent, BE)  
*In vitro modelling of Marfan related cardiomyopathy points to abnormalities in mechanobiology of the heart muscle cells*
- 16:45 Selected oral presentation **Jorge Barrasa Fano** (KU Leuven, BE)  
*Advanced 3D Traction Force Microscopy to calculate forces in sprouting angiogenesis*
- 17:00 Selected oral presentation **Laia Gifre-Renom** (KU Leuven, BE)  
*Impact of tissue-specific mechanical and biochemical signals on specialized endothelial cell signatures*
- 17:15 Honors to former BSCDB president Danny Huylebroeck, P. Ponsaert
- 19:00 Dinner at Eat Love Pizza (optional) - Ajuinlei 10 a, 9000 Gent

### Friday, October 29, 2021

8.30 – 9.00 Registration + coffee

### Session 4

- 9:00 **Kristian Franze** (U. Cambridge, UK)  
*The mechanical regulation of neuronal growth in the developing brain*
- 9.30 **Benoit Ladoux** (Institut Jacques Monod, Paris, France)  
*The role of active nematics in epithelial tissue organization*
- 10.00 Selected oral presentation **Anthony Procès** (U Mons, BE)  
*Signature of the mechano-activation of microglial cells*
- 10.15 Selected oral presentation **Catalina De Schrevel** (UC Louvain, BE)  
*Expression and function of axon guidance genes in the developing liver.*

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10.30 – 11.00 Coffee break

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- 11.00 Selected oral presentation **Laura Glorieux** (UC Louvain, BE)  
*Characterization of cellular and acellular components of the embryonic pancreas for bioprinting.*
- 11.15 **Benoit Landrein** (Lyon, FR)  
*The mechanics of seed size control in plants*
- 11.45 Selected oral presentation **Louis Van Der Meeren** (U Gent, BE)  
*Exploring the involvement of mechanobiology in regulated cell death modalities*
- 12:00 **Poster flash talks** (No. 13-22)



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12.30 – 13:30 Lunch + poster presentation (No. 13-22)

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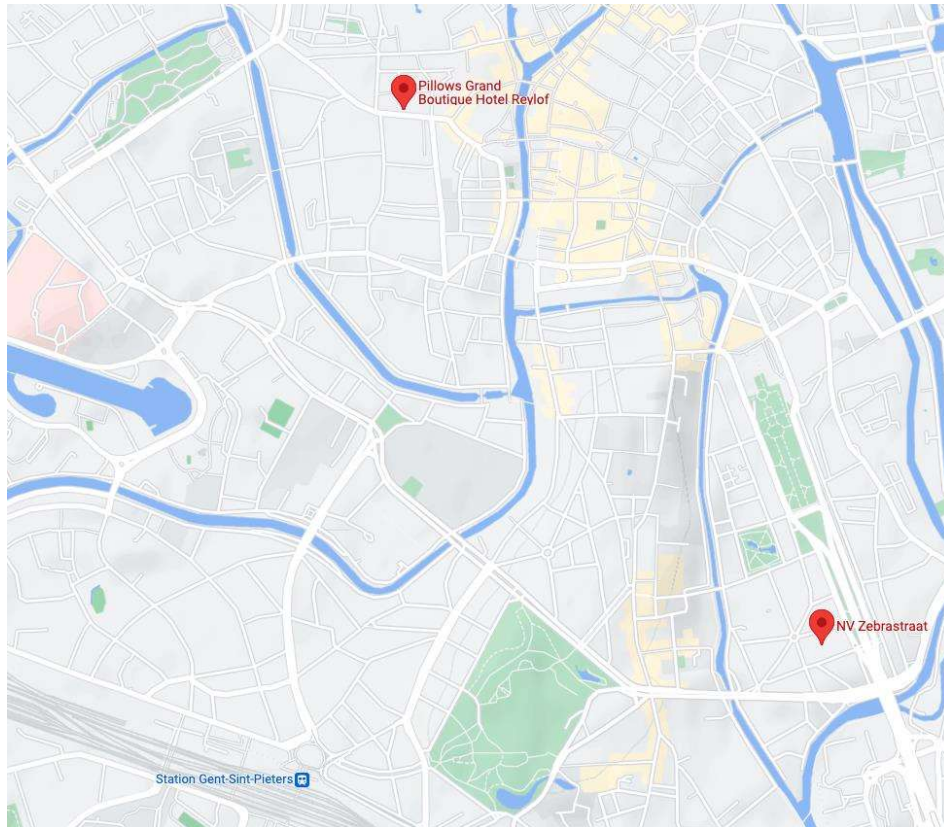
**Session 5**

- 13.30 Selected oral presentation **Eleonore Vercruyse** (U Mons, BE)  
*Why is the migration speed of epithelial cohorts modulated by their width?*
- 13:45 Selected oral presentation **Nawseen Tarannum** (U Manchester, UK)  
*Mechanical regulation of cell division orientation: investigating the role of NuMA.*
- 14:00 **Isabelle Migeotte** (ULB, Brussels, Belgium)  
*Resistance and elasticity of extra-embryonic membranes*
- 14:30 Keynote speaker **Takashi Hiragi** (EMBL, Heidelberg, Germany – Hubrecht Institute, Utrecht, the Netherlands)  
*Self-organisation in mouse development*
- 15:15 Award BSCDB prizes by J. van Hengel, president of BSCDB
- 15:30 Closing remarks and coffee



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October 28-29, 2021 (Ghent)



## Conference Location

NV Zebrastraat Center  
Zebrastraat 32/001 - 9000 Gent  
<https://www.zebrastraat.be/>

### Room Ned Kahn

