



## **Biophysical stimuli and mass transport for tissue development** ***Implications for in vitro model systems***

We are proud to announce the symposium entitled "Biophysical stimuli and mass transport for tissue development; implications for *in vitro* model systems" to be held in the Netherlands 18<sup>th</sup> and 19<sup>th</sup> of November 2010. This symposium is organized by dr. Jos Malda, dr. Jeroen Rouwkema and prof. Frank Baaijens in conjunction with the Dutch "Translational excellence in Regenerative Medicine" (TeRM Smart Mix) consortium. The meeting is endorsed by TERMIS.

This specialized symposium, which will mainly consist of internationally and nationally renowned invited speakers, is directed towards the current status and future developments of bioreactors in the field of tissue engineering and regenerative medicine. Confirmed speakers include prof. Dan Bader (UK), dr. Nicola Elvassore (Italy), dr. Adam Engler (USA), dr. Matthias Lutolf (Switzerland), prof. Ivan Martin (Switzerland), prof. Will Minuth (Germany), dr. Ronnie Schulz (Germany), and prof. Gordana Vunjak-Novakovic (USA).

November 18-19th, 2010  
Holtweijde Estate, Lattrop, The Netherlands (<http://www.holtweijde.nl/>)

For more information and instructions regarding registration:  
<http://www.term.nu/bioreactor>

**TeRM** smart  
mix

 **dpte**

 **BMM**

 **termis**<sup>®</sup>





# Preliminary Program

## **Thursday November 18th 2010**

### **Session 1. Setting the stage: Utility of *in vitro* models**

Biological Requirements of *in vitro* models  
*Dr. Sue Gibbs, VUmc Amsterdam*

Integration of technical and biological requirements in bioreactor systems  
*Dr. Madelon Bracke, Xpand Biotechnology*

Are *in vitro* models a valuable tool for the translation from bench to bedside?  
*Prof. Will Minuth, University of Regensburg*

Biomimetic approach to biophysical regulation of cells and tissues  
*Prof. Gordana Vunjak Novakovic, Colombia University New York*

### **Session 2. Mass transfer**

Basic principles of mass transfer in bioreactor systems  
*Dr. Jeroen Rouwkema, University of Twente.*

Nutrient limitation in developing tissue *in vitro*  
*Dr. Jos Malda, University Medical Center Utrecht*

Perfusion-based systems for the engineering of stromal tissues  
*Prof. Ivan Martin, University Hospital Basel*

## **Friday November 19th 2010**

### **Session 3. Biophysical stimulation**

Modes of physical stimulation  
*Prof. Dan Bader, Queen Mary University London*

Mechanical stimulation to mimic the *in vivo* environment: technical view  
*Dr. René van Donkelaar, Technical University Eindhoven*

Mechanical stimulation to mimic the *in vivo* environment: biological view  
*Dr. Ronny Schulz, University of Leipzig*

Cell Responses to the Mechanochemical Microenvironment  
*Dr. Adam Engler, University of California San Diego*

Mechanoregulation of collagen formation  
*Prof. Frank Baaijens, Eindhoven University of Technology*

Electrical stimulation for cell conditioning and tissue regeneration  
*Prof. Gordana Vunjak Novakovic, Colombia University New York*

### **Session 4. Microscale platforms**

Microscale *in vitro* model systems  
*Prof. Matthias Lutolf, EPFL Lausanne*

Microscale models for study of cell function in development and disease  
*Dr. Nicola Elvassore, University of Padova*

### **Interactive Session 5:**

Future of *in vitro* model systems  
*Moderator: Prof. Clemens van Blitterswijk, University of Twente.*

