Dr Trudy L. Knight B.Sc (Hons), M.Sc (Tox), D.I.C, MRSC, M.R.Pharm.S, Ph.D

Occupational and Environmental Medicine

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About

Trudy Knight is based in the Institute of Occupational and Environmental Medicine at the University of Birmingham. She has experience of working in various aspects of toxicology, pharmacology and pharmacy in environments of academia, pharmaceutical industries, and the National Health Service.

Qualifications

- Ph.D in Molecular Toxicology, Imperial College of Science, Technology and Medicine, at St. Mary's Hospital Medical School, London
- D.I.C in Molecular Toxicology, , Imperial College of Science, Technology and Medicine, at St. Mary's Hospital Medical School, London
- MRSC. (Member of the Royal Society of Chemistry)
- M.Sc in Toxicology, University of Birmingham
- Member of the Royal Pharmaceutical Society of Great Britain
- B.Sc (Hons) in Pharmaceutical Sciences, Aston University

Professional Registrations

- Registered Pharmaceutical Chemist with General Pharmaceutical Council
- Registered Toxicologist with The Society of Biology, British Toxicology Society and EuroTox

Biography

Trudy Knight embarked on a career in pharmaceutical sciences, with the aim of gaining substantial experience in all aspects of Professional Pharmacy. She worked in several NHS Hospitals, in various specialities, including Clinical Ward Pharmacy, Pharmaceutical Manufacture of sterile and non-sterile products, Quality Control (Analytical Chemistry and Microbiology), Drug Information and Teaching pre-registration Pharmacists.

Throughout this time, she developed, not only her original interest in pharmacology and therapeutics, but also in the adverse effects of drugs, safe prescribing, and skills in production of personalised formulations to avoid toxicity, in particular for dermatological conditions and paediatric patients. She is particularly interested in manifestation and mechanisms of idiosyncratic drug reactions. Her PhD study was on the molecular basis of immune-mediated hepatotoxicity induced by halothane, in the Department of Pharmacology and Toxicology, at St. Mary's Hospital Medical School, London.

Trudy further expanded her experience in pharmaceutical toxicological work by employments in Academia, and in Pharmaceutical Industries (Roche Pharmaceuticals plc, and Faulding Pharmaceuticals plc.) in areas of Pharmacologjcal and Toxicological Research, Regulatory Affairs, Evidence Based Pharmacotherapy, Systematic Reviews and Health Technology Assessments, and Teaching Pharmacology. At the University of Birmingham, she has worked on the Birmingham Graduate Entry (MBChB) Course (GEC).

Trudy also has concern for human safety following inhalational exposures to chemicals in the environment and occupations, and is presently based in the Institute of Occupational and Environmental Medicine at the University of Birmingham. She is currently working (p/t) as Project Manager of the large multidisciplinary academic nano-research project, FABLE (From Airborne Exposures to Biological Effects: the impact of nanoparticles on human health) funded (£2.2million) by NERC/MRC. The research investigates the nature of metal nanoparticles found in ambient and indoor environments, synthesis and characterisation of metal nanoparticles, investigation of their ability to cross cellular membranes and their intracellular behaviour, and their toxicity in various cell types in vitro, and in in vivo models. The work is done in several laboratories across Birmingham University campus, at the University of Aberdeen and at Public Health England in Oxford. Trudy is also involved with environmental and health government organisations, with the aim of finally transferring outcomes of the project to inform policy.

Teaching

Trudy lectures on the MSc in Occupational Health (Institute of Occupational and Environmental Medicine), and is Personal Tutor for this course, and also for the MSc in Toxicology (School of Biosciences).

Postgraduate supervision

Supervision of projects of 2-3 students per year for the MSc in Occupational Health

Research

Research Interests

- Idiosyncratic drug reactions, in particular immune-mediated reactions to drugs.

- Mechanisms of adverse reactions to drugs
- Personalised medicines
- Safe prescribing (especially in paediatrics and the elderly)
- Nano materials (Toxicity and pharmaceutical use)
- Legal regulation of occupational and environmental exposures to nanomaterials.

Other activities

IARC Monograph 108 Some Drugs and Herbal Medicines

2013, Trudy was invited by The International Agency for Research on Cancer (IARC) (part of the World Health Organisation (WHO), to join the Working Group of 23 international scientists to evaluate the carcinogenicity of 14 drugs and herbal products, at an 8-day meeting in Lyon, France in June.

The meeting summary has been published in Lancet Oncology (August 2013), and the complete IARC Monograph Volume 108 'Some Drugs and Herbal Medicines', written by all members of the Working Group, will be published by IARC later in 2013.

Trudy also undergoes various consultancies for Legal and Government agencies.

Memberships of Scientific Societies & Positions held

- Member of UK Clinical Pharmacy Association
- The Biochemical Society
- UK Environmental Mutagen Society (UKEMS) (Molecular Epidemiology Group)
- The British Toxicology Society (BTS)

  Positions held with the The British Toxicology Society:
  - Member of the Communications Sub-Committee – 2007-2013
  - Secretary of the Communications Sub-Committee – 2008-2013
  - Member of the BTS Editorial Board - 2007 ongoing

Learned Societies

Member of the British Pharmacological Society (BPS)
Positions held with BPS: The BPS representative on the Royal College of Pathologists Specialist Advisory Committee for Toxicology (current since October 2014)

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