

BSNM2025 Programme

Day 1: Tuesday 2nd September

08:30 – 09:15 Registration and coffee

09:00 – 11:00 **Session I**

09:15 – 09:30 **Welcome and event introduction – Prof Steve Conlan/ Dr Alejandro Paredes**

09:30 – 10:00 **KEYNOTE: Prof Helen McCarthy** (Queen's University Belfast) – *Peptide-based nanoparticles applied to gene therapies*

10:00 – 10:15 Dr Flávia Sousa (University of Groningen) - *Boosting CAR T therapy with Advanced Adjuvant Cancer Nanovaccines*

10:15 – 10:30 Dr Midhun Ben Thomas (Centre for Process Innovation) - *Advanced Cross-Flow Micromixer Technology for Industrial-Scale RNA-LNP Production*

10:30 – 11:00 *Coffee break*

11:00 – 12:10 **Session II**

11:00 – 11:30 **KEYNOTE: Prof Ed Lavelle** (Trinity College Dublin) – *Nanoparticles as vaccine adjuvants*

11:30 – 11:45 Mr Ciaran McGranaghan (Queen's University Belfast) - *Cell-selective nano-delivery of nucleic acids for treatment of Glioblastoma*

11:45 – 12:00 Dr Maria Soledad Orellano (POLYMAT) - *Nanogel-Mediated Antimicrobial Therapy to Overcome Biological Barriers in the Context of Bovine Mastitis*

12:00 – 12:10 **Flash talks**

12:15 – 13:30 *Lunch and poster session*

13:30 – 15:05 **Session III**

13:30 – 14:00 **KEYNOTE: Dr Mike Mitchell** (University of Pennsylvania) – *Recent progress on lipid nanoparticle-mediated gene delivery*

14:00 – 14:30 **INDUSTRY/SPONSOR TALK – Botai Xuan; IZON**

14:30 – 14:45 Miss Martina Sangalli (Queen's University Belfast) - *Nanocrystal-loaded nanofibres for targeted topical delivery of amphotericin b against cutaneous leishmaniasis*

14:45 – 15:00 Dr María Melian (Universidad de La República) - *Improving Dissolution Rate and Oral Bioavailability of Benzimidazole Anthelmintics Using Self-Dispersible Nanocrystals*

15:00 – 15:15 Dr Lucía Lopez Vidal (Queen's University Belfast) - *Super-fast production of drug nanocrystals via dual asymmetric centrifugation: a versatile strategy for high-throughput formulation screening*

15:15 – 15:45 *Coffee break*

15:45 – 17:00 **Session IV**

15:45 – 16:15 **INDUSTRY/SPONSOR TALK OR INVITED SPEAKER - Racha Majed; NanoFCM**

16:15 – 16:30 Professor Josimar Eloy (Federal University of Ceara) - *Development and Physicochemical Characterization of Curcumin-Loaded Anti-EGFR Immunoliposomes for Potential Application in Colorectal Cancer.*

16:30 – 16:45 Dr Marta G. Fuster (Queen's University Belfast) - *Surface Polymerization of PEG Acrylate on Lumefantrine Nanocrystals for Nose-to-Brain Delivery*

16:45 – 17:00 Dr Raquel Riciati do Couto Vilela (University of Sao Paulo) - *Biomimetic nanoparticles for targeted therapy of Glioblastoma Multiforme (GBM)*

18:30 – 19:30 **Drinks reception at the Great Hall**

19:30 – Late **Dinner at the Great Hall**

Day 2: Wednesday 3rd September

08:45 – 09:45 BSNM Annual General Meeting (BSNM members only)

10:00 – 11:15 Session V

10:00 – 10:30 **KEYNOTE: Prof Dame Ijeoma Uchegbu** (University College London) – *Targeted nanoparticles to address key unmet therapeutic challenges*

10:30 – 10:45 Dr Joan-Carles Escolano (Bruker) - *Advanced AFM Imaging and Analysis of Cellular and Tissue Samples: Innovations in Large-Area Mapping and Mechanobiology*

10:45 – 11:00 Professor Raquel Petrilli (Federal University of Ceara) - *Development, Characterization and In Vitro Evaluation of ROS Generation of Curcumin-Loaded Lipid Nanoparticles as a Potential Strategy for the Treatment of Skin Cancer via Photodynamic Therapy*

11:00 – 11:15 Miss Siyu Long (University of Manchester) - *Mechanistic Insights into fluorescent lipid nanoparticles formation in nanoprecipitation*

11:15 – 11:45 *Coffee break*

11:45 – 12:40 Session VI

11:45 – 12:15 **KEYNOTE: Prof Jonathan Coulter** (Queen's University Belfast) – *Gold nanoparticle-based therapies in prostate cancer*

12:15 – 12:30 Mr Salehuddin Allen (University of Manchester) - *Investigating the toxicological effects of repeated ingestion of realistic nano-plastics on mouse livers*

12:30 – 12:45 Dr Chengwei Jiang (University College London) - *Targeted Pulmonary Delivery of Icaritin and Nintedanib Using ML-Optimized Micelles for Fibrosis Therapy*

12:30 – 12:40 **Flash talks**

12:40 – 13:45 *Lunch and poster session.*

13:45 – 15:00 Session VII

13:45 – 14:15 **KEYNOTE: Prof. Marcelo Calderon** (POLYMAT, Spain) – *Polymeric nanostructures to cross biological barriers*

14:15 – 14:30 Miss Alex Clarke (University of Southampton) - *Killing Intracellular Pathogens with Antibiotic Nanocapsules*

14:30 – 14:45 Miss Mazrina Mazlan (University of Manchester) - *Thermoresponsive and Degradable Poly(oligoethylene glycol methyl ether methacrylate) (POEGMA) Nanogels for Targeted Drug Model Release*

14:45 – 15:00 Miss Bangyu Song (University of Manchester) - *Macrophage-Membrane-Fused Liposomes for siRNA-Targeting of Pleiotrophin in Glioblastoma Therapy*

15:00 – 15:30 *Coffee break*

15:30 – 16:00 The future of nanomedicine; what's next? - A discussion panel

15:30 – 16:00 **Open discussion**

16:00 – 16:30 **Prize giving and closing ceremony. Meeting closed.**

Poster Presentations

1. **Marwa Gharib**, Queen's University Belfast. *RNA Nanoparticle-Based Delivery of Molecular Glue Degraders for Targeted Protein Degradation in Cancer Therapy.*
2. **Deepshikha**, University of Central Lancashire. *Preparation and Evaluation of Lipid polymer hybrid Nanoparticles for enhanced ocular delivery of Nepafenac.*
3. **Pedro Londono**, Queen's University Belfast. *Prednisolone nanocrystals for ophthalmic drug delivery: rational stabilizer screening and formulation optimization using design of experiments.*
4. **Yining Li**, Queen's University Belfast. *Developing Multi-functional Molecularly Imprinted Nanocomposites.*
5. **Eduardo Gallardo-Toledo**, University of Liverpool. *Assessment of creatine kinase in rat plasma as indicator of tissue damage after intramuscular administration of approved long-acting injectable medicines.*
6. **Megan McGawley**, University of Central Lancashire. *Development of aptamer loaded lipid-based nanoparticles for the treatment of glioblastoma multiforme.*
7. **Joshua Hollis**, University of Central Lancashire. *A Targeted Delivery Approach: Aptamer-Loaded Lipid Nanoparticles for Selective Breast Cancer Treatment.*
8. **Paula Milan-Rois**, University of Cambridge. *Protein nanoparticles for combined chemotherapy and oligonucleotide therapy against oncogenic lncRNAs in lung cancer.*
9. **Adriparna Paul**, Queen's University Belfast. *Production of Small Nanocrystals using Radiosensitising drugs for treatment of Glioblastoma.*
10. **María Melian**, Universidad de La República. *Production of Poorly Water-Soluble Anthelmintic Nanocrystals Using Dual Asymmetric Centrifugation.*
11. **Bharath kanna Ananthanarayanan**, Queen's University Belfast. *A novel top-down approach to produce super-small drug nanocrystals in a highly efficient manner.*
12. **Bunty Sharma**, Queen's University Belfast. *Metallcatanionic vesicles mediated photodynamic therapy.*
13. **Aws Al Jayyousi**, Queen's University Belfast. *Optimising intra-articular nanocrystal formulations.*
14. **Nikhil Gilbile**, Queen's University Belfast. *Systematic Optimisation of Plant-Derived Extracellular Vesicles for Intracellular Drug Delivery Applications.*
15. **Tamara Zwain**, University of Lancashire. *The Wonders of Advancing in Glioblastoma Therapy: Aptamer/ Plant-Based lipid Nanoparticles (LNP) and Aptamer-Targeted Drug Delivery.*
16. **Akshada Mhaske**, University of Central Lancashire. *Mitochondria-targeted nano-lipid carrier for copper chelation and oxidative stress reduction in neurodegenerative disorders.*
17. **Daniel Bell**, University of Birmingham. *Ultrasound Stimulated Antimicrobial Release from Silica Nanoparticles for Biofilm Eradication.*

18. **Mang Xu**, University of Manchester. *Enhancing Anti-cancer Immunity Using 2D-Nanoscale Immunotherapy Delivery Platforms.*
19. **Mang Xu**, University of Manchester. *Nanoscale liposomal delivery of lysate-based cancer vaccine.*
20. **Yixun Zhou**, University of Manchester. *Co-delivery of Tumour Lysate and R848 onto Graphene Oxide to Amplify Immunity Against Malignant Tumours.*
21. **Lydia Thompson**, University of Manchester. *Exploiting post-resection blood-brain barrier permeability for liposomal delivery of glioblastoma therapies.*
22. **Zainab Al-Quraishi**, University of Strathclyde. *Enhancing transfection efficacy in prostate cancer cells: a comparison of microfluidic versus manual formation of camptothecin-bearing pegylated polypropylenimine dendriplex.*
23. **Peifeng Li**, Queen's University Belfast. *Synthesis of B-doped carbon dots by microwave-assisted solvothermal method and application in glucose sensing.*
24. **Emma Cooper**, Loughborough University. *Understanding polymer-protein interactions in nanoparticle drug delivery systems.*
25. **Lucía Lopez-Vidal**, Queen's University Belfast. *3D-Printed Acyclovir Nanocrystals: A Novel Strategy for Herpes Simplex Therapy*