Dr Marie-Christine Jones BPharm, PhD

Lecturer in Pharmaceutics

Pharmacy and Therapeutics

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About

Marie-Christine Jones has joined the School of Clinical and Experimental Sciences as part of the team developing the new integrated MPharm degree.

Her research background is in pharmaceutical nanotechnology and her research interests are focussed on the development of new drug delivery systems and the evaluation of their behaviour in a physiological environment.

Qualifications

- PhD Pharmaceutical sciences (option pharmaceutical technology) (2008)
- Bachelor of Pharmacy (2000)

Biography

Marie-Christine obtained her Bachelor in Pharmacy from the Faculty of Pharmacy (Université de Montréal) in 2000. She then completed her PhD in Pharmaceutical Sciences working on polymeric unimolecular micelles as oral delivery systems for Class II drugs and peptides.

After her PhD, Marie-Christine moved to London (UK) to join the School of Pharmacy (now University College London School of Pharmacy) where she furthered her expertise on polymeric drug delivery system, including their use in gene silencing therapy. In 2010, she joined King's College London's Institute of Pharmaceutical Science, where she studied the toxicity of inhaled nanoparticles made of 'soft-materials'

Marie-Christine joined the College of Medical and Dental Science in 2012 as part of the team building the new MPharm curriculum at the University of Birmingham.

Teaching

MPharm undergraduate degree programme

Postgraduate supervision

Marie-Christine in interested in supervising projects in the following areas:

- Drug delivery
- Gene delivery
- Nanotoxicology
- Particokinetics

Research

Focussing mostly on the delivery of water-insoluble agents and labile macromolecules, Marie-Christine's research platform aims at exploring novel polymeric drug delivery systems and providing a better understanding of their fate following administration.

More specifically, she is interested in identifying specific physico-chemical properties and pharmacological targets that can be exploited to provide higher therapeutic activity while limiting toxicity from both drug and carrier.

Publications

Jones, M.C., Kumar, A., Spina, D., Forbes, B., Page, C., Dailey, L.A., (2011), In vivo safety and particokinetics of inhaled medicine**. Journal of Drug Delivery Science and Technology**, 21:339-346.

Jones, M.C. and Leroux, J.C., (2010), Reverse micelles from amphiphilic branched polymers. **Soft Matter**, 6: 5050-5059.

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Gao, H., Jones, M.C., Chen J, Prud'homme, R.E., Leroux, J.C., (2008), Hydrophilic nanoreservoirs embedded into polymeric nanoparticules- An approach to compatibilize polar molecules with hydrophobic matrices. **Chemistry of Material** 20: 4191-4193.

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Jones, M.C., Tewari, P., Blei, C., Hales, K., Pochan, D.J., Leroux, .JC., (2006), Self-assembled nanocages for the encapsulation of hydrophilic guest molecules. **Journal of the American Chemical Society**, 128:14599-14605.

Jones, M.C., Ranger, M., Leroux, J.C., (2003), pH-sensitive unimolecular polymeric micelles: synthesis and characterization of a novel drug carrier. **Bioconjugate Chemistry, 14:774-781.**, 14:774-781.

Jones MC and Leroux JC., (1999), Polymeric micelles - A new generation of colloidal drug carriers. **European Journal of Pharmaceutics and Biopharmaceutics, 48: 101-111.** , 48: 101-111.