

Wednesday 11th September

10.00 Registration, exhibition, poster viewing and welcome refreshments

S1.1

11.00

Welcome

Dr Mark McAllister, APS Chair

Opening Plenary

Professor Cameron Alexander, CChem, FRSC, FHEA, FIMMM, Science Chair – UK PharmSci 2019, Professor of Polymer Therapeutics, Royal Society Wolfson Research Merit Fellow, University of Nottingham

12.00

Plenary Lecture

Smart cancer nanomedicine

Professor Twan Lammers, Head of Department Nanomedicine and Theranostics, RWTH Aachen University

13.00 Lunch, exhibition and poster viewing

14.00 Parallel sessions

S1.2A Medicinal Chemistry	S1.2B Material Science challenges with biologics	S1.2C Skin Forum
<p><i>Chair: Professor Helen Osborn, Professor of Biomedical Chemistry, University of Reading</i></p> <p><i>Dr Allan Jordan, Director of Oncology Drug Discovery, Sygnature Discovery</i> Title to be announced</p> <p><i>Dr Zoe Waller, Senior Lecturer in Chemical Biology, School of Pharmacy, University of East Anglia</i> Adventures with Four-Stranded DNA</p> <p>Podium presentations from submitted abstracts</p> <p><i>Dr Bruce Alexander, Principal Lecturer in Physical Chemistry, University of Greenwich</i> Enhancing the solubility of</p>	<p><i>Chair: Professor Gavin Andrews, Vice Dean, School of Pharmacy, Queen's University of Belfast</i></p> <p><i>Fergal O'Brien, Royal college of surgeons, Belfast</i> Title to be announced</p> <p><i>Dave Parmley, Senior Research Engineer, Centre for Process Innovation</i> Materials Science challenges when developing an oral mAb product. Centre for Process Innovation</p> <p>Podium presentations from submitted abstracts</p> <p><i>Silvia Sonzini, Senior Scientist, AstraZeneca</i> Sizing at the nanoscale: an orthogonal approach</p>	<p><i>Chair: Dr Majella Lane, Senior Lecturer, Pharmaceutics, University College London</i></p> <p><i>Dr David Scurr, Senior Research Fellow, University of Nottingham</i> Novel Insights into Skin Biology and Permeation of Actives using ToF-SIMS and 3D OrbiSIMS</p> <p><i>Dr Bruno Sil dos Santos, Lecturer in Pharmaceutical Science and Pharmacology, School of Human Sciences, London Metropolitan University</i> Crossing old barriers and printing new ones: skin, nails and additive manufacturing</p> <p>Podium presentations from submitted abstracts</p> <p><i>Heba Abdelwahab, PhD Student, School of Pharmacy, QUB</i> Novel microneedles array design and nanocapsules; A promising drug delivery system to improve</p>

<p>econazole salts through inclusion complex formation</p> <p><i>Florence Osuagwu, MPharm Student, Keele University</i></p> <p>Novel calix [4] resorcinarene nanocarriers for enhanced drug solubilisation: synthesis of octaamino-substituted resorcinarenes</p>	<p><i>Juan Domínguez Robles, School of Pharmacy, Queen's University Belfast</i></p> <p>Lignin-PLA composites for additive manufacturing applications: a potential material for healthcare applications</p>	<p>the intradermal delivery and photodynamic activity of Hypericin to skin melanoma cancer</p> <p><i>Emma McAlister, Research Fellow, Queen's University Belfast</i></p> <p>The use of directly compressed tablets combined with novel hydrogel-forming microneedles for the transdermal delivery of a low molecular weight high dose antibiotic</p>
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15.30 Refreshments, exhibition and poster viewing

16.00 Parallel sessions

S1.3A Drugs from Natural Sources	S1.3B Diversity in amorphous materials covering co-crystals, nano formulations and co-amorphous systems.	S1.3C ATMPs -what's next in the pipeline and what are the manufacturing challenges?
<p><i>Chair to be announced</i></p> <p><i>Professor Dr Thomas Efferth, Editor-in-Chief, Phytomedicine. Chair, Department of Pharmaceutical Biology Institute of Pharmacy and Biochemistry, Johannes Gutenberg University</i></p> <p>Systems biology of natural products for cancer therapy</p> <p><i>Professor Julie Hawkins, Professor of Plant Systematics and Evolution, School of Biological Sciences, University of Reading</i></p> <p>Taxonomy, Phylogeny and DNA Barcoding Strategies for Herbal Medicines</p> <p>Podium presentations from submitted abstracts</p> <p><i>Taherali Farhan, UCL School of Pharmacy</i></p> <p>Local colonic application of</p>	<p><i>Chair: Dr Sheng Qi, Reader, University of East Anglia</i></p> <p><i>Dr Kristof Kimpe Principal Scientist, Johnson and Johnson</i></p> <p>Formulate me tinder – tackling formulation design @ Janssen</p> <p><i>Professor Yaroslav Khimiyak, Professor in NMR Spectroscopy School of Pharmacy, University of East Anglia</i></p> <p>Molecular level understanding of pharmaceutical materials: from encapsulated solids to soft matter</p> <p>Podium presentations from submitted abstracts</p> <p><i>Dr Michael Devlin, researcher, University of Strathclyde</i></p>	<p><i>Chair: Dr Andreea Iftimia-Mander, BChemE MSCHEM PhD, Innovation Lead - Enabling Programmes, UK Research and Innovation</i></p> <p><i>Dr Fungayi Chidothe MD, Head of Strategy and Planning</i></p> <p>Cell and Gene Therapy Catapult</p> <p><i>Angela Osborne, Managing Director, ATMP Manufacturing Community</i></p> <p>ATMP Manufacturing Community</p> <p>Podium presentations from submitted abstracts</p> <p><i>Dr Pratik Gurnani, Research Fellow, University of Nottingham</i></p>

<p>monoclonal antibodies – does mucus hinder their permeation?</p> <p><i>Idowu Eniafe Fadayomi, PhD Student, Keele University</i></p> <p>Characterization of anti-ovarian cancer diterpenoids in <i>Justicia insularis</i> and their roles in apoptosis</p>	<p>Structure and transformations in amorphous paracetamol</p> <p><i>Dr Steven Ross, University of Greenwich</i></p> <p>Coprocessing of Pharmaceutical Cocrystals for High Quality and Enhanced Physicochemical Stability</p>	<p>Using hydrophobicity to tune the hydrolysis rate of charge switchable non-viral polymeric gene delivery vectors</p> <p><i>Dr Mohammad A Obeid, Assistant Professor, Yarmouk University</i></p> <p>Formulation of non-ionic surfactant vesicles (NISV) prepared by microfluidics for therapeutic delivery of siRNA into cancer cells</p>
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17.30 Parallel sessions

S1.4A Exhibitor presentations	S1.4B Exhibitor presentations	S1.4C The Innovation Landscape for Medicines Manufacturing
<ul style="list-style-type: none"> - M2M Pharmaceuticals Ltd - Ashland - Genvolt Ltd 	<ul style="list-style-type: none"> - Surface Management Systems <i>2 other presentations to be announced</i> 	<p><i>Chair: Dr Marcel Kuiper, Knowledge Transfer Manager Health, Knowledge Transfer Network Ltd</i></p> <p><i>Dr Andreea Iftimia-Mander, BChemE MScChemE PhD, Innovation Lead - Enabling Programmes, UK Research and Innovation</i></p> <p>UKRI and ISCF landscape</p>

18.00	Posters and networking
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19.00	PharmSci 2019 BBQ and networking event
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Thursday 12th September

8.00 Registration, exhibition, poster viewing and welcome refreshments

S2.1

9.00 **The potential of 3D printing in the development and manufacture of medicines and its impact upon Pharmacy**

Professor Clive Roberts, Professor of Pharmaceutical Nanotechnology, Head of School of Pharmacy, University of Nottingham

APS Science Award sponsored by Astra Zeneca

10.00

Plenary Lecture

Professor Rachel Elliott, Professor In Health Economics, University of Manchester

Title to be announced

11.00 Refreshments, exhibition and poster viewing

11.30 Parallel sessions

S2.2A Smarter medicines by design United Kingdom & Ireland Controlled Release Society (UKICRS)	S2.2B Biopharmaceutics <i>Next generation delivery systems for the delivery of complex molecules</i>	S2.2C Diagnostics for detection of microorganisms
<p><i>Chair: Professor Yvonne Perrie, Strathclyde Institute of Pharmacy and Biomedical Sciences</i></p> <p><i>Dr Maria J. Vicent, PhD, Polymer Therapeutics Lab, Centro de Investigación príncipe Felipe, Spain</i></p> <p>Polypeptide-based conjugates as versatile therapeutics</p> <p><i>Dr Asha Kumari Patel, Lecturer in Cell & Gene Therapy, Imperial College London</i></p> <p>Developing inhaled mRNA therapeutics for lung disease</p> <p>Podium presentations from submitted abstracts</p> <p><i>Dr Thais Abelha, Research Fellow, University of Nottingham</i></p> <p>Nanoparticle uptake screening in different human cell lines: effect of</p>	<p><i>Chair: Dr Mark McAllister, APS Chair</i></p> <p><i>Professor Randy Mrsny, Professor of Epithelial Cell Biology, Department of Pharmacy and Pharmacology, University of Bath</i></p> <p>Update on Oral Delivery of Therapeutic Proteins and Peptides</p> <p><i>Dr Vipul Yadav, Director of Research, Intract Pharma Ltd</i></p> <p>Converting injectable antibodies into safe and simple oral pills?</p> <p>Podium presentations from submitted abstracts</p> <p><i>Professor Andrew Lewis, VP R&D, Biocompatibles UK Ltd</i></p> <p>Unlocking the DEBIRI Paradox</p>	<p><i>Chair: Professor Martin Snowden, University of Greenwich</i></p> <p><i>Dr Ashraf Ismail, Associate Professor, Food Science and Agricultural Chemistry, McGill University, Canada</i></p> <p>Microbial Identification and Typing by Fourier Transform Infrared (FTIR) and NMR Whole-Organism Fingerprinting Techniques</p> <p><i>Dr Alexander Edwards, Associate Professor, University of Reading</i></p> <p>Tiny Test Tubes for Rapid Antibiotic Susceptibility Testing: Low-Cost Smartphone Analytical Microbiology Using Microcapillary Film</p> <p>Podium presentations from submitted abstracts</p> <p><i>Dr Keng Wooi Ng, Lecturer, Newcastle University</i></p> <p>Gel-based, 3D visual and colorimetric detection of a skin</p>

<p>nanoparticle size, PEG length and cell type</p> <p><i>Dr Asma Patel, Senior Director Development, Quotient Sciences</i> Clinical optimisation of modified-release CNS products using formulation design space strategies</p>	<p><i>Dr Robert Cavanagh, Post Doctoral Research Fellow, University of Nottingham</i> Screening of mixed co-poly(ester-carbonate) PEG-based nanoparticles for breast cancer therapy: an in vitro and biodistribution based approach</p>	<p>cancer biomarker using immunodiagnostic microneedles</p> <p><i>Dr Dharaminder Singh, Senior Bioengineer, CNBio</i> A microfluidic addition and removal device for the investigation of the PK/PD/efficacy relationship of PI3K inhibitors in vitro</p>
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13.00 Lunch, exhibition and poster viewing

14.00 Parallel sessions

S2.3A Smarter Medicines by Design 2 United Kingdom & Ireland controlled release society (UKICRS)	S2.3B New Scientist Focus Group	S2.3C 3D Printing
<p><i>Chair: Dr Laura Mason, Upperton Pharma Solutions (UKICRS Treasurer)</i></p> <p><i>Dr Enrico Ferrari, Senior Lecturer, University of Lincoln</i> Design of nanomedicines by smart decoration of gold nanoparticles</p> <p><i>Professor Manuel Salmeron-Sanchez, FRSE, Chair of Biomedical Engineering, Head of Division of Biomedical Engineering, School of Engineering, University of Glasgow</i> Advanced biomaterials for engineered in vitro tissue models</p>	<p><i>Chair: David Streather, AstraZenaca</i></p> <p><i>Dr Asma Buanz, Lecturer in Pharmaceutical Engineering, UCL School of Pharmacy</i> Pushing the boundaries to make better medicines</p> <p><i>Jean Philippe Ganay, Senior Associate Scientist, Pfizer</i> A day in the life of a formulation scientist</p> <p><i>Dr Farnaz Esmaeili, Senior Scientist, CGT department, GSK</i> Journey of a pharmaceutical scientist to serve the patients</p>	<p><i>Chair: Professor Dennis Douroumi, Professor in Pharmaceutical Technology and Process Engineering</i> <i>Director of Centre for Innovation in Process Engineering and Research (CIPER)</i></p> <p><i>Professor Jukka Rantanen</i> <i>Professor of Pharmaceutical Technology and Engineering, Department of Pharmacy, University of Copenhagen, Denmark</i> Printing of information-rich pharmaceuticals</p> <p><i>Dr Sheng Qi, Reader, University of East Anglia</i> A toolkit for the rational formulation development of 3D printed pharmaceutical solid dosage forms</p>

<p>Podium presentations from submitted abstracts</p> <p><i>Andi Dian Permana, PhD Student, School of Pharmacy, Queens University Belfast</i></p> <p>Enhanced intradermal delivery of ivermectin using the combination of nanosuspensions and dissolving microneedles as a therapy for lymphatic filariasis</p> <p><i>Giuseppe Uras, PhD student, University of Nottingham - School of Pharmacy</i></p> <p>Newly synthesized AChE inhibitor with dual binding site reduces the β-amyloid aggregation in a <i>Drosophila</i> Alzheimer's Disease model</p>	<p>Podium presentations from submitted abstracts</p> <p><i>Elliott Higgin, Postgraduate Research Student, King's College London</i></p> <p>Design and generation of new absorption enabling peptides for oral delivery of biologics</p> <p><i>Sarah J Trenfield, UCL School of Pharmacy</i></p> <p>Track-and-Trace: Novel Anti-Counterfeit Measures for 3D Printed Medicines using Smart Material Inks</p>	<p>Podium presentations from submitted abstracts</p> <p><i>Alvaro Goyanes, FabRx Ltd</i></p> <p>Automated therapy preparation using 3D printing of isoleucine formulations for treatment of MSUD: first single-centre, prospective, crossover study</p> <p><i>Sophia Nikoleta Economidou, Medway School of Pharmacy, University of Kent</i></p> <p>3D printed microneedles combined with a microelectromechanical system (MEMS) for transdermal drug delivery</p>
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15.30 Refreshments, exhibition and poster viewing

16.00 Parallel sessions

<p>S2.4A New Scientist Focus Group Career options in the pharmaceutical industry and networking skills</p>	<p>S2.4B Review session: Antibody-drug conjugates</p>	<p>S2.4C Review session: Immunotherapy</p>
<p><i>Chair: Professor Laura Waters</i></p> <p><i>Dr Bruce Alexander, Principal Lecturer, Physical Chemistry, University of Greenwich & Yvonne Pendry, University of Greenwich</i></p> <p>Career options in the pharmaceutical industry and networking skills</p>	<p><i>Dr Mark Frigerio, Vice President, Design and Development, Abzena</i> <i>Title to be announced</i></p>	<p>Professor Robin Shattock, Faculty of Medicine, Department of Medicine, Chair in Mucosal Infection and Immunity, Imperial College London <i>Title to be announced</i></p>

17.15 – 18.15

S2.5 Debate on open access

David Jones, Pro-Vice-Chancellor for Education and Students at Queen's University Belfast

19.00 APS Black tie dinner – Painted Hall

Friday 13th September

8.00 Registration, exhibition, poster viewing and welcome refreshments

S3.1

9.00 **Innovative Science Award Plenary Lecture**

Professor Abdul Basit, Pharmaceuticals, University College London, School of Pharmacy

09.50 **Plenary session**

Emerging Scientist Award Lecture -Dr Clare Hoskins, Keele University Nano-assassins for pancreatic cancer therapy

10.40 **Closing address**

Professor Cameron Alexander, CChem, FRSC, FHEA, FIMMM, Science Chair – UK PharmSci 2019, Professor of Polymer Therapeutics, Royal Society Wolfson Research Merit Fellow, University of Nottingham
Dr Mark McAllister, APS Chair
Professor Martin Snowden, University of Greenwich

11.00 Refreshments, exhibition and poster viewing

11.30 Parallel sessions

<p>S3.1A Nanomedicines Focus Group Pharmaceutical Sciences in a changing world with the sub themes of sustainability and diversity</p>	<p>S3.1B Process engineering and Product formulation Manufacturing Classification System (MCS) Recent developments and Future Opportunities</p>	<p>S3.1C Biotherapeutics, vaccines and Parenterals</p>
<p><i>Chair: Dr Philipp Seib, Senior Lecturer in Cellular Pharmaceutics, Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS)</i></p> <p><i>Professor Hélder A. Santos, Associate Professor, Nanomedicines and Biomedical Engineering, University of Helsinki, Finland</i></p> <p>Multifunctional nanomedicines for cancer and cardiovascular diseases</p> <p><i>Dr Floriane Séquier, Team Leader, Global Product Development, AstraZeneca</i></p> <p>Progressing the Development of AZD2811 Nanoparticles for Intravenous Administration</p> <p>Podium presentations from submitted abstracts</p>	<p><i>Chairs: Neil Dawson, Pfizer R&D & Dr Kendal Pitt, Senior Technical Director, Pharma Supply Chain, GSK</i></p> <p><i>Neil Dawson, Pfizer R&D & Dr Kendal Pitt, Senior Technical Director, Pharma Supply Chain, GSK</i></p> <p>MCS Recent developments and publications</p> <p><i>Audience Interaction and Discussion</i></p> <p>MCS Future opportunities</p> <p>Podium presentations from submitted abstracts</p>	<p><i>Chair: Dr Rachel Knott, Reader School of Pharmacy and Life Sciences, Robert Gordon University</i></p> <p><i>Dr Jonathan Bones, Principal Investigator, National Institute for Bioprocessing Research and Training</i></p> <p>Multi-attribute testing for biotherapeutics</p> <p><i>Dr Ian Anderson, Senior Manager (Analytical Sciences), Allergan Biologics Ltd (R&D), Estuary Banks</i></p> <p>Analytical challenges of using adeno-associated virus as a delivery system for gene therapy</p> <p>Podium presentations from submitted abstracts</p>

<p><i>Az Alddien Natfji, PhD Student, School of Pharmacy, University of Reading</i> Polymer-drug conjugates as non- prodrug systems, a strategy offering peripheral localisation of drugs and retained biological activity</p> <p><i>Dr Cynthia Bosquillon, University of Nottingham</i> Evaluation of lysosomal sequestration in bronchial epithelial cells as a mechanism of drug retention in the lungs</p>	<p><i>Hetvi Triboandas, PhD student, De Montfort University</i> Continuous manufacture and monitoring of itraconazole amorphous solid dispersions by hot melt extrusion using in- line UV-Vis spectroscopy</p> <p><i>Gillian Berrie, PhD Student, University of Strathclyde</i> Manufacture of fully synthetic liposomes using Microfluidics</p>	<p><i>Dr Joshua Boateng, University of Greenwich at Medway</i> Development and characterization of protein loaded biomaterial based composite dressings for the treatment of chronic wounds</p> <p><i>Dr Nathalie Lavignac, Lecturer, Medway School of Pharmacy</i> Poly(amidoamine)/protein conjugates</p>
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13.00 Lunch, exhibition and poster viewing

14.00 Close of conference