



BIOLOGICS IN THERAPY



20th Advanced Course in Pharmaceutical Technology

Online 27-29 September 2021

Day 1 (September 27th) 9:00 a.m. CET

9:00- 9:10 Presentation of the School and Introduction Prof. Paolo Caliceti- Prof. Maria Carafa Session

1 Chair Prof. Giuseppe De Rosa- Prof. Massimo Fresta

9:10-9:50: Plenary Lecture Prof. Dr. Lucio Pastore (Università di Napoli) *Nucleic acids in therapy; potential and limitations*

9:50-10:00 Q&A

10:00-10:10 break

10:10-11:10 Poster Session

11:10-11:20 break

11:20-12:00 Plenary Lecture: Dr. Heinrich Haas – (BioNTech RNA Pharmaceuticals, Germany) *mRNA delivery*

12:00-12:10 Q&A

Day 2 (September 28th) 9:00 a.m. CET

Session 2 Chair Dr. Thomas Moore and Prof. Paolo Decuzzi

9:00-9:40 Plenary Lecture: Prof. Dr. Ernst Wagner – (Ludwig-Maximilians-Universität München, Germany) *RNA gene medicines: Evolution of synthetic nanocarriers*

9:40-9:50 Q&A

9:50-10:00 break

Session 3 Chair Prof. Anna Fadda, Prof. Nunzio Denora

10:00-10:40 Selected poster oral presentation (group 1)

10:00-10:05 Michela Mocchi *Pharmaceutical development of canine and equine freeze dried mesenchymal secretome for musculoskeletal disorders*

10:05-10:10 Alessia Romeo *Melatonin-loaded hybrid nanoparticles for delivery to the posterior eye segment*

10:10-10:15 Martina Ghezzi *Improvement of imiquimod solubility and skin retention using micelles of TPGS loaded with oleic acid*

10:15-10:20 Elena Giuliano *Wound healing features of rutin-loaded poloxamer 407 hydrogels*

10:20-10:40 Discussion and Q&A

10:40-10:50 break

Session 4 Chair Dr. Enrica Chiesa and Prof. Pasquale del Gaudio

10:50-11:10 Specialized Talk: Prof. Roy Van der Meel – (Eindhoven Technical University, Eindhoven, Netherlands) *Lipid nanoparticle technology enabling nucleic acid therapeutics*

11:10-11:15 Q&A

Session 5 Chair Prof. Anna Fadda, Prof. Nunzio Denora

11:15-11:55 Selected poster oral presentation (group 2)

11:15-11:20 Francesco Rama *Hyaluronic acid decorated liposomes: effects of the lipid anchor on skin permeation*

11:20-11:25 Gemma Conte *Hybrid lipid/polymer nanoparticles for pulmonary delivery of siRNA in cystic fibrosis lung inflammation*

11:25-11:30 Busra Arpac *Engineered lipoplexes for oligonucleotide delivery and cellular barriers crossing*

11:30-11:35 Sara Demartis *Nanotransferosomes-encapsulated dissolving microneedle arrays for dermal and transdermal delivery of drugs: a preformulation study*

11:35-11:55 Discussion and Q&A

11:55-12:00 break

Session 6 Chair Dr. Elena Bellotti and Prof. Nadia Passerini

12:00-12:20 Specialized Talk: Prof. Francesca Mastrotto- (University of Padova) *Polymeric delivery systems for therapeutic nucleic acids*

12:20-12:25 Q&A

Day 3 (September 29th) 9:00 a.m. CET

Session 7 Chair Prof. Paola Minghetti, Prof. Ruggero Bettini

9:00-9:20 Dr. Manuela Camisa (ADIENNE) *GMP manufacturing of biologics vs small molecules*

9:20-9:40 Dr. Irene Oddone (BSP) *Challenges in process development and scale-up for ADCs products*

9:40-10:00 Dr. Maria Luisa Nolli (NCNbio) *The revolution in medicine: the development of Advanced Therapy medicinal products*

10:00-10:10 break

10:10-10:30 Dr. Lorena Scotti (Lisapharma) *Scale-up of hybrid self-assembling nanoparticles: from bench to pilot plant*

10:20-10:50 Dr. Maria Teresa Peracchia (Sanofi) *Experience sharing of biologic drug development in the industry*

10:50-11:00 Q&A

11:00-12:00 Parallel tables Workshop Session

- 1) **Polymer-based DDS of biologicals** (Mentors: Prof. Pietro Matricardi and Francesco Puoci)
- 2) **Lipid-based DDS of biologicals** (Mentors: Prof. Silvia Arpicco and Donato Cosco)
- 3) **Pegilation in drug delivery** (Mentors: Prof. Stefano Salmaso and Gianfranco Pasut)
- 4) **Approaches for local drug delivery** (Mentors: Prof. Elisabetta Gavini and Francesco Cilurzo)