



### Pharmaceutical Science - translating innovation for delivery to patients

### Tuesday 5th September 2023 - Scientific Programme

1000 hours Registration, exhibition, poster viewing and refreshments

1100 hours Welcome - Professor Hannah Batchelor, APS Chair - G10 Main Lecture Theatre

1105 hours Opening Plenary - Jo Craig, SVP CMC, NeRRe Therapeutics, "Pharmaceutical Science - Reflections on the

Translation of Innovation for Patient Benefit" - G10 Main Lecture Theatre

1150 hours Plenary Lecture - Fireside Chat with Maureen Coleman, Chairman CNBioInnovations, Rephine, PIR International

and Parafricta, interviewed by Dr Kofi Asare-Addo, Reader in Pharmaceutics and the Admissions Tutor for the

Pharmacy (MPharm) course at the University of Huddersfield - G10 Main Lecture Theatre

1235 - 1400 hours Lunch, exhibition and poster viewing

1400 - 1530 hours Parallel Science Session 1

Palmer 109

### 3D Printing of Pharmaceuticals: from Bench to Patients

Chair: Dr Atheer Awad, Lecturer, University of Hertfordshire

"t.b.c."

#### "Future trends in drug product development - Additive manufacturing of oral dosage forms"

Nadine Gottschalk, Principal Scientist, Merck Life Science KGaA

### "Inkjet Printing onto Contact Lenses for Ophthalmic Delivery"

Thomas D Pollard, University College London - podium presentation speaker selected from abstracts

#### "Limitations of PEO high molecular weight in Fused deposition modelling (FDM) 3d printing to extend drug release"

Nour Nashed, University of Sussex podium presentation speaker selected from abstracts



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## Biopharmaceutics on New modalities: Beyond rule of five; oral route

Chair: Professor Nikoletta Fotaki, Professor in Pharmaceutics and Biopharmaceutics, University of Bath

#### "Beyond rule of five; oral route"

Professor Nikoletta Fotaki, Professor in Pharmaceutics and Biopharmaceutics, University of Bath

## "Biopharmaceutics of oral PROTAC delivery: solubility and permeability challenges"

Dr Magda Swedrowska, Associate Principal Scientist, AstraZeneca

#### "Drug delivery technologies for improving the oral bioavailability of biologics"

Dr Stephen T Buckley, PhD, Scientific Vice President, Advanced Drug Delivery, Novo Nordisk

#### "Mesoporous silica microparticles for peptide loading via solvent evaporation for oral delivery; polarity, size and viscosity effects"

Mohamad Anas Al Tahan, Aston University - podium presentation speaker selected from abstracts



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### Advanced Therapy Medicinal Products and Biotherapeutics

Chair: Dr Zahra Rattray, Senior Lecturer in Translational Pharmaceutics, University of Strathclyde

#### "Soft implantable cryogel scaffolds for controlled local delivery of therapeutics"

Dr Benjamin Newland, Lecturer at Cardiff University

#### "Extending the shelf life of fresh starting material and cell-based products for increased quality and accessibility of advanced therapies"

Dr Steve Swioklo, Chief Scientific Officer, Atelerix Limited

#### "Developing and delivering the gold standard of Patient and Public Involvement (PPI) into research: the patient voice matters"

Dr Sandra Quinn, CPsychol. Health Services Research Manager, Myeloma UK

## "Assembly properties of complex drug delivery systems"

Kevin Treacher - podium presentation speaker selected from abstracts

### Tuesday 5th September 2023 - Scientific Programme (continued)

1600 - 1730 hours

Parallel Science Session 2



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#### **Process Engineering and Formulation Focus Group**

Chairs: Dr Ranjit Dhenge, Platform and Process Engineering Team Leader, GlaxoSmithKline and Jason Crooks, GlaxoSmithKline

#### "Continuous Direct Compression: **Accelerated Development**"

Dr Gurjit Bajwa, Process Engineering and Analytics Lead, GlaxoSmithKline Fellows Alumni

#### "Subtractive manufacturing of tablets at the Point-of-Care"

Dr Mohamed A Alhnan, Senior Lecturer in Pharmaceutical Medicine, King's College London

"A strategy for assessing mucoadhesive potential in dosage forms employing bio-adhesive materials"

Roderick Stewart, Aston University, Birmingham - podium presentation speaker selected from abstracts

#### "Inhibition of Nitrosamine Drug Substance-Related Impurity in a Tablet Formulation - A Proof of Concept Study"

Xiaolei Wang, Scientific Leader, MDS-PDS-PD-Oral & Inhaled. GlaxoSmithKline - podium presentation speaker selected from

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**Drugs from Natural Sources Focus Group - Translational innovations for** new anti-cancer and anti-protozoal agents?

Chair: Professor Michael Heinrich, UCL School of Pharmacy, University London

#### "RXR and ROR as targets for natural product (analogs) "

Univ.-Prof. Dr Verena M. Dirsch Department of Pharmaceutical Sciences, (Division of Pharmacognosy), Faculty of Life Sciences, University of Vienna

"Does Cryptolepis sanguinolenta have potential as a source of novel and sustainable antimalarial drugs?"

Professor Colin W. Wright, Professor of Pharmacognosy, School of Pharmacy and Medical Sciences, University of Bradford

#### "Anticancer Evaluation of Alkaloids from Psychotria montana (Rubiaceae)"

Yuye Shuai, University of Nottingham podium presentation speaker selected from abstracts

"A review of ingredients of topical/transdermal formulations of actives from botanical sources with reference to the Chinese market" Jingyi Gu, University College London podium presentation speaker selected from abstracts

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#### **Skin Forum**

Chair: Professor Adrian Williams, **Professor of Pharmaceutics** University of Reading School of Pharmacy

#### "Skin physiology and skin health"

Professor Stuart Jones, Chair in Pharmaceutical Medicine, Director of the Centre for Pharmaceutical Medicine Research, Institute of Pharmaceutical Science, King's College London

#### "Clinical usage of multiple topical products in the management of skin conditions: consequences for product performance"

Dr Liam McAuley, Head of the Centre for Research in Topical Drug Delivery and Toxicology at the University of Hertfordshire

#### "Feeding filaggrin; targeted support of a key aetiological pathway in **Atopic Dermatitis**"

Dr Neil Gibbs, Founder and CSO, Curapel

#### "Nanoemulsion as Novel Nanocarrier for Topical Delivery of Mupirocin"

Bahjat Alhasso, University of Huddersfield - podium presentation speaker selected from abstracts

"Dissolving microarray patches loaded with a rotigotine nanosuspension: potentially an alternative to the conventional Neupro® patch"

Yaocun Li, Queens University Belfast

Drinks Reception and Poster Viewing 1730 hours

### Wednesday 6th September 2023 - Scientific Programme

0800 hours Focus Group Leads Face to Face Meeting - Palmer 1.11

0830 hours Registration, exhibition, poster viewing and welcome refreshments

0900 hours APS Science Award Presentation - Professor Hannah Batchelor, APS Chair - Palmer G10

0915 hours APS Science Award Lecture - David S. Jones, Professor of Pharmaceutical and Biomaterial Engineering

"Acrylates, Hydrogels and Flashing Lights: designing clinically relevant implants and drug delivery systems" -

Palmer G<sub>10</sub>

0945 hours Plenary Lecture - Professor Abdul Basit, Professor of Pharmaceutics, University College London

"Clinical translation of 3D printed medicines" - Palmer G10

### Wednesday 6th September 2023 - Scientific Programme (continued)

1100 - 1230 hours Parallel Science Session 1



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Computational Methods in Pharmaceutical Science. United Kingdom and Ireland Controlled Release Society (UKICRS)

Chair: Professor Gareth Williams, University College London

#### "Keeping powders relevant in the structural characterisation of pharmaceuticals"

Kenneth Shankland, Prof. of Pharmaceutical Crystallography, University of Reading

### "An Introduction to Machine Learning Methods for Formulation Science"

Dr David Shorthouse, Lecturer, UCL School of Pharmacy

#### "Investigating Water Transport Mechanisms in Film Coated Placebo Tablets at Body Temperature Using Terahertz Pulsed Imaging"

Mingrui Ma, University of Cambridge podium presentation speaker selected from abstracts



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#### Biopharmaceutics on New Modalities: Beyond Rule of Five; Non-Oral Route

Chair: Professor Nikoletta Fotaki, Professor in Pharmaceutics and Biopharmaceutics, University of Bath

### "Biopharmaceutics: the integrative science of medicines development"

Professor Ben Forbes, Professor of Pharmaceutics, King's College London

### "Nasal Biopharmaceutics: fit for current and future needs?"

Dr Alison Lansley, Principal Lecturer, University of Brighton

#### "Subcutaneous Biopharmaceutics: Building tools for a flexible future"

Kate Harris, Associate Principle Scientist, Biopharmaceutics, AstraZeneca

#### "Developing a Robust In Vitro Release Method for a Polymeric Nanoparticle: Challenges and Learnings"

Vasiliki Paraskevopoulou - podium presentation speaker selected from abstracts

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#### **Nanomedicine**

Chair: Dr Elaine Ferguson, Reader in Polymer Therapeutics, School of Dentistry, Cardiff University

### "Nanomedicine Formulation: from bench to bedside"

Claire Patterson MPharm PhD, Director of Pharmaceutical Science, Seda

# "Novel epoxy-tiglianes therapeutics induce biofilm disruption and healing in acute and chronic skin wounds"

Dr Lydia C Powell, Lecturer, Swansea University Medical School

#### "DNA Nanostructures for Antimicrobial Drug Delivery"

Dr Ioanna Mela, Royal Society University Research Fellow and Assistant Professor in Pharmacology

#### "Novel Eco-Benign Synthesis of Isoniazid-Loaded Silver Nanoparticles: An Innovative Strategy for Drug-Resistant Tuberculosis Treatment"

Tamara Akpobolokemi, Kings College London - podium presentation speaker selected from abstracts

"Evaluation of the NanoDis as an automated sampling technology platform for the In Vitro Release testing of Nanomedicines. Case study: Polymeric nanoparticle in vitro release method"

Heather Mead, AstraZeneca - podium presentation speaker selected from abstracts

1230 hours Lunch, exhibition and poster viewing



Palmer 102

Nanotechnology for Precision **Medicine Applications. United Kingdom and Ireland Controlled Release Society (UKICRS)** 

Chair: Dr Katie Ryan, Senior Lecturer in Pharmaceutics, University College Cork



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#### Joint Pharmaceutical Analysis Group (JPAG)

Chair: Professor Laura Waters, Professor of Pharmaceutical Analysis, School of Applied Sciences, University of Huddersfield



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#### **Navigating the Evolving Regulatory** Landscape

Chair: Colm Reddington, Director CMC Regulatory Affairs, AstraZeneca

#### "Nano-omics: nanotechnologyenabled harvesting of bloodcirculating biomarkers"

Dr Marilena Hadjidemetriou, Lecturer in Nanomedicine. NanoOmics Team Leader

#### "Lipid Nanoparticles for Combinatory **Nucleic Acid Delivery for Cancer** Immunotherapy"

Professor Khuloud Al-Jamal, FRSC, FRPharmS, FHEA, Chair of Drug Delivery and Nanomedicine, Head of Medicines Development, Institute of Pharmaceutical Science, King's College London

"Use of nanostructured lipid carriers (NLCs) as platform for delivery of antioxidants to the skin and hair follicles to enhance the effects of scalp cooling therapy in a bid to change the face of cancer"

Ana-Maria Totea, University of Huddersfield - podium presentation speaker selected from abstracts

#### "Evaluation of Biological Activity and Potential for Oral Drug Delivery of **Human Milk Extracellular Vesicles**"

Xiang Luo, PhD Pharmaceutical Science, Institute of Pharmaceutical Science, School of Cancer and Pharmaceutical Science, King's College London

Close

#### "Bench to bedside: breath testing for early disease detection and precision medicine"

Dr Dahlia Salman, Bioxhale Limited CEO

"Sequence Engineering to Improve the "Syringeability" of High-**Concentration Monoclonal Antibody** Formulations"

Georgina Armstrong, PhD Student, Senior Scientist, BioPharm Processs Research, Drug Substance Development, GlaxoSmithKline

Modulation of bacterial infection and inflammation by release of lactide from a silicone elastomer device"

Kaifeng Huang, Queen's University Belfast - podium presentation speaker selected from abstracts

"Effects of Benzalkonium Chloride on Planaria Mobility and Potential as an **Alternative Model in Nasal Toxicity** Testing"

Manel Habel, University of Reading podium presentation speaker selected from abstracts

#### "A regulatory framework to enable innovation"

Matt Popkin, Senior Director, CMC Excellence, GSK R&D

"Enabling Bedside Manufacture -Point of Care: an innovative regulatory framework"

Dr Elspeth Gray, Quality Assessor, MHRA and Ian Rees. Retired MHRA

"Implementation of 3D Printing of Personalised Medicines in a Clinical Setting"

Alvaro Goyanes, Director and Cofounder at FabRx

#### Refreshments, Exhibition and Poster Viewing 1500 hours

Exhibitors Session and Showcase - Maureen Coleman, Chairman CNBioInnovations, Rephine, PIR 1530 hours International and Parafricta - Palmer G10 Innovative Science Award Presentation - Jason Crooks, GlaxoSmithKline - Palmer G10 1645 hours Innovative Science Award Lecture (sponsored by GlaxoSmithKline) - "Time Trials - Precise Timing of Drug 1700 hours Delivery for the Treatment of Cortisol Deficiency" - Martin Whitaker, PhD, Royal Society Entrepreneur in Residence, The University of Sheffield - Palmer G10

1730 hours 1900 hours

### Thursday 7th September 2023 - Scientific Programme

0830 hours Registration, exhibition, poster viewing and welcome refreshments

0900 hours Emerging Scientist Award Presentation - Arul Balasundaram, Pfizer - Palmer G10

0915 hours Emerging Scientist Award Lecture (sponsored by Pfizer)- "A tale of badly behaving proteins, bioinspired

delivery systems and inspirational women" - Dr Zahra Rattray, Senior Lecturer in Translational Pharmaceutics

- Palmer G10

0945 hours Plenary Lecture - "Optimizing Early Development of Oral Small Molecules: A Data-Driven Approach to

Overcoming Bioavailability Challenges" - Stephen Tindal, Director, Science and Technology, Catalent -

Palmer G10

#### 1030 hours Refreshments, Exhibition and Poster Viewing

1100 - 1115 hours Poster Prize Giving - Hannah Batchelor, Chair, APS - Foyer Palmer Building

1115 - 1245 hours Parallel Science Session 2



Palmer 109

## Microfluidics and lab-on-a-chip: from drug delivery to discovery

Chair: Dr Kofi Asare-Addo, Reader in Pharmaceutics and the Admissions Tutor for the Pharmacy (MPharm) course at the University of Huddersfield



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#### **New Scientists Focus Group**

Chair: Beatriz Pereira, Senior Formulation Scientist, Astrazeneca



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#### **Material Science Focus Group**

Chair: Elaine Stone, Formulation Consultant, Stonepharma Limited

### "Lab-on-a-Chip for Metastatic Bone Disease"

Dr Stefaan Verbruggen, Lecturer in Medical Technology, Queen Mary University of London

## "Microfluidics for personalised medicine: Drug testing on patient-derived organoids"

Professor Gabriele Dubini, Professor of Bioengineering Chair, PhD Programme in Bioengineering, Department of Chemistry, Materials and Chemical Engineering 'Giulio Natta', Politecnico di Milano

#### "Robotic microfluidic imaging of blood stimulation- towards highthroughput portable measurement of haemostasis"

Ruya Meltem Sariyer, University of Reading - podium presentation speaker selected from abstracts

#### "Fireside Chat"

Professor Bill Dawson with Beatriz Pereira

#### "Comparison of Titanium Dioxidecontaining and Titanium Dioxide-free Film Coating Systems"

Simon Lawrence, Pharmaron - podium presentation speaker selected from abstracts

#### "Investigating surface-induced polymorphism of mannitol: new insights using simultaneous thermal analysis-synchrotron X-ray diffraction"

Asma Buanz, University of Greenwich - podium presentation speaker selected from abstracts

#### "Porosity as a CQA for Immediate Release Tablets: Science, Measurement and Process Integration"

Professor Axel Zeitler, Professor of Microstructure Engineering and Deputy Head of Department (Research) at the Department of Chemical Engineering and Biotechnology, University of Cambridge

#### "Material Science - Get it Right"

Dr Mridul Majumder, Founder and Director, M2M Pharmaceuticals Limited

#### "Predicting granule and tablet properties using in-line measurements and evolutionary equation discovery"

Issa Munu, University of Birmingham - podium presentation speaker selected from abstracts

#### "Assessment of the Opacity of Titanium Dioxide Free Film Coating Formulations"

Michaela Ogden-Barker, Pfizer podium presentation speaker selected from abstracts

























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