

Nanotechnology in Medical Care: A Clinician's Perspective

Speaker: Dr Shervanthi Homer-Vanniasinkam
Consultant Vascular Surgeon, The General Infirmary at Leeds, UK;
Professor of Clinical & Experimental Vascular Research,
University of Bradford, UK

Venue: Blk EA, #02-11 (Seminar Executive Room), Faculty of Engineering

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Time: 4.00pm to 5.00pm

Abstract:

The burgeoning science of nanotechnology has recently invaded the medical arena, creating the specialist field of nanomedicine. This 'specialty' deals with the application of nanoscience in the diagnosis, treatment and prevention of human disease.

Several groups of researchers, including clinician-scientists, are working on exciting developments in areas embracing all aspects of patient care from molecular imaging and diagnostics to nanoparticle treatment of cancer. Whilst currently there is widespread interest in harnessing this technology in all fields of medicine, in order to realize the full potential of nanomedicine it is perhaps important to prioritise areas in which to focus our research endeavours. Often, due to the inherent nature of this science, innovative 'blue-sky', high-risk, high-impact projects need to be embarked upon, and funded, before pilot data has been accrued; consequently, clinical and scientific panels need to address the issue of how these projects should be peer-reviewed.

The clinical community is both excited by the promise of what this technology can deliver in terms of patient care and wary of some of the potential dangers of embracing this new field. Thus, it is important for clinicians, scientists and industry to develop a scientifically and socially conscious platform from which to foster the development of nanomedicine within clearly defined and ethically responsible boundaries. We should jointly strive to achieve this goal so that the promise that nanomedicine holds for improved healthcare is realised.

Biography:

Professor Shervanthi Homer-Vanniasinkam was appointed Consultant Vascular Surgeon at The General Infirmary at Leeds in October 1995 and was awarded a Personal Chair in Clinical and Experimental Vascular Research by the University of Bradford in June 1998. In addition to her clinical work as a full-time vascular surgeon, she is actively involved in a number of basic, applied and translational research projects. Her research interests have focused on ischaemia-reperfusion injury in which she has published widely and has given a number of national and international presentations. She has successfully initiated, and been the principal investigator for, many clinical trials. More recently, Professor Homer-Vanniasinkam has been associated with emerging technology projects and is keenly interested in the medical applications of these technologies; she is working closely with the Institute of Nanotechnology to set up a UK Nanomedicine Network of which she will be the first Honorary President.

For details, please contact:

Ms Kelly Low, NUSNNI, Blk E3, #05-29, 2 Engineering Drive 3, Singapore 117576.

Tel: 6516-3991, Fax: 6872-5563, Email: kellylow@nus.edu.sg