£3 million joint UK-US project to Study Nanoparticles in the Environment

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Scientists at the University of Birmingham have secured £3 million to study the effects of nanoparticles on the environment.

The research project will focus on silver nanoparticles and carbon nanotubes that are used in a wide range of consumer products such as clothing, cosmetics and tennis racquets and are emerging pollutants of current concern, as they may contaminate the natural environment and water treatment systems. Their environmental pathways – transport to the sewerage treatment system, into soil, surface waters and sediments -will be investigated, as will their toxicity and absorption into a range of organisms such as bacteria, algae, invertebrates and fish.

The scientists will develop and validate computer models of nanoparticle environment exposure, biological uptake and toxicity, which will be immediately useful to the regulatory agencies in the assessment of potential risks from nanoparticles. These models will make substantial contributions towards maintaining both environmental health, given the increasing discharges of nanoparticles, and the long term sustainability of the nanotechnology industry which has important economic and social benefits.

Professor Jamie Lead, lead project investigator from the University's School of Geography, Earth and Environmental Sciences, said, 'Nanoparticles are novel materials of huge potential importance and benefits but which may pose novel hazards to the environment. In order to exploit the benefits of this technology in a sustainable manner we need to know the potential hazards and risks in far more depth. At the end of this project we will have a vastly improved understanding of the fundamental science involved, but will also be able to feed this information to regulators to make an immediate positive impact on environmental and ecological health.'

Ends

Notes to Editors

The money for this project has been awarded by the Natural Environment Research Council, the Engineering and Physical Sciences Research Council, DEFRA, and the Environment Agency and USEPA and involves colleagues from the University of Birmingham's School of Biosciences and the School of Physics and Astronomy, as well as colleagues from Rice University, Clemson University and UC Davis (all USA), Exeter University, Napier University and the Natural History Museum.

For further information

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