Competence Pool Webinar NanoBio **27th November 2014**

Agenda

10.30 (GMT+1) *Victor Acinas, International Programmes Officer, CCAN - Collaborative Centre for Applied Nanotechnology*
Welcome & Introduction to the EU project NANORA

10.45 (GMT+1) *Prof. Claus-Michael Lehr, Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Germany*
Nanomedicine for drug delivery across epithelial barriers
Nanomedicine refers to the application of nanotechnology in the context of medical applications, such as the development of better and safe drug products. Among other areas of application, such as targeting of tumors, nano-sized drug carriers are particularly attractive for the non-invasive delivery (i.e. without using a needle) of pharmaceuticals across the bodie's outer barriers, such as the intestinal mucosa, the skin or the lungs. In order to be safe, nanomedicines must be made of nontoxic materials and preferentially also be biodegradable, in order to be safely eliminated from the body. In the context of designing and the safety and efficacy of novel nanomedicines, cell- and tissue based in vitro models – preferentially of human origin - are important tools. Examples of such applications are the treatment of inflammatory bowel diseases, the needle-free delivery of vaccines via the hair follicles of the skin, or the delivery of aerosolized nanocarriers to the lung for the treatment of pulmonary diseases

11.00 (GMT+1) *Dr. Sergio Anguissola Chief Scientific Officer at nanoTox Innovations, a subsidiary of NRai, Ireland*
How to deal with upcoming EU and US regulations for the characterisation of nanomaterials?
In the light of upcoming EU and US regulations for the characterisation of nanomaterials, nanoTox Innovations is developing new methods for real time physical characterisation of nanoparticles in complex fluids together with Irish academics and companies in the US and UK. In particular, nTi is one of a few companies with the required expertise to determine interactions of the particles with targets, in relevant biological environments, rather than simply the bare particles themselves. This presentation will focus on the latest results and how it can be applied to the pharmaceutical industry.

11.15 (GMT+1) *Dr. John Hanrahan Chief Technology Officer at Glantreo, Ireland*
Novel nanomaterial platform technologies for the pharmaceutical and food industry
This presentation introduces Glantreo's platform nanomaterial technologies which emerged from innovative material science research in Ireland over the past 10 years. The application areas for these platform technologies are chromatography/separations, drug delivery and proteomics. The presentation will end with a selection of key future development areas and collaboration opportunities.

11.30 (GMT+1) **Discussion to determine the actual performance needs**

12.00 (GMT+1) **End**