



This biannual symposium brings together researchers from diverse but inter-related fields, including stem cell biologists, biophysicists and biomaterials scientists, to discuss the use of biomaterials to create artificial cell niches that mimic extracellular matrix. Such materials enable us to study how the mechanical and biochemical characteristics of the matrix influence cellular behaviours via mechanotransduction, including cell-matrix adhesion, migration and differentiation. Understanding these fundamental biological processes in greater detail is essential for the future development of regenerative therapies and disease models. The symposium is hosted by [Dr. Nick J Walters](#) and generously sponsored by the [Faculty of Medicine & Life Sciences, University of Tampere](#). We discuss recent developments and future outlooks relating to the field, as well as challenges we have faced and results we have achieved in developing materials and analysing cell-matrix interactions. The symposium is open for anyone to attend, with a small registration fee of €25.

### Thursday 15th June

#### 16:00–19:00 Scientific Session

- 16:00–16:40 [Prof. Molly M Stevens](#), Imperial College London, UK  
*Keynote:* Exploring and engineering the cell-material interface
- 16:40–17:05 [Dr. Eileen Gentleman](#), King's College London, UK  
Unravelling how bi-directional cell-biomaterial interactions direct stem cell fate in 3D
- 17:05–17:30 [Assoc. Prof. Vesa P Hytönen](#), University of Tampere, Finland  
Mechanical stability of talin rod controls cell migration and substrate sensing
- 17:30–19:00 Welcome Drinks & Poster Session, followed by transportation to dinner

#### 19:00–23:00 Networking Session

- 19:00–late Optional dinner at [Ravintola Tiiliholvi](#), Kauppakatu 10, 33210 Tampere (€47 at participants' own expense), followed by socialising at [Panimoravintola Plevna](#), Itäinenkatu 8, 33210 Tampere



### Friday 16th June

#### 09:00–10:30 Scientific Session

- 09:00–09:40 [Dr. Nicholas D Evans](#), University of Southampton, UK  
*Keynote:* Collective cell behaviour in long-range mechanosensing
- 09:40–10:05 [Dr. Martin Ehrbar](#), University Hospital Zürich, Switzerland  
Augmenting bone regeneration by PEG hydrogel engineering
- 10:05–10:30 [Ms. Tracy TL Yu](#), King's College London, UK  
Modifiable 3D hydrogels as regulators of hBMSC differentiation

#### 10:30–14:30 Networking Session

- 10:30–11:00 Coffee Break
- 11:00–14:30 Optional canoeing trip on lake Näsijärvi, including lunch break (€40 at participants' own expense)



#### 14:30–15:40 Scientific Session

- 14:30–15:10 [Prof. Jöns Hilborn](#), Uppsala University, Sweden  
*Keynote:* ECM hydrogels and stem cell niches
- 15:10–15:35 [Assoc. Prof. Oommen P Varghese](#), Uppsala University, Sweden  
Impact of hydrogel cross linking chemistry on bone tissue regeneration
- 15:35–16:00 [Dr. Teemu O Ihalainen](#), University of Tampere, Finland  
Mechanotransduction at the nuclear lamina: Role of lamin proteins

Register by 8<sup>th</sup> June at [www.uta.fi/med/en/mcns2017](http://www.uta.fi/med/en/mcns2017)