PLENARY SPEAKERS

Professor Ian Bates

Director Education Development for International Pharmaceutical Federation (FIP);
Chair of Education, UCL School of Pharmacy;
Academic Lead NHS London Hospitals

Ian Bates holds the Chair of Pharmacy Education at the UCL School of Pharmacy as Head of Educational Development and is a Faculty Fellow of the Royal Pharmaceutical Society. He is seconded to the National Health Service (NHS) in London, as academic lead across the university teaching hospitals. Professor Bates is the Director of the Education Development Team for the International Pharmaceutical Federation (FIP), leading an international team appointed by FIP working in partnership with WHO and UNESCO, and additionally Editor-in-Chief of Pharmacy Education, an international peer review research journal hosted by FIP. He is a Fellow of the Royal Pharmaceutical Society, a Fellow of the Royal Statistical Society, a Fellow of the Royal Society for Public Health, and a Trustee for the European Pharmaceutical Students' Association. He is a Programme Director for the Joint Programmes Board, providing foundation training and workplace education for practitioner development for NHS pharmacists; additionally, as a founder member of CoDEG, provides advice on workplace education for many domestic and international institutions and agencies. Professor Bates is the independent Expert Advisor for the Royal Pharmaceutical Society on educational matters and the nominated representative for Health Education England and the associated professional Advisory Board. He was appointed a Fellow of the International Pharmaceutical Federation (FIP) in 2013 in recognition of his global leadership in international education development, and additionally received the Lifetime Achievement Award from UKCPA.

A global perspective on pharmacy education: linking national, regional and global trends in workforce development

Professor Ian Bates, FRPharmS, FFRPS, FFIP, FRSS, FRSPH.

Director Education Development for International Pharmaceutical Federation (FIP); Chair of Education, UCL School of Pharmacy; Academic Lead NHS London Hospitals.

The collective performance of any national pharmacy workforce should underpin health improvement in that nation. The pharmacy workforce, of course, comprises individual practitioners; hence linking individual development of professional competencies (from undergraduate to advanced practice) to national workforce development strategies, is a priority for policymakers in health systems. This seminar will describe current strategic workforce development policy and implementation from national, regional and global perspectives. We will describe how competency-based development of pharmacy practitioners can be related to enhanced performance of pharmaceutical health delivery and improvement in public health. The seminar will use country level case studies as examples of educational and training trends in the increasingly 'globalized' pharmaceutical workforce. Current transformative professional education policies, and how these relate to professional development for individual practitioners, will be discussed.

Dr Michael John Rathbone

Founder and Managing Director,
ULTI Pharmaceuticals, New Zealand

Michael J. Rathbone, PhD is Founder and Managing Director of his own company, ULTI Pharmaceuticals. He was formerly Professor of Pharmaceutical Technology and Dean, School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia. Prior to this he was Associate Professor of Pharmaceutics, School of Pharmacy, Griffith University, Australia where his responsibilities included Acting Head of School. Previous to his appointment at Griffith University, he was the Director of Research and General Manager InterAg, New Zealand, where he spearheaded the companies veterinary controlled drug delivery research and directed their national and global collaborative research activities. Dr Rathbone obtained his undergraduate degree in Pharmacy at Leicester Polytechnic (De Montfort University), UK (1980), and PhD in Pharmaceutics from the University of Aston, Birmingham, UK (1986). Dr Rathbone has innovated many novel veterinary drug delivery systems, several of which have been registered on the New Zealand, Australian and United States markets. He is a Fellow of the Controlled Release Society, has served on the Board of Directors of the CRS and has received several prestigious awards for his contribution to the science and technology of controlled release. He has edited 8 books in the area of modified release drug delivery and 10 special theme issues of journals such as Advanced Drug Delivery Reviews and Journal of Controlled Release. His knowledge of the entire spectrum of innovation, product research & development, cGMP analysis, manufacturing scale-up, QC analysis, stability testing and registration provides him with an extensive overview, and unparalleled experience of, the veterinary pharmaceutical industry.

A to Z of Veterinary Drug Delivery

Michael J Rathbone

Founder and Managing Director, ULTI Pharmaceuticals, New Zealand

This presentation will examine the animal health landscape in which the formulation scientist finds themself when developing pharmaceuticals for animals. It will discuss the recent changes that have occurred within the animal health arena in recent years and provide an insight into the opportunities for the formulation scientist that has evolved out of the recent changes. The presentation will provide some insight into how to exploit the presenting opportunities and give some suggestions on where to focus efforts

The presentation will be divided into three parts. Part One will deal with the landscape and include a description of the market size, the players, the patients, and the drugs. It will continue by describing the recent and significant changes that have occurred in the animal health industry over the last decade, highlight the opportunity for the formulation scientist resulting from these changes and describe how to exploit the opportunity. Part Two will review some of the market needs and give suggestions on where to focus formulation efforts in the areas of intravaginal, oral (companion animals) and oral (ruminants). The presentation will finish (Part Three) by providing some personal thoughts on today's animal health market.

Professor Beverley Glass

Professor of Pharmacy, James Cook University, Australia

Beverley Glass after being awarded her BPharm degree completed a PhD in Pharmaceutical Chemistry and thereafter took up a position as a Principal Research Scientist in the Pharmaceutical Industry. Thereafter, Beverley entered academia and held positions at both the Universities of Port Elizabeth and Rhodes in South Africa. In 1999 ahe accepted the position as Chair of Pharmaceutical Chemistry at Rhodes University, whilst maintaining contact with the practice of Pharmacy as both an Industrial and Community Pharmacy Consultant and Expert Consultant (Drug Stability and Analytical Chemistry) for the Regulatory Authority, the Medicines Control Council of South Africa. Beverley joined the School of Pharmacy and Molecular Sciences (Pharmacy, Chemistry and Biochemistry) at James Cook University in Townsville, Australia in 2001 to assist in the development of the curriculum and establishment of the integrated pharmacy programme which commenced in 1999, as an Associate Professor in Pharmaceutics and Pharmacy Management. Beverley was appointed the as the Foundation Chair of Pharmacy at James Cook University in 2005 and Head of the Discipline of Pharmacy and is currently acting Head of the School of Pharmacy and Molecular Sciences.

Research interests are centred around the stability of drug substances and formulation with special reference to their photo-and thermal stability, including, development and validation of methods for the quantitation of drug degradation, elucidation of degradants, proposal of degradation pathways and mechanisms for degradation and the stabilization of formulations, including cyclodextrin chemistry. IN-USE stability including the effects on transport, storage and repacking on the drug products providing information for the proposal of new protocols is a new focus area.

Altering medicines to meet patient needs: integrating practice, research and education to ensure the quality use of medicines

Beverley D Glass[1], Sherryl Robertson[1], Jutta Kockler[1], Louise Brown[2] and Alison Haywood[3]

[1]Pharmacy, College of Medicine and Dentistry and [2]Speech Pathology, College of Healthcare Sciences, James Cook University, Townsville, 4811. Australia; [3]School of Pharmacy, Griffith University, Gold Coast, 4222. Australia.

Purpose: Pharmacists, who have an important role to play in the delivery of quality medicines, are being increasingly required to make decisions related to the alteration of these medicines to meet the needs of patients. Despite this widespread practice, which involves repackaging of solid dosage forms, including into dose administration aids (DAAs), compounding oral liquids and crushing tablets in thickened fluids for administration to patients with swallowing difficulties, there is little available research on the outcomes of these manipulations. The aim of this study is to present various cases examining the implications in terms of stability and bioavailability of altering medicines, where research has been informed by the practice and then translated into educational offerings for both pharmacy students and pharmacists.

Methods: Selected drugs repackaged into DAAs and compounded as oral liquids were evaluated for their physicochemical stability. The amount of drug released from tablets crushed in thickened fluids was also measured using standard dissolution procedures. Drug content in all these studies was determined using validated high performance liquid chromatography (HPLC) methods.

Results: Although most drugs were found to be stable when repackaged, findings indicated that for some hygroscopic drugs, repackaging is not recommended. However, for light-sensitive drugs only counselling on storage is required. Results have also revealed that there are stability concerns associated with compounded oral liquids, due to incompatibilities between the drugs, sourced from commercially available products and the excipients in the formulations. There is evidence that drug dissolution from crushed tablets mixed with thickened fluids is adversely affected, due to both the viscosity and the nature of the fluid. This practice-informed research has been invaluable in guiding both undergraduate curricular transformation and continuing professional development for pharmacists.

Conclusions: These findings confirm the importance of the knowledge of the pharmacist in the delivery of altered medicines of an appropriate quality. The outcome of this research thus highlights the integration of practice, research and education and the key role for pharmacists as part of a multidisciplinary health team in providing integrated care in a dynamic continuum.

Professor Paul Rutter

Professor of Pharmacy Practice, University of Wolverhampton, United Kingdom

Paul qualified as a pharmacist in 1992 and began his career working as a community pharmacist for Boots the Chemist. Whilst working for Boots he became a 'teacher practitioner' splitting his time between practising as a pharmacist and helping to teach pharmacy students at Bradford University. In 1995 he moved to Portsmouth University to take up a position as a research pharmacist. During this time he gained his PhD (2000) which explored ways in which community pharmacists could be more involved in patient care. Paul then took a full-time teaching post at Portsmouth University and developed his teaching and research around pharmacist involvement in patient self-care. In 2006 Paul joined Wolverhampton University after taking a career break travelling through South America. He has written textbooks on diagnosis for pharmacists and nurses, which have been translated in to a number of languages and become key reading for pharmacy students in the UK, Australia and New Zealand. He has published widely on self-care and pharmacy service development.

Self-care and pharmacy

Paul Rutter

University of Wolverhampton, United Kingdom

Healthcare systems across the globe seek to maximise effective and efficient use of resource. Recent policy developments advocate patient self-care as a mechanism to empower patients and shift ‘care closer to the home’. Community pharmacy is increasingly recognised as a conduit in which patient self-care can be supported, with increased medicine availability, extension in providing preventative services and better integration into primary care. This affords pharmacy the opportunity to manage a wider range of patient problems. Researchers have investigated the contribution pharmacy makes; not all of it is positive. Education needs to keep pace with practice change. The presentations will explore how pharmacy currently performs and how to ensure future challenges are met.

Dr George Dranitsaris

B.Pharm, MS, PhD, FCSHP

George Dranitsaris is an oncology research scientist with graduate training in biostatistics,decision analysis and clinical epidemiology. His areas of interest include clinical trial design, the application of statistical modeling techniques to evaluate drug performance outside of the trial setting, the measurement of cost effective drug use and cancer supportive care research. He has over 100 publications in the national and international literature, is past president of the Canadian Association of Pharmacy in Oncology, a statistical reviewer for the Journal of Clinical Oncology and a member of the editorial board of the Journal of Oncology Pharmacy Practice and the European Journal of Hospital Pharmacy

Conducting pharmacy based research

George Dranitsaris, B.Pharm., MS, PhD

The objectives of this presentation are as follows:

- To review the different types of study designs that would be optimal for pharmacy based research.
- To discuss the key components of a sound study protocol.
- To provide guidance on how to obtain funding to get your research started.
- To present some examples of research that pharmacists could do.

Pharmacists have a long tradition in conducting research related to the effective use of pharmacotherapy. To initiate any research study, the first step involves the development of a research proposal. Preparing a research proposal is a multifaceted task where the investigator must consider issues such as hypothesis, study design, nature of the experimental intervention, sample size, statistical analysis and ethical considerations. All of these issues must be thoroughly addressed in the proposal to ensure that study bias is minimized. A flawed study may generate data, but such information may compromise patient care because erroneous treatment decisions can be made based on the study results. Therefore, pharmacist researchers have an ethical responsibility to develop a sound research proposal. In this session, the components of a sound study protocol will be discussed, with example of the types of research questions that can be addressed by pharmacists.