

Introduction

Friday, June 10, 2022

*4pm-7pm 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

Module 1 Fundamentals of Regenerative Medicine	<i>Lessons in presence at the Università Cattolica del Sacro Cuore in Rome</i>	
	Friday, July 8, 2022	
	09am-10:30am	The history of regenerative medicine Ranieri Cancedda (Università degli Studi di Genova, Genoa, Italy)
	10:30am-12pm	Regenerative medicine and its cultural and anthropological outcomes Mons. Tomasz Trafny (Pontifical Council for Culture)
	2:30pm-4pm	Biology and properties of stem cells: embryonic, adult and induced pluripotent Wanda Lattanzi (Università Cattolica del Sacro Cuore, Rome, Italy)
4pm-5:30pm	Regeneration from the salamander's point of view: understanding key players (To be identified)	
Module 2 Advanced Stem Cell Concepts	Friday, July 8, 2022	
	5:30pm-7pm	Biology of hematopoietic stem cells Ugo Testa (Istituto Superiore di Sanità, Rome, Italy)
	Saturday, July 9, 2022	
	09am-10:30am	Mesenchymal stromal cells: from the 2006 MSC consensus to current views Massimo Dominici (Università degli Studi di Modena e Reggio Emilia, Modena, Italy)
	10:30am-12pm	Mesenchymal stromal cells for musculoskeletal regeneration: current status and perspectives Dimitrios Kouroupis (University of Miami, Miller School of Medicine, Miami, Florida, USA)
	12pm-1:30pm	Adipose-derived mesenchymal stromal cells Enrico Ragni (IRCCS Istituto Ortopedico Galeazzi, Milan, Italy)
	3pm-4:30pm	Mesenchymal stromal cells from human placenta Ornella Parolini (Università Cattolica del Sacro Cuore, Rome, Italy)
	4:30pm-6pm	Multilineage differentiating stress enduring (Muse) cells Mari Dezawa (Tohoku University Graduate School of Medicine, Sendai, Japan)
6pm-7pm	Panel debate with experts working with different MSC sources (bone marrow, adipose tissue, perinatal tissues): nomenclature, specific features and properties, the handling protocols' dilemma Massimo Dominici (Università degli Studi di Modena e Reggio Emilia, Modena, Italy); Dimitrios Kouroupis (University of Miami, Miller School of Medicine, Miami, Florida, USA); Enrico Ragni (IRCCS Istituto Ortopedico Galeazzi, Milan, Italy); Ornella Parolini (Università Cattolica del Sacro Cuore, Rome, Italy); Mari Dezawa (Tohoku University Graduate School of Medicine, Sendai, Japan)	
Module 3 Modern Era of Regenerative Medicine	<i>Lessons in presence at the Università Cattolica del Sacro Cuore in Rome</i>	
	Sunday, July 10, 2022	
	9am-10:30am	The brain and the immune system: regenerating the injured brain Francesca Pischiutta (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy)
	10:30am-12pm	Cell therapy for muscular dystrophy Giulio Cossu (University of Manchester, Manchester, UK)
12pm-1:30pm	Extracellular vesicles in cardiac regeneration Sveva Bollini (Università degli Studi di Genova, Genoa, Italy)	
Module 3 Modern Era of Regenerative Medicine	<i>Online Lessons</i>	
	Friday, July 15, 2022	
	2pm-3:30pm	Relevance of inflammation in disease and tissue regeneration (To be identified)
	3:30pm-5pm	Regeneration of Neuronal Network Zaal Kokaia (Lund University, Stem Cell Center, Lund, Sweden)
5pm-6:30pm	Hematopoietic stem cells for cerebral palsy (To be identified)	

Module 4 Tissue Engineering and Biomaterials	Online Lessons	
	Friday, September 30, 2022	
	9am-10:30am	Nature inspires chemical engineers to develop smart devices for regenerative medicine & nanomedicine Anna Tampieri (National Research Council - CNR, Faenza, Italy)
	10:30am-12pm	Biomimicry at nanoscale level: a step forward towards tissue integration and regeneration Matteo Santin (University of Brighton, Brighton, UK)
	12pm-1:30pm	Biomimetic chemistry and biomechanics in bone scaffold design Simone Sprio (National Research Council - CNR, Faenza, Italy)
	3pm-4:30pm	The multi-faceted application of graphene-based materials Massimiliano Papi (Università Cattolica del Sacro Cuore, Rome, Italy)
4:30pm-6pm	3D printed structures and fibrous membranes as promising and innovative scaffolds for the regenerative medicine Ilaria Cacciotti (University of Rome "Niccolò Cusano", Rome, Italy)	
Module 5 Veterinary Medicine Applications of Regenerative Medicine	Online Lessons	
	Saturday, October 1, 2022	
	9am-10:30am	Emerging challenges in Veterinary medicine applications Offer Zeira (San Michele Veterinary Hospital, Tavazzano con Villavesco, Lodi, Italy)
	10:30am-12pm	Experimental and clinical tissue engineering of bone and osteochondral tissue (To be identified)
	12pm-1:30pm	Novel cell-based strategies for tendon regeneration Valentina Russo (Università di Teramo, Teramo, Italy)
	3pm-4:30pm	Stem cells for feline and canine cardiomyopathies Jayesh Dudhia (Royal Veterinary College, University of London, London, UK)
4:30pm-6pm	Equine amniotic cells and their potential application in veterinary regenerative medicine: in vitro and preclinical studies Anna Lange-Consiglio (Università degli Studi di Milano, Milan, Italy)	
Module 6 Modelling Diseases from Cells to Organisms	Lessons in presence at the Università Cattolica del Sacro Cuore in Rome	
	Friday, January 27, 2023	
	9am-10:30am	Static vs. dynamic culture systems: addressing biomimicry with bioreactors Ivan Martin (University of Basel, Basel, Switzerland)
	10:30am-12pm	Use of induced pluripotent stem cells and tissue engineering to model brain and liver disease Catherine Verfaillie (KU Leuven, Leuven, Belgium)
	12pm-1:30pm	Organoids and Organs on chips to advance patient benefit and animal welfare Uwe Marx (TissUse GmbH, Berlin, Germany)
	3pm-4:30pm	Preclinical animal models versus iPSC-derived cell models in regenerative medicine Peter Ponsaerts (University of Antwerp, Antwerp, Belgium)
Module 7 Roadmap to Clinical Translation	Lessons in presence at the Università Cattolica del Sacro Cuore in Rome	
	Saturday, January 28, 2023	
	9am-10:30am	Mesenchymal Stem Cells to induce tolerance to organ transplant Giuseppe Remuzzi (Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Bergamo, Italy)
	10:30am-12pm	Novel perspective of adoptive cell mediated cancer immunotherapies Martino Introna (Azienda Socio Sanitaria Territoriale Papa Giovanni XXIII, Bergamo, Italy)
	12pm-1:30pm	Advanced therapy medicinal products, the road to the clinic Graziella Pellegrini (Università di Modena e Reggio Emilia, Modena, Italy)
	3pm-4:30pm	Update on clinical trials with hematopoietic stem cells Maria Ester Bernardo (San Raffaele-Telethon Institute for Gene Therapy (SR-TIGET), IRCCS San Raffaele Scientific Institute, Milan, Italy)
4:30pm-6pm	Update on clinical trials with induced pluripotent stem cells Marius Wernig (Stanford University School of Medicine, Stanford, CA, USA)	
Module 8 From a Research Project to a	Online Lessons	
	Friday, February 10, 2023	
	2pm-6pm	How to write a successful grant: European vs. American calls for grants Chiara Gabbi (Independent Scholar, Reggio Emilia, Italy)

Translational Product	Saturday, February 11, 2023	
	11am-12:30pm	Technology Transfer and Intellectual Property Management (To be identified)
	2pm-6pm	A practical session: writing grants and establishing collaborations Chiara Gabbi (Independent Scholar, Reggio Emilia, Italy)
Module 9 From Research to Clinic: A Dialogue Between Research Laboratories and Competent Authorities	Online Lessons	
	Friday, March 3, 2023	
	9am-9:45am	The role of regulatory bodies in translational research: from basic science to clinical trials Maria Cristina Galli (Istituto Superiore di Sanità, Rome, Italy)
	9:45am-10:30am	GMP requirements for Advanced Therapy Medicinal Products Maria Cristina Galli (Istituto Superiore di Sanità, Rome, Italy)
	10:30am-12pm	Good Laboratory Practice (GLP) in preclinical research Annarita Meneguz (Istituto Superiore di Sanità, Rome, Italy)
	12pm-1:30pm	EU regulatory system for ATMPs: focus on the Committee for Advanced Therapies (CAT) responsibilities Barbara Bonamassa (Agenzia Italiana del Farmaco – AIFA, Rome, Italy) – <i>To be confirmed</i>
	3pm-4:30pm	The long journey of ATMP development between Science and Regulatory compliance Maria Luisa Nolli (NCNbio srl, Milan, Italy)
Module 10 Regenerative Medicine: Market Access and Business Opportunities	Saturday, March 4, 2023	
	9am-10:30am	Market access strategies (To be identified)
	10:30am-12pm	Biotech industries and companies in the regenerative medicine scenario Salvatore Simmini (STEMCELL Technologies UK, Cambridge, UK)

Module 11 Workshop

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

Closing ceremony

Friday, May 19, 2023

Presentation and defence of attendees' final reports

* Central European Time