

Introduction	
Friday, April 9, 2021	
16-19	A live streaming commencement ceremony of the Master's course, a quick glance at the lectures, the topics and modules included, the lecturers, and the internship program
Tuesday, June 22, 2021	
Module 1 Fundamentals of Regenerative Medicine	9-11 <b>Introduction to the course, discussion of aims and expectations</b> Ornella Parolini, course organizer and attendees
	11-13 <b>The history of regenerative medicine</b> Ranieri Cancedda (Università degli Studi di Genova, Genoa, Italy)
	13-15 <b>Lunch with the experts</b>
	15-17 <b>Regenerative medicine: Pandora's box</b> Silvio Garattini (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy)
	17-19 <b>Biology and properties of stem cells: embryonic, adult and induced pluripotent</b> Maddalena Mastrogiacomo (Università degli Studi di Genova, Genoa, Italy)
	Wednesday, June 23, 2021
Module 2 Advanced Stem Cell Concepts	9-11 <b>Regenerative medicine and its cultural and anthropological outcomes</b> Mons. Tomasz Trafny (Pontifical Council for Culture)
	11-13 <b>Regeneration from the salamander's point of view: understanding key players</b> Ken Muneoka (Texas A&M University, College Station, Texas, USA)
	13-15 <b>Lunch with the experts</b>
	15-17 <b>Hematopoietic stem cells: milestones in umbilical cord blood transplantation</b> Annalisa Ruggeri (IRCCS San Raffaele Scientific Institute, Milan, Italy)
	17-19 <b>Hematopoietic stem cells for cerebral palsy</b> Joanne Kurtzberg (Duke University School of Medicine, Durham, North Carolina, USA)
	Thursday, June 24, 2021
Module 3 Modern Era of Regenerative Medicine	9-11 <b>Bone marrow as a multifunctional stem cell niche: the key players</b> Diego Correa (University of Miami, Miller School of Medicine, Miami, Florida, USA)
	11-13 <b>Mesenchymal stromal cells: from the 2006 MSC consensus to current views</b> Massimo Dominici (Università degli Studi di Modena e Reggio Emilia, Modena, Italy)
	13-15 <b>Lunch with the experts</b>
	15-17 <b>Use of induced pluripotent stem cells and tissue engineering to model brain and liver disease</b> Catherine Verfaillie (KU Leuven, Leuven, Belgium)
	17-19 <b>Panel debate with experts working with different MSC sources (bone marrow, adipose tissue, perinatal tissues): nomenclature, specific features and properties, the handling protocols' dilemma</b> Massimo Dominici (Università degli Studi di Modena e Reggio Emilia, Modena, Italy); Ornella Parolini (Università Cattolica del Sacro Cuore, Rome, Italy); Laura de Girolamo (IRCCS Istituto Ortopedico Galeazzi, Milan, Italy)
	Friday, June 25, 2021
Module 3 Modern Era of Regenerative Medicine	9-11 <b>Multilineage differentiating stress enduring (Muse) cells</b> Mari Dezawa (Tohoku University Graduate School of Medicine, Sendai, Japan)
	11-13 <b>Relevance of inflammation in disease and tissue regeneration</b> Silvano Sozzani (Sapienza Università di Roma, Rome, Italy)
	13-15 <b>Lunch with the experts</b>
	15-17 <b>Regeneration of Neuronal Network</b> Zaal Kokaia (Lund University, Stem Cell Center, Lund, Sweden)
	17-19 <b>The brain and the immune system: regenerating the injured brain</b> Elisa R Zanier (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy)
	Saturday, June 26, 2021
Module 3 Modern Era of Regenerative Medicine	9-11 <b>Cell therapy for muscular dystrophy</b> Giulio Cossu (University of Manchester, Manchester, UK)
	11-13 <b>Extracellular vesicles in cardiac regeneration</b> Sveva Bollini (Università degli Studi di Genova, Genoa, Italy)
	13-15 <b>Lunch with the experts</b>
	15-17 <b>Discussion: Cell replacement versus paracrine effects</b> Ornella Parolini (Università Cattolica del Sacro Cuore, Rome, Italy)
	18-21 <b>Cocktail with the experts</b>
	Sunday, June 27, 2021
9-13	<b>Working Groups with tutors and experts on specific issues/criticisms/controversies related to module topics</b>

<b>Module 4</b> Tissue Engineering and Biomaterials	<b>Monday, August 30, 2021</b>	
	11-13	<b>Nature inspires chemical engineers to develop smart devices for regenerative medicine &amp; nanomedicine</b> Anna Tampieri (National Research Council - CNR, Faenza, Italy)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>Biomimicry at nanoscale level: a step forward towards tissue integration and regeneration</b> Matteo Santin (University of Brighton, Brighton, UK)
	17-19	<b>Biomimetic chemistry and biomechanics in bone scaffold design</b> Anna Tampieri (National Research Council - CNR, Faenza, Italy)
	<b>Tuesday, August 31, 2021</b>	
	9-11	<b>3D printing and bioprinting techniques: towards new frontiers</b> Ilaria Cacciotti (University of Rome "Niccolò Cusano", Rome, Italy)
	11-13	<b>The multi-faceted application of graphene-based materials</b> Massimiliano Papi (Università Cattolica del Sacro Cuore, Rome, Italy)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>Fibrous membranes as promising platforms for guided regenerative medicine</b> Ilaria Cacciotti (University of Rome "Niccolò Cusano", Rome, Italy)
<b>Module 5</b> Modelling Diseases from Cells to Organisms	17-19	<b>Static vs. dynamic culture systems: addressing biomimicry with bioreactors</b> Ivan Martin (University of Basel, Basel, Switzerland)
	<b>Wednesday, September 1, 2021</b>	
	9-11	<b>Organoids and organs on chip</b> Uwe Marx (TissUse GmbH, Berlin, Germany)
	11-13	<b>Regulatory testing requirements: an overview for human medicinal products and 3R testing approach (replacement, reduction, refinement)</b> (To be determined)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>Pre-clinical animal models for regenerative medicine applications</b> Peter Ponsaerts (University of Antwerp, Antwerp, Belgium)
<b>Module 6</b> Veterinary Medicine Applications of Regenerative Medicine	17-19	<b>Emerging challenges in Veterinary medicine applications</b> Offer Zeira (San Michele Veterinary Hospital, Tavazzano con Villavesco, Lodi, Italy)
	<b>Thursday, September 2, 2021</b>	
	9-11	<b>Experimental and clinical tissue engineering of bone and osteochondral tissue</b> Antonio Crovace (Università di Bari Aldo Moro, Bari, Italy)
	11-13	<b>Novel cell-based strategies for tendon regeneration</b> Valentina Russo (Università di Teramo, Teramo, Italy)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>Stem cells for feline and canine cardiomyopathies</b> Jayesh Dudhia (Royal Veterinary College, University of London, London, UK)
	17-19	<b>Equine amniotic cells and their potential application in veterinary regenerative medicine: in vitro and preclinical studies</b> Anna Lange-Consiglio (Università degli Studi di Milano, Milan, Italy)
<b>Module 7</b> Roadmap to Clinical Translation	<b>Friday, September 3, 2021</b>	
	9-11	<b>Mesenchymal Stem Cells to induce tolerance to organ transplant</b> Giuseppe Remuzzi (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Bergamo, Italy)
	11-13	<b>The role of regulatory bodies in translational research: from basic science to clinical trials</b> Maria Cristina Galli (Istituto Superiore di Sanità, Rome, Italy)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>Update on clinical trials with mesenchymal stromal cells</b> Martino Introna (Azienda Socio Sanitaria Territoriale Papa Giovanni XXIII, Bergamo, Italy)
	17-19	<b>Advanced therapy medicinal products, the road to the clinic</b> Graziella Pellegrini (Università di Modena e Reggio Emilia, Modena, Italy)
	20-22	<b>Dinner with the experts</b>
	<b>Saturday, September 4, 2021</b>	
	9-11	<b>Update on clinical trials with hematopoietic stem cells</b> Maria Ester Bernardo (San Raffaele-Telethon Institute for Gene Therapy (SR-TIGET), IRCCS San Raffaele Scientific Institute, Milan, Italy)
	11-13	<b>Update on clinical trials with induced pluripotent stem cells</b> Marius Wernig (Stanford University School of Medicine, Stanford, CA, USA)
13-15	<b>Lunch with the experts</b>	
15-17	<b>Working Groups with tutors and experts on specific issues/criticisms/controversies related to module topics</b>	

<b>Module 8</b> From a Research Project to a Translational Product	<b>Wednesday, January 26, 2022</b>	
	10-13	<b>How to write a successful grant: European vs. American calls for grants</b> Chiara Gabbi (Independent Scholar, Reggio Emilia, Italy)
	14-19	
	20-22	<b>Dinner with the experts</b>
	<b>Thursday, January 27, 2022</b>	
	9-13	<b>A practical session: writing grants and establishing collaborations</b> Chiara Gabbi (Independent Scholar, Reggio Emilia, Italy); Laura Motta (Università Cattolica del Sacro Cuore, Rome, Italy)
	13-15	<b>Lunch with the experts</b>
<b>Module 9</b> From Research to Clinic: A Dialogue Between Research Laboratories and Competent Authorities	15-17	<b>Technology transfer and intellectual property</b> Filippo Leone (Università Cattolica del Sacro Cuore, Rome, Italy)
	17-19	<b>Experience with the regulatory board: from inspection to certification</b> Representative of national and international biotech and pharmaceutical companies in the field of Regenerative Medicine and Tissue Engineering
	<b>Friday, January 28, 2022</b>	
	9-11	<b>Classification of biological products and Advanced Therapy Medicinal Products (ATMPs): an international overview</b> Maria Cristina Galli (Istituto Superiore di Sanità, Rome, Italy); Other Regulatory Institution Representatives
	11-13	<b>Good Laboratory Practice (GLP) in preclinical research</b> (To be determined)
	13-15	<b>Lunch with the experts</b>
	15-17	<b>"From discovery to therapy": simulations of practical approaches to comply with regulatory requirements</b> Maria Cristina Galli (Istituto Superiore di Sanità, Rome, Italy)
	17-19	<b>GMP requirements for Advanced Therapy Medicinal Products</b> Simona Russo (Agenzia Italiana del Farmaco – AIFA, Rome, Italy) (To be confirmed)
	<b>Saturday, January 29, 2022</b>	
	9-11	<b>Good Clinical Practice (GCP)</b> Angela Del Vecchio (Agenzia Italiana del Farmaco – AIFA, Rome, Italy) (To be confirmed)
<b>Module 10</b> Regenerative Medicine: Market Access and Business Opportunities	11-13	<b>An introduction to regulatory affairs in pharmaceutical sector and presentation of a medicinal product certification scheme</b> Giuseppa Pistrutto (Agenzia Italiana del Farmaco – AIFA, Rome, Italy) (To be confirmed)
	13-15	<b>Lunch with the experts</b>
	15-18	<b>Market access strategies</b> Americo Cicchetti (Università Cattolica del Sacro Cuore, Rome, Italy)
	19-21	<b>Cocktail with the experts</b>
	<b>Sunday, January 30, 2022</b>	
9-11	<b>Commercialization of cell-based products, the experience of companies</b> Representative of industries and biotech companies	
11-13	<b>Biotech industries and companies in the regenerative medicine scenario</b> Representative of national and international industries and biotech companies	
13-15	<b>Lunch with the experts</b>	
15-18	<b>Conclusive remarks, take-home messages, SWAP analysis of course content and outcomes</b>	

**Module 11 - Workshop***To be defined*

The attendees will be invited to attend an international workshop/meeting in regenerative medicine

**Update****Friday, February 25, 2022**16-19 **A live streaming closing ceremony of the Master's course in order to provide the students with the opportunity to discuss their internship and provide feedback on the course**