



*4<sup>th</sup> International Intensive course and workshop :*

**Nanomedicines- Nanoparticulates for Drug Delivery**

**(& GALENOS THEMATIC WORKSHOP)**

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**September 11-22, 2008**

***COURSE PROGRAM***

11/9/2008 Thursday	Arrival for IP – students / organizers / instructors <b>Afternoon: Orientation</b> Welcome reception
12/9/2008 Friday	<b>Dept. of Pharmacy, Univ. of Patras</b> 1 <sup>st</sup> Day- <b>Introduction in Nanoparticles for Drug delivery Applications</b> (Focus on Liposomes) Introductory Lectures & Practicals –Demonstrations of Liposome/Nanoparticle Preparation techniques <i>S.G.Antimisiaris- P. Klepetsanis- S. Mourtas</i> Morning: 9.30 – 12.00 Afternoon: 14.00 – 18.00
13/9/2008 Saturday	<b>Dept. of Pharmacy, Univ. of Patras</b> 2 <sup>nd</sup> Day <b>Introduction in Nanoparticles</b> / Demonstrations of Techniques for characterization and evaluation of performance of nanoparticles <i>P. Klepetsanis , N. Bouropoulos, D. Mouzakis</i> Visit to FORTH- ICEHT (informal for workshop students) (Arrival day for Marie Curie Thematic Meeting) Morning: 9.30 – 12.00 Afternoon: 14.00 – 18.00
14/9/2008 Sunday	Cultural Event Day
15/9/2008 Monday	<b>Conference Center, Univ. of Patras / ICEHT</b> 08:30 - 09:00 <b>Opening Ceremony</b>

	<p>(representative from Patras Univ.)</p> <p>09:00 - 10:30 Key Notes (2 Speakers)</p> <p><b>G. Gregoriadis</b> (London, UK) “General Introduction on Liposomes in Drug Delivery -Challenges”</p> <p><b>P. Macheras</b> (Athens, GR) “Biopharmaceutic-Pharmacokinetic Issues related to Drug Delivery”</p> <p>10:30 - 11:00 Coffee Break</p> <p>11:00 - 13:00 Euro-PhD presentations (8 presentations, 15 min)</p> <p>13:00 - 14:00 Buffet Lunch</p> <p>14:00 - 15:45 Euro-PhD presentations (7 presentations, each 15 min)</p> <p>15:45 - 16:00 Euro-PhD award ceremony</p> <p>16:00 - 16:30 Coffee Bread</p> <p>These fellows have indicated to give their Euro-PhD presentation:</p> <ol style="list-style-type: none"> <li>1. Carla Caddeo</li> <li>2. Ivana D'Angelo</li> <li>3. Roman Egle</li> <li>4. Catalina Peptu</li> <li>5. Maria Leticia Manca</li> <li>6. Ana Melero</li> <li>7. Mine Orlu</li> <li>8. Michaela Madlova</li> <li>9. Manuel Santander Ortega</li> <li>10. Maïke Stiers</li> <li>11. Clausdio Surace</li> <li>12. Sebastian Taetz</li> <li>13. Ayca Yildiz</li> <li>14. Patrizia Paolicelli</li> </ol> <p>16:30 - 18:30 Galenos Marie Curie Consortium Meeting (for professors) at ICEHT</p> <p>16:30 - 18:30 Management Training (for students)</p> <p><b>Evening:</b> Galenos-Dinner for all Fellows and Supervisors of the Galenos Marie Curie Project</p>
<p>16/9/2008 Tuesday</p>	<p><b>Conference Center, Univ. of Patras</b></p> <p><b>Morning (9.00 -12.30)</b></p> <p><i>Theme: I. Liposomes –Nanomedicines-Biopharmaceutic / Pharmacokinetic Issues</i></p> <p><b>E. Fattal</b>, (Paris, FR) “Liposomes for antisense and siRNA delivery”</p> <p><b>A. Fahr</b> (Jena, DE) “Photodynamic therapy using liposomal formulations”.</p> <p><i>Liposomes and other administration routes</i></p> <p><b>E. Fattal</b>, (Paris, FR) “Liposomes for intraocular delivery of biotech</p>

	<p>products “</p> <p><b>A-M. Fadda</b> (Cagliari, IT) “Liposomes and niosomes for cutaneous drug delivery “</p> <p><b>Afternoon (14.30 – 18.30)</b></p> <p><b>C. Ehrhardt</b>, (Dublin, IR) "Liposome aerosols in cancer therapy"</p> <p><i>Theme: II. Nanomedicines: Technological advances</i></p> <p><b>J. Kristl</b> (Ljubljana, SL) "Cell uptake of solid lipid nanoparticles and their cytotoxicity"</p> <p><b>C-M Lehr</b> (Saarbruecken, DE) "Nanotechnology for delivering drugs across biological barriers: intestines, skin and lungs”</p> <p><b>P. Maincent</b> (Nancy, FR) “Encapsulation of nanoparticles in microparticles: in vitro and in vivo approach.”</p> <p><b>M.G. Fuentes</b> (Compostela,ES) "Nanomedicine: a target of opportunity in cancer therapy and research</p>
<p>17/9/2008 Wednesday</p>	<p><b>Conference Center, Univ. of Patras</b></p> <p><b>Morning (9.00 -12.30)</b></p> <p><b>T. Christopoulos</b> (Patras, Greece) "Nanotechnology applications in bioanalytical methods: Nanoparticle-based biosensors"</p> <p><i>Theme II (continued)</i></p> <p><b>P. Constantinides</b> (Gurnee, IL, USA) “Scientific and technological advances in nanoparticles for drug formulation and delivery“</p> <p><b>B. Forbes</b> (London, UK)"Nanoparticles for inhaled drug delivery"</p> <p><b>B. Forbes</b> (London, UK) “Influencing drug absorption and retention in the lung"</p> <p><i>Theme III. Gene Delivery:</i></p> <p><b>W. Hennink</b> (Utrecht, NL) “Polymer based gene delivery systems”</p> <p><b>Afternoon (14.30 – 18.30)</b></p> <p><b>M. Gumbleton</b> (Cardiff, UK)"Phage display applications in drug delivery and targeting to Lung and Blood Brain Barrier"</p> <p><i>Theme IV. Brain Targeting</i></p> <p><b>P. Kallinteri</b> (Kent, UK) “Novel PGA nanoparticles for brain tumour therapy”</p> <p><i>Theme:V. Nanomedicines: Biocompatibility Issues:</i></p> <p><b>Y.Missirlis</b> (Patras, GR) “Nanomedicines and Biocompatibility”</p> <p><b>G. Michanetzis</b> (Patras,GR) “Evaluation of Haemocompatibility of Nanomedicines– Has it been underestimated? ”</p> <p><b>Poster Session 1</b></p>

<p>18/9/2008 Thursday</p>	<p><b>Conference Center, Univ. of Patras / ICEHT</b> <b>Morning (9.00 -12.30)</b> (Theme:V . Continued)</p> <p><b>M. Moghimi</b> (Copenhagen, DK) “Nanoparticles and Complement activation”</p> <p><b>Visit to FORTH_ICEHT: Presentation of Institute by President Prof. C. Galiotis, and tour in Institute Laboratories and Facilities</b></p> <p><b>Afternoon (14.30 – 18.30)</b></p> <p>Oral delivery– <i>Absorption Issues</i></p> <p><b>P. Constantinides</b> (Gurnee, IL, USA) Self-assembled lipid nanostructures in drug delivery: physicochemical and biopharmaceutical aspects</p> <p><b>R. Kumar</b> (Glasgow, UK)“Nanomedicines: The potential of biodegradable nanoparticles for peroral drug delivery”.</p> <p><b>D. Fatouros</b> (Portsmouth, UK) "Oral delivery of SNEDDS formulations: Physicochemical characterization of their lipolytic products in the GI tract”</p> <p><b>C. Reppas</b> (Athens, GR)“Absorption of drugs administered in lipids”</p> <p><b>Poster Session 2</b></p>
<p>19/9/2008 Friday</p>	<p><b>Conference Center, Univ. of Patras</b></p> <p><b>Morning (9.00 -12.30)</b></p> <p><i>Special Issues in Nanomedicines</i></p> <p><b>J. Bouwstra</b> (Leiden, NL)-Skin Delivery I]. Skin structure and transdermal an dermal delivery II]. Nanoparticulate sytems for dermal delivery including vaccination.</p> <p><b>R. Schiffelers</b> (Utrecht, NL) <i>Therapeutic Applications</i> Selected Therapeutic examples in I] Inflammatory diseases II] Cancer</p> <p><i>Special constructions</i></p> <p><b>S. Sofou</b> (N.Y, USA) “pH controlled lateral phase separation on lipid bilayer membranes: applications in liposome-based drug delivery”</p> <p><b>Afternoon (14.30 – 18.30)</b></p> <p>“Calcium phosphate cements for clinical applications”</p> <p><b>N. Bouropoulos</b> (Patras, GR) Part A: Synthesis &amp; applications</p> <p><b>D. Mouzakis</b> (Patras, GR) Part B: Biomechanical Properties &amp; Characterization</p> <p><b>G. Voyatzis</b> (Patras, GR) “Antimicrobial cross linked polystyrene nanospheres for specialty multifunctional textile production”</p> <p><b>A. Bakandritsos</b> (Patras, GR) “Synthesis and Characterization of Nanoparticulate Magnetic Colloids Towards Biomedical Applications.”</p>

20/9/2008 Saturday	<p><b>Practical Course I</b> (Students will be divided in groups and will rotate between 6 different lab projects / 3 each day)</p> <p>10.00-12.00 <b>A</b> (preparation techniques)</p> <p>Lunch break</p> <p>14.00-16.00 <b>B</b> (characterization)</p> <p>16.00- 18.00 <b>C</b> (stability- delivery routes)</p> <p><b>Instructors:</b> V. Ntimenou; P. Hatzi; S. Loi, M. Kastellorizios, S. Duraj, G. Perdikaris</p>
21/9/2008 Sunday	<p><b>Practical Course II</b> (Students will be divided in groups and will rotate between 6 different lab projects / 3 each day)</p> <p>10.00-12.00 <b>D</b> (cell interactions)</p> <p>Lunch break</p> <p>14.00-16.00 <b>E</b> (Types of liposomes for dermal-transdermal administration)</p> <p>16.00- 18.00 <b>F</b> (Protein encapsulation, Freeze dry techniques)</p> <p><b>Instructors:</b> V. Ntimenou; P. Hatzi; S. Loi, M. Kastellorizios, S. Duraj, G. Perdikaris</p>
22/9/2008 Monday	<p><b>Poster Session- Student Presentations</b></p> <p><b>Results of Practical courses</b> – Students will present their results (encapsulation efficiency, stability)</p> <p><b>Student evaluation Tests</b> (1 hour multiple choice test will be prepared including questions from all lecturers)</p> <p><b>Evaluation of course by students</b></p> <p>Concluding Remarks -Closing</p>