



Introduction

Every two years, a group of academics with major interests in particulate drug delivery systems meet along with their research groups at the European Workshop on Particulate Systems (EWPS). The participants have, to date, come from the Danish University of Pharmaceutical Sciences (Copenhagen), the Universities of Geneva, Paris South, Berlin, Utrecht and London. In June 2004, it was the turn of The School of Pharmacy, University of London to host the meeting. In the past, selected presentations from the symposium have been published in a special issue of the *International Journal of Pharmaceutics*. This special issue contains a review, a full paper and notes arising from the London meeting covering a wide spectrum of topics, illustrating the growing implications of particulate technology in pharmacy and medicine.

The contents are especially appropriate as *IJP* has recently encouraged more papers on pharmaceutical nanotechnology. Many of the contributions to this issue fall under this description, and demonstrate the wide array of situations in which nanoparticles and microparticles have a role in drug and vaccine delivery (Somavarapu et al.; Martin et al.) and targeting or whose behaviour illuminates the characteristics of biological nanosystems. Manufacture and processing of systems as well as characterisation is vital if biological data can be trusted. Nanoencapsulation of a crystalline drug is addressed by Layre et al., while calorimetry and enzymology are applied to the characterisation of carriers by Pollitt et al. and Ljusberg-Wahren et al. respectively. Dendrimer based nanoparticles are described by Singh and Florence. Nanoparticles are of course not all synthetic; natural nanoparticles include viruses, prion

proteins or even nanobacteria (Sommer et al., 2003). Maignenen et al. discuss in their paper the role of gut macrophages in mice contaminated with scrapie or BSE. Garcia and colleagues review the implications of colloidal carriers in blood brain barrier translocation. The diffusion of macromolecules in the cytosol (Fretz et al.) and in brain endothelial cells (Garcia et al.) is a key determinant of whether or not nanosystems reach their targets in tumours. Other papers address particle uptake by dendritic cells (Foged et al.), the diffusion of nanospheres in complex media (Ruenraroengsak and Florence), the release of DNA from dendriplexes within nanoparticles (Ribeiro et al.) and the in vivo evaluation of chitosan nanoparticles (Aktas et al.). Non-aqueous emulsions have been suggested as sustained release vehicles by Suittimeatægorn et al. while one study considers aspects of the fluidity and elasticity of phospholipid tethers (Nasseri and Florence).

We hope that the contributions from the EWPS are of interest to a wider audience.

Reference

- Sommer, A.P., McKay, D.S., Ciftcioglu, N., Oron, U., Meyter, A.R., Kajander, E.O., 2003. Living nanovesicles—chemical and physical survival strategies of primordial biosystems. *J. Proteome Res.* 2, 441–443.

A.T. Florence
University of London, The School of Pharmacy
29-39 Brunswick Square
London WC1N 1AX, UK
E-mail address: a.t.florence@ulsop.ac.uk