



# INNOVATION IN LOCAL DRUG DELIVERY SCHOOL FOR DOCTORATE IN PHARMACEUTICAL TECHNOLOGY

*Lake Como School of Advanced Studies - September 25-28, 2018*

## **18<sup>th</sup> School for Doctorate in Pharmaceutical Technology**

### **INNOVATION IN LOCAL DRUG DELIVERY**

**25-27 September 2018**

**Como**

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**18<sup>th</sup> School for Doctorate in Pharmaceutical Technology**

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**Abstract:**

Some diseases of particular anatomic districts are not adequately treated by systemic drug administration, mainly because of the difficulty to reach the district itself. Local drug delivery methods are currently developed to efficiently pathologies of inner ear, eyes, SNC, and to target drugs to tumors. A wide range of delivery systems or devices for local drug delivery have been developed and are currently under clinic evaluation. The school will cover the main topics related to Local Drug Delivery, including issues for designing delivery systems, characterization tools, *in vitro/in vivo* application and regulatory aspects. The program will include lessons from speakers with different expertise as well as oral presentation by PhD students, in order to provide a comprehensive view on the topic.

**School Directors:**

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# Program

<b>Day 1</b>	<b>Tuesday, 25 September 2018</b>
12:00 – 14:00	Registration
14:00	<b>Presentation of the school and welcome</b> Anna Fadda – Università degli Studi di Cagliari
14:20	<b>Memorial of Professor Nevio Picci</b> Francesca Iemma – Università degli Studi della Calabria
<i>Afternoon session</i>	<b>Local drug delivery in orthopaedic, and tissue regeneration strategies</b> <i>Moderator: Bice Conti – Università degli Studi di Pavia</i>
14:30	<b>Bone regeneration: strategies when the frame fails</b> Franco Benazzo, IRCCS Policlinico S. Matteo, Pavia
15:00	<b>Development of advanced drug delivery systems using natural based materials</b> Vitor M. Correlo, Universidade do Minho, Braga, Portogallo
15:30	<b>Viscoelastic gels for intra-articular administration</b> Laura Mayol, Università degli Studi di Napoli Federico II
16:00 – 17:30	<b>PhD Students Presentation - Group 1 (15 min/presentation)</b> <i>Discussant panel: Rossella Dorati – Università degli Studi di Pavia, Francesco Puoci – Università degli Studi della Calabria</i>
	<b>Electrospun nanofibers for tissue regeneration combined with drug delivery</b> Silvia Pisani – Università degli Studi di Pavia
	<b>A new wound dressing based on Spanish Broom fibers loaded with Vitamin E and Lactobacillus plantarum for skin wounds</b> Barbara Giordani - Università degli Studi di Bologna
	<b>Curcumin and resveratrol loaded electrospun nanofibers as wound dressings</b> Dalila Miele – Università degli Studi di Pavia
<i>Social event @Teatro Sociale only for under 30</i>	

<b>Day 2</b>	<b>Wednesday, 26 September 2018</b>
<i>Morning session 1</i>	<b>Drug delivery to skin and cutaneous annexes</b> <i>Moderator: Massimo Fresta – Università degli Studi di Catanzaro</i>
9:00	<b>UV – Damage and benefits</b> Steven Nisticò, Università degli Studi di Catanzaro
9:30	<b>Lipid nanoparticles as skin drug delivery systems: Main features and potential therapeutic application</b> Carmelo Puglia, Università degli Studi di Catania
10:00	<b>Drug delivery to the nail: Challenges and recent developments</b> Begoña Delgado-Charro, University of Bath, UK

10:30 – 11:30	<b>PhD Students Presentation - Group 2 (15 min/presentation)</b> <i>Discussant panel: Carlotta Marianelli, Università di Roma</i>
	<b>Brain delivery of Pt(IV)-prodrugs using pegylated solid lipid nanoparticles</b> Ilaria Arduino, Università degli Studi di Bari “Aldo Moro”
	<b>In search of smart lipid-based vesicles and smart triggers</b> Martina Nardoni, Sapienza Università di Roma
	<b>Supramolecular hydrogels of heterochiral tripeptides</b> Evelina Parisi Università degli Studi di Trieste
<i>Coffee break</i>	
<i>Morning session 2</i>	<b>Intratumor drug delivery</b> <i>Moderator: Giuseppe De Rosa – Università degli Studi di Napoli</i>
12:00	<b>Treating pancreatic cancer with hyperthermia: Translational requirements</b> Adrielle Prina-Mello, University Trinity College, Dublin, Ireland
12:30	<b>Implantable anti-cancer drug delivery systems</b> David Stepensky, Ben-Gurion University of Negev, Beersheba, Israel
13:00	<b>Nanomedicines for pediatric cancer therapy</b> Maria Blanco-Prieto, University of Navarra, Spain
<i>Lunch and poster session</i>	
15:00 – 16:30	<b>PhD Students Presentation - Group 3 (15 min/presentation)</b> <i>Discussant panel: Francesca Maestrelli, Università di Firenze, Chiara G.M. Gennari, Università di Milano</i>
	<b>Optimization and chemical-physical characterization of ASCn liposomes loaded with khellin</b> Laura Risaliti - Università degli Studi di Firenze
	<b>In situ gelling systems for the local delivery of natural compounds in the treatment of oral mucositis</b> Barbara Vigani - Università degli Studi di Pavia
	<b>Escin-based nanovesicles to improve berberine topical delivery</b> Giulia Vanti - Università degli Studi di Firenze
	<b>Formulation development of a biopolymer based multilayer film for the local treatment and wound repair of periodontitis</b> Karthik Neduri - Università degli Studi di Genova
<i>Coffee break</i>	
<i>Afternoon session 1</i>	<b>Nasal and pulmonary local drug delivery</b> <i>Moderator: Maria Jole Carafa - Università degli Studi di Roma</i>
17:00	<b>The relevance of local drug delivery in lung pathologies</b> Federico Lavorini - Università degli Studi di Firenze
17:30	<b>Lung delivery for fighting infectious diseases</b> Ruggero Bettini, Università degli Studi di Parma
<i>Aperitif and poster session</i>	

<b>Day 3</b>	<b>Thursday, 27 September 2018</b>
<i>Morning session</i>	<b>Drug delivery to eyes</b> <i>Moderator: Patrizia Chetoni - Università degli Studi di Pisa</i>
09:00 - 09:45	<b>Autologous limbal stem cell transplantation in patients with limbal stem cell deficiency</b> Giovanni Milazzo, Chiesi Farmaceutici Parma
09:45 – 10.00	<b>Evolution of the legislation for biotechnological products in Europe</b> Aurora Botti, Chiesi Farmaceutici Parma
10:00 – 11:30	<b>PhD Students Presentation - Group 4 (15 min/presentation)</b> <i>Discussant panel: Francesca Selmin - Università degli Studi di Milano, Nadia Passerini – Università degli Studi di Bologna</i>
	<b>Pharmaceutical development of extracellular vesicle formulations: from mesenchymal stem/stromal cells to cell secretome in regenerative medicine</b> Elia Bari, Università degli Studi di Pisa
	<b>Development of innovative FDM-3D-printing technologies for the production of patient-tailored medicines</b> Marilena Saviano, Università degli Studi di Salerno
	<b>Oral spray congealed microparticles for the local intestinal delivery of biologics</b> Serena Bertoni, Università degli Studi di Bologna
	<b>Maltodextrins as drying auxiliary agent for the preparation of easily resuspendable nanoparticles</b> Giulia Magri, Università degli Studi di Milano
<i>Coffee break</i>	
12:00 – 13:00	<b>PhD Students Presentation - Group 5 (15 min/presentation)</b> <i>Discussant panel: Silvia Pescina, Università di Parma, Silvia Arpicco, Università di Torino</i>
	<b>The effect of chitosan coating on albumin nanoparticles for nose-to-brain delivery</b> Vieri Piazzini, Università degli Studi di Firenze
	<b>Formulation and delivery of disease-modifying drugs as nasal powders for Alzheimer's disease</b> Laura Tiozzo Fasiolo, Università degli Studi di Parma
	<b>Development of novel nanomicellar formulations for the ocular delivery of cyclosporine a</b> Eleonora Terreni, Università degli Studi di Pisa
<i>Lunch</i>	
<i>Afternoon session</i>	<b>The future in the development of medicines</b> <i>Moderator: Paolo Caliceti – Università degli Studi</i>
14.30 – 15.30	<b>In vitro human 3D models and advanced culture systems</b> <b>Investigating the metastatic cascade through vascularized 3D human models</b> Matteo Moretti, Istituto Ortopedico Galeazzi, Milano

15:30 – 16.15	<b>Development of a delivery systems for a local administration – A case study</b> Torkel Gren, Recipharm, Solna, Sweden
16:15 – 17:00	<b>Formulation and stability of highly potent anticancer drugs</b> Irene Oddone / Giuliana Verdone, BSP Pharmaceuticals S.p.A.

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