



Rigorous, Relevant Research

Medicines Research Unit

Introduction

Research within Clinical Pharmacy is focused upon the effectiveness of drug therapies from dosage form design to patient application. Our research embraces pharmaceutical technology, drug delivery, therapeutics assessment and cost effective, evidence-based medicines management.

Pharmacy is based within the School of Life and Health Sciences which is located in our city-centre campus. Within Aston University, we benefit from world-class facilities for research and learning; this includes our recently refurbished laboratories and clinics that are equipped with the latest subject-related technology.

Our cross-disciplinary research ranges from fundamental investigations to applied research and much of our activities are carried out in conjunction with the healthcare sector, industry, regulatory bodies and other universities - both in the UK and Internationally.

Sponsors and funders

We have a range of funding partners which include: Alzheimer's Research Trust, AstraZeneca, Bayer Healthcare, BBSRC, British Heart Foundation, Colorcon, EPSRC, EU Framework programmes, Lipoxen Technologies Ltd, Medicines for Children Research Network, Parkinson's Disease Society, Pfizer, Pharmacy Practice Research Trust, Ross Products Division, Royal Pharmaceutical Society of Great Britain, Royal Society, The Medical Research Council, The Wellcome Trust.

Key projects

We have a strong research track record within the areas of Pharmaceutical and Clinical Sciences. Key areas include:

Drug Discovery, Design and Development

The combined expertise of a range of disciplines focuses on the discovery, design and development of drugs, from small molecules to biopharmaceuticals, with a range of therapeutic applications.

Expertise: Antimycobacterial compounds, antisense technology, nucleic acids and peptide nucleic acids, anti-tuberculosis drugs, cancer cachexia, fluorescent imprinted polymers, neuropeptides, neurotoxicity testing, neurophysiology & pharmacology, x-ray crystallography.

Evidence-based practice

Research underway looks at the psychological, social and policy contexts of healthy ageing, including how diverse communities understand normative and non-normative ageing. There is sizable experience in the supply of formulations for paediatric and geriatric clinical trials.

Expertise: social and behavioural science, health inequalities, health care policy, public health, and drug safety.

Health services management

Medicines management and the intervention with care policies improves quality of life for the population. Research is addressing these issues by engaging user communities to assess attitudes, beliefs, practices and the effectiveness of health, specifically with regard to medicine management and service provision.

Expertise: policy & health, primary & secondary care, medicines management, professional services development, pharmacy education, professional practice.

Pharmaceutics and Drug Delivery

Depending on the properties of a drug compound and the therapeutic action required, different formulation strategies are required. Our expertise in this area focuses on enhancing the delivery and efficacy of drugs by tackling a range of problems from low solubility and poor bioavailability, to enhancing delivery via a range of delivery routes, through to understanding the mechanistic principles controlling drug delivery and targeting. We look to develop appropriate formulations and platforms better tailored to individual patient needs including all age groups.

Expertise: Immediate, sustained and controlled release systems, nanotechnology, particulate drug carriers, vaccine adjuvants, formulation characterisation and engineering, tissue engineering.

Link to group web page:

www.aston.ac.uk/lhs/research/health/pharmacy/

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