

# RNA DELIVERY PRATO 2026

## TUESDAY 1st September

**10am** **Welcome**

**10.30 am -12.30 pm** **OPENING SESSION**

10.30 am Opening lecture: Norbert Pardi (UPenn, Philadelphia) mRNA technology: vaccines, therapeutics, barriers and opportunities  
11.30 am Poster Flash Talks (20 x 3 mins)

**12.30 pm -1.30 pm** **lunch**

**1.30 pm - 3.30 pm** **SESSION 2**

1.30 pm Robin Shattock (Imperial College, London) Self-Amplifying RNA: From Molecular Promise to Clinical Performance  
2.10 pm Sabrina Leslie (University of British Columbia, Vancouver) Following the arrow of time: single-molecule to single-cell microscopy enables nanomedicine optimization  
2.50 pm Thomas Preiss (Australian National University, Canberra) Self Activating mRNA for cell-selective expression

**3.30 pm - 4.00 pm** **afternoon break**

**4.00 pm - 6.00 pm** **SESSION 3**

4.00 pm Zoltan Kis (University of Sheffield, UK) Continuous RNA production platform process-in-a-box  
4.20 pm Miffy Cheng (University of British Columbia, Vancouver) Opportunities and Challenges for Spatiotemporal Regulation of Gene Expression  
4.40 pm Tim Mercer (University of Queensland, Brisbane) Single-step synthesis of mRNA medicines  
5.00 pm Discussion panel: RNA design for durable and selective activity (1hr)

**6.00 pm - 8.00 pm** **Welcome reception**

## WEDNESDAY 2nd September

**8.00 am -10.00 am** **SESSION 4**

8.00 am Audrey Gallud (Astra Zeneca, Sweden) From Lab to Life: Current Trends and Future Directions in Engineering Scalable LNP Success  
8.30 am Mark Smales (University of Kent, UK) Design of mRNA vaccines and therapeutics for 'optimal' protein expression and authenticity  
9.00 am Owen Fenton (University of North Carolina, Chapel Hill) Advancing the Design Logic of mRNA Nanomedicines  
9.30 am Defang Ouyang (University of Macau) Artificial intelligence-driven rational design of ionizable lipids for mRNA delivery

**10.00 am -10.30 am** **morning break**

**10.30 am -12.30 pm** **SESSION 5**

10.30 am Heinrich Haas (Neovac, UK) Next generation mRNA nanoparticles for application in vaccination and therapy  
11.10 am Yvonne Perrie (University of Strathclyde, UK) From Single Payload to Platform: Broadening the Scope of LNP Delivery  
11.50 am Paula Cevaal (University of Melbourne) Applications of RNA delivery for therapy of infectious diseases  
12.10 pm Chantelle Ahlenstiel (University of New South Wales) Delivery of antiviral RNA therapeutics to the respiratory tract

**12.30 pm - 1.30 pm**      **lunch**

**1.30 pm - 3.30 pm**      **SESSION 6**

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|---------|---|---|
| 1.30 pm | Gaurav Sahay (Oregon State University, USA)                 | Chasing the Elusive: Rapid Measurement of Endosomal Escape In Vivo                                    |
| 2.10 pm | Angus Johnston (Monash University, Melbourne)               | Investigating the influence of ionisable lipid properties on endosome escape                          |
| 2.40 pm | Enrico Mastrobattista (Utrecht University, The Netherlands) | Development of an AI model for predicting endosomal escape and transfection efficiencies of mRNA-LNPs |
| 3.10 pm | Yuxin Yao (Monash University, Melbourne)                    | LNP-lipoprotein interactions and their potential impact on biodistribution and PK of mRNA-LNPs        |

**3.30 pm - 4.00 pm**      **afternoon break**

**4.00 pm - 6.00 pm**      **SESSION 7**

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| 4.00 pm | Rein Verbeke (Ghent University, Belgium)                                     | An update on the adjuvant activity in mRNA vaccines                                    |
| 4.20 pm | Germán Abel Islan (Johannes Gutenberg University, Mainz, Germany)            | From Structure to Immunity: Adjuvant-Integrated LNPs for Next-Generation mRNA Vaccines |
| 4.40 pm | Chantal Pichon (University of Orleans, France)                               | Innate immune adaptation to mRNA medicines and repeat-dosing constraints               |
| 5.00 pm | Discussion panel: innate immunity, vaccine design, safety and toxicity (1hr) |  |

**7.00 pm - 9.00 pm**      **Networking Dinner at Interludio II Ristorante**

**THURSDAY 3rd September**

**8.00 am - 10.00 am**      **SESSION 8**

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|---------|---|--|
| 8.00 am | Robert Hofmeister (Create Medicines, Boston, USA) | In vivo Programming of the Immune System - Directly in the Body  |
| 8.40 am | Ina Lentacker (Ghent University, Belgium)         | Impact of mRNA-LNPs on myeloid cell phenotypes and dynamics in the 4T1 triple negative breast cancer model |
| 9.00 am | Erica Quagliarini (Sapienza University of Rome)   | Engineering stealth bionanoarchitectures for efficient nucleic acid delivery                               |
| 9.20 am | Jie Tang (Monash University, Melbourne)           | Nanoparticle Engineering for Mucosal mRNA Delivery   |
| 9.40 am | Shadabul Haque (Monash University, Melbourne)     | Developing clinically relevant pulmonary delivery platforms for antiviral RNA therapeutics                 |

**10.00 am - 10.30 am**      **morning break**

**10.30 am - 12.30 pm**      **SESSION 9**

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|----------|---|---|
| 10.30 am | Lucrezia Caselli (University of Florence)                             | Lipid Nanoparticles with phase-separated core and biogenic surface for gene delivery                          |
| 10.50 am | Miffy Cheng (University of British Columbia, Vancouver)               | LNP Phase Separation and Functional Impacts in Gene Delivery  |
| 11.20 am | Markéta Paloncýová (Czech Advanced Technology and Research Institute) | Insight into Lipid Nanoparticle Structure and Function from the Perspective of molecular dynamics simulations |
| 11.30 am | Roy van der Meel (Eindhoven University of Technology)                 | Apolipoprotein nanoparticle platform technology for RNA delivery to immune cells                              |
| 11.50 am | Rongjun Chen (Imperial College London)                                | A Virus-Inspired Strategy for Enhanced RNA Delivery and Long-Term Room-Temperature Stability                  |

12.10 am Piotr Kowalski (University College Cork) Engineering polymeric nanocarriers for oral and systemic mRNA delivery

**12.30 pm -1.30 pm lunch**

**1.30 pm - 3.30 pm SESSION 10**

1.30 pm Brandon Dixon (Georgia Tech, USA) Lymphatic vessels as a therapeutic target for mRNA delivery with lipid nanoparticles

2.00 pm Dan Peer (Tel Aviv University, Israel) Therapeutic genome editing in cancer: the next frontier

2.30 pm Gavin Painter (Victoria University of Wellington, New Zealand) Next-Generation Malaria Vaccines: Harnessing Intramuscular mRNA-LNPs to Drive Liver Trm Responses

3.00 pm Simone Carneiro (LMU Munich) Optimization of lipid nanoparticles for CRISPR/Cas9 delivery: a strategy for enhanced gene editing in a lung tumor model

**3.30 pm - 4.00 pm afternoon break**

**4.00 pm - 6.00 pm SESSION 11**

4.00 pm Frank Caruso (University of Melbourne) Engineering Sticky Nanoparticles for Therapeutic Transport

4.20 pm Francesca Baldelli (Politecnico di Milano) Bio-Nano interactions of fluorinated gene delivery carriers: From Protein Corona Formation to Cellular and Membrane Responses

4.40 pm Zahra Rattray (University of Strathclyde, UK) Shaping the Bio-Nano Interface: Protein Corona Dynamics and Next-Generation Formulation Approaches

5.00pm Discussion panel: intracellular trafficking, biodistribution and protein corona (1hr)

**7.00 pm -10.00 pm Conference Dinner**

**FRIDAY 4th September**

**8.00 am -10.00 am SESSION 12**

8.00 am Kieu Lam (Genevant, Vancouver) Engineering Targeted mRNA Lipid Nanoparticles for Delivery to T Cells and HSPCs for Therapeutic Applications

8.40 am Yi Yan Yang (A\*STAR, Singapore) Active cellular targeting of RNA payloads: chemistry, biology, scale-up, and reality

9.20 am Pall Thordarson (University of New South Wales, Sydney) Functionalizing LNP's: What have we learned and what can we (not) learn from other bioconjugation chemistry adventures?

9.40 am Moore Chen (Monash University, Melbourne) Optimisation of LNP targeting by control of ligand orientation

**10.00 am -10.30 am morning break**

**10.30 am -12.30 pm CLOSING SESSION**

10.30am Discussion panel: targeted LNPs, mechanisms and applications (1hr)

11.30am Concluding Discussion (1hr)

**12.30 pm -1.30pm lunch and close**