NanoBioInterface: crossing borders
Organized by C. James Kirkpatrick and William Bonfield

Introduction
NanoBioInterface: a multidisciplinary challenge
C. J. Kirkpatrick & W. Bonfield

Articles
Quantitative analysis of the protein corona on FePt nanoparticles formed by transferrin binding

Nanoparticle interaction with model lung surfactant monolayers
R. K. Harishchandra, M. Saleem & H.-J. Galla

Oxidative stress and inflammation response after nanoparticle exposure: differences between human lung cell monocultures and an advanced three-dimensional model of the human epithelial airways
L. Muhrer, M. Rosegger, P. Wick, M. Mohe, P. Geis & B. Rothien-Rutishauser

An impaired alveolar-capillary barrier in vitro: effect of proinflammatory cytokines and consequences on nanocarrier interaction
M. I. Hermanns, J. Kasper, P. Dubruel, C. Puhl, C. Uboldi, V. Vermeersch, S. Fuchs, R. E. Unger & C. J. Kirkpatrick

Targeted drug-delivery approaches by nanoparticulate carriers in the therapy of inflammatory diseases
W. Ulbrich & A. Lamprecht

Balancing protection and release of DNA: tools to address a bottleneck of non-viral gene delivery
C. L. Grigsby & K. W. Leong

Bioreponsive nanosensors in medical imaging
E. Schnellberger

Biological nano-functionalization of titanium-based biomaterial surfaces: a flexible toolbox
R. Beutner, J. Michael, B. Schwenzer & D. Scharnweber

Fluorescence two-dimensional difference gel electrophoresis for biomaterial applications
L. E. McNamara, M. J. Dalby, M. O. Riehle & R. Burchmore

Nanoparticles, human health hazard and regulation
A. Seaton, L. Tran, R. Aitken & K. Donaldson

Registered Charity No 207043
rsif.royalsocietypublishing.org
Published in Great Britain by the Royal Society, 6–9 Carlton House Terrace, London SW1Y 5AG

See further with the Royal Society in 2010 – celebrate 350 years