

BIOMATERIALS

INTERACTIONS BETWEEN MATERIALS AND THE LIVING

CALL FOR SPEAKERS

CONTEXT

In the framework of intermatGR Interreg IVA project, with support of the University of the Greater Region, a **one-day workshop** dedicated to **biomaterials**, more specifically the **interactions between materials and living matter** will be organised in **October 2014**.

Whatever the applications, *in vitro*, *ex-vivo* or *in vivo*, biocompatibility of implants is strictly affected by the short, medium and long term relationships existing between cells and materials. Those aspects are indeed critical to limit any inflammatory response and to promote the integration and functionalities of the implants. If surface properties (chemistry, rugosity, porosity) are key parameters to control protein adsorption, cell adhesion and proliferation, other parameters should be also taken into consideration. Amongst other, we can mention: diffusion aspect (gas, nutrients, metabolites, cells..) and biomechanical solicitations (gradient, duration, frequency ..). This workshop will represent a unique opportunity to promote exchange of ideas, experiences between intermatGR's actors with the perspective for example to promote the application of stem cells in regenerative medicine.

THE INTERMATGR PROJECT

This project aims to build a **transnational cluster** on the materials and process fields in the Greater Region. The main objective consists of pooling competences in the field of **Materials Engineering** as well as to initiate the **exchange of knowledge and the transfer of technology between research institutions and enterprises** beyond national frontiers.

This project is coordinated by University of Saarland, with a regional consortium gathering the universities (University of Luxembourg, University of Lorraine and University of Liège) and industrial clusters (Luxinnovation, Materiala and Pôle MecaTech) of Greater Region.

More information on the [website of the project](#)

OBJECTIVES AND STRUCTURES OF THE DAY

The main objective of the day is to analyse the topic **from an academic viewpoint**, with contributions from different research's units of Greater Region and **from an industrial point of view**, with intervention from SME's and GE, dealing with the topic. The idea is to gather both sectors (academic and industrial) in order to bring face to face the industries' needs with the competences' offers of academic actors. Secondly, this workshop is a good opportunity to meet all actors of Greater Region, to identify new potential partners for future collaborations and partnerships.

The day will be organised in 2 parts. During the morning, a plenary session will give the opportunity for researchers and developers to present their last works in the field and the new challenges linked



with it. The second part of the day will be dedicated to discussions in small group, between different actors on a more specific subject. A poster session is planned to start on the afternoon as well as pitch session for enterprises.

DATE AND VENUE

This workshop will be held in **Arlon** (BE), on the “Arlon Campus Environment” of the University of Liège, on **22nd or 23rd of October 2014**. The exact day will be determined according the availability of majority.

WHO SHOULD PARTICIPATE?

Participants are expected from both **industrial world** (SME, GE) and **academic world** (Universities, Research centres) from all parts of Greater Region.

THE LECTURES

3 main subjects are suggested for lectures:

- Material surfaces (Microcarriers, membrane, implants)
- Mechanical stress of the cells (biomechanics)
- Diffusion/gradient aspects (gas, nutrients, catabolites,...)

To address the following applications:

- Biotechnology applications (bio-fermentation)
- Optimisation of in vitro models, for pharmacology or toxicology,
- Elaboration of biomaterials for tissues reconstruction.

We expect lectures linked with potential industrial applications or linked with the industrial context.

Languages: **preferentially German or French** (FR/GE and GE/FR simultaneous interpreting is forecasted) or English in case of German or French are not possible.

Duration for lectures: 20-25 minutes

SUBMISSION

An abstract of lecture should be addressed to [Nathalie Maricq](#) before the 25th of July, using the submission form.

CONTACT

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