

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Wanjin Hong:

Date: 29 July 2014, Tuesday

Time: 11:00AM – 12:00PM

Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Speaker: Dr. Keith Foster, Vice President Scientific Affairs Toxin, Ipsen Group, Syntaxin Ltd., United Kingdom

Title: The future of engineered toxins: A new class of therapeutic proteins in Neurology, Oncology and Endocrinology

Botulinum neurotoxins have been successfully employed as effective therapeutic agents for the treatment of a range of neurological disorders involving peripheral neuronal hyperactivity for over 30 years. To date, however, the majority of the neurotoxin clinical products have employed only a single specific sub-serotype, A1. Recent identification of the extensive and increasing diversity of botulinum neurotoxin subtypes with demonstrated functional differences has provided an opportunity to develop novel neurotoxins that have differentiated therapeutic properties and the potential to better meet patient needs in a range of therapeutic applications. This potential is further extended by increased knowledge regarding the structure function relationship of the individual domains within the neurotoxin di-chain protein, which includes in many cases an understanding at the molecular level of the specific protein interactions underpinning component aspects of neurotoxin activity. Recent reports of the ability to rationally mutate specific locations within the neurotoxin, informed by molecular understanding of function, and so modify particular functionalities, both binding and proteolytic cleavage of SNARE proteins, opens up the opportunity to extend the diversity of functional domains beyond those available in nature. Approaches being explored include the design and expression of mutated neurotoxins, hybrid and chimera neurotoxins and the creation of fully engineered targeted secretion inhibitors. By employing recombinant genetic engineering techniques it is therefore possible to create and design novel therapeutic proteins that are rationally designed to provide enhanced therapeutic properties and so extend the therapeutic benefit of the botulinum neurotoxins to a greater range of diseases and patient populations. Examples of such next generation therapeutics are already being produced and entering clinical application. Use of recombinant protein expression also provides the opportunity to produce future therapeutic neurotoxin products using standard biologic manufacturing processes. These developments are opening up a new era in therapeutic neurotoxin development that will enable the provision of a range of differentiated neurotoxin products to address multiple patient needs.

Biography:

Dr Foster has more than 25 years of management experience in pharmaceutical R&D, including positions with SmithKline Beecham and Ipsen. An internationally recognised expert in botulinum neurotoxin biology, Dr Foster led the team that developed the proprietary technology that is the basis of Syntaxin, and played a lead role in developing the analgesic application of the technology. He has extensive experience in intellectual property management and development of a patent portfolio.

ALL ARE WELCOME (No registration required)