Conférence – CEISAM – UMR CNRS 6230

18 octobre 2016
10h00 – Salle Marie Curie

Dr. Ramin Rohanizadeh

Université de Sydney - Australie

"Design of curcumin nano-micelles presenting anti-cancer properties"

Abstract

Curcumin, a non-toxic plant extract has recently attracted much attention in medicine due to its remarkable therapeutic actions, such as anti-microbial, anti-inflammatory and anti-cancer properties. In this work we fabricated curcumin nanoparticles (nano-micelles) in different sizes and demonstrated that nano-formulation of curcumin significantly promotes its *in vitro* anti-cancer activities. We also developed inhalable curcumin particles for pulmonary delivery and demonstrated that inhaled curcumin could potentially be used for lung cancer treatment with minimal side effects. We will extend this research by investigating possible combination therapy of curcumin and bisphosphonates against breast cancer bone metastasis. Such nanoparticles would specifically target breast cancer cells located within the bone environment, as bisphosphonates have a high affinity to bone mineral.

Biography

Dr Ramin Rohanizadeh received his PhD degree in 1998 from the University of Nantes (France) in Biomedical Sciences. He then joined Professor LeGeros' team at the New York University. Dr Rohanizadeh commenced a postdoctoral fellowship in 2003 in Professor Mason's group at the Department of Physiology, University of Sydney, on bone tissue engineering. Following this, he worked until 2006 as a senior scientist at Avastra Ltd, a biotech research and development firm specialising in implantable protein-based devices. Since 2006, Dr Rohanizadeh has been an academic member of the Faculty of Pharmacy, University of Sydney. His research involves tissue engineering, nano-formulation, and implantable drug delivery devices. He has published 93 articles in international peer-reviewed journals and his work has been cited more than 1600 times.

Contact : jean-michel.bouler@univ-nantes.fr – 02 51 12 57 16