



Centro 3R

III Convegno Annuale



**L'era delle 3R:
modelli *in silico*, *in vitro* e *in vivo*
per promuovere la ricerca traslazionale**

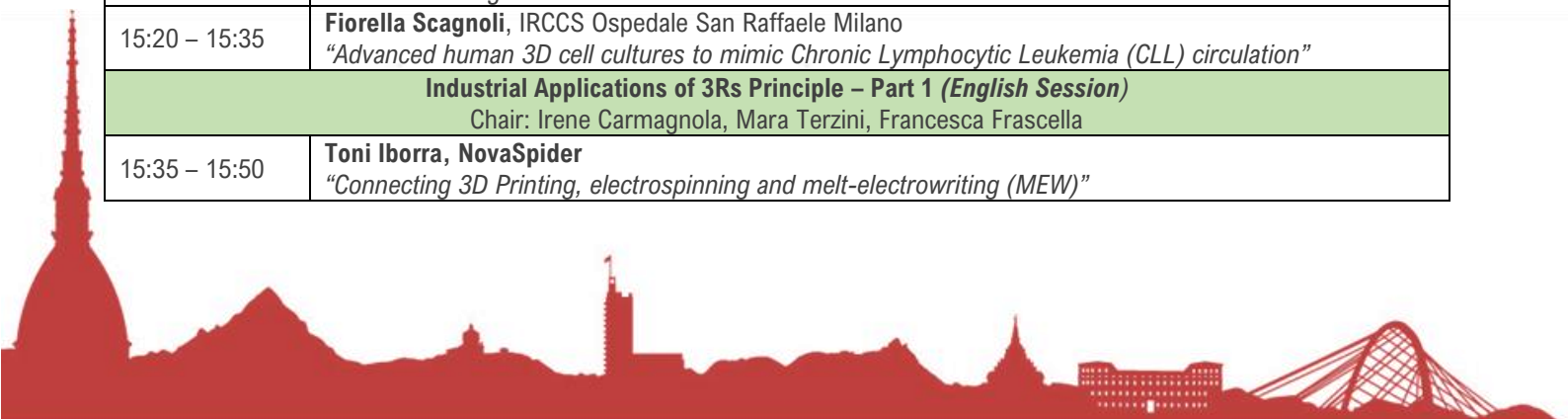
30 settembre - 1 ottobre 2021

Evento online organizzato dal Politecnico di Torino



30 settembre 2021

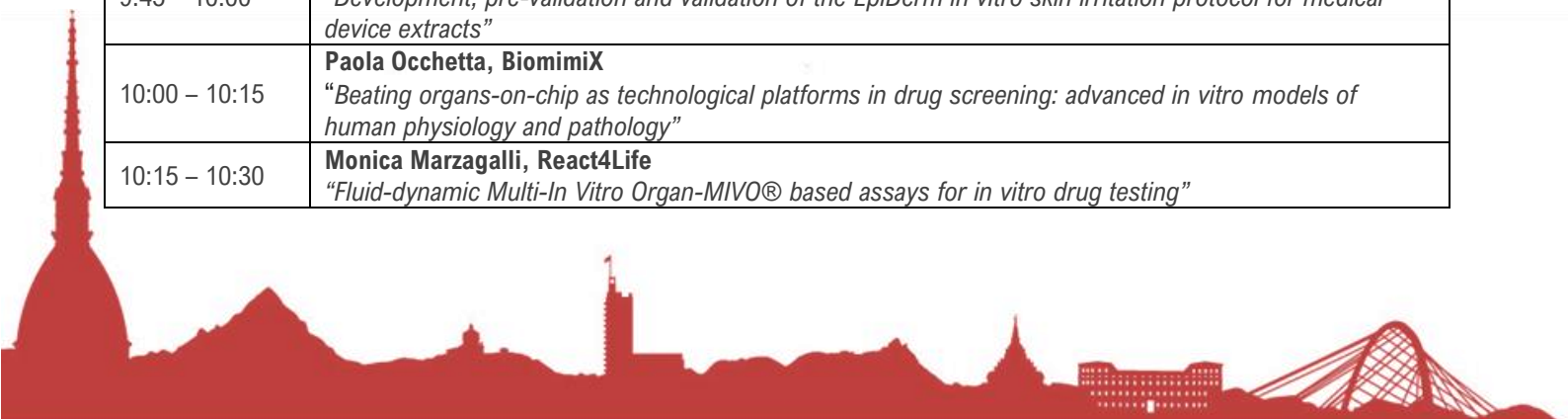
9:00 – 9:15	Connessione alla piattaforma: video di benvenuto
Apertura del Convegno	
9:15 – 9:30	<p>Guido Saracco, Rettore del Politecnico di Torino <i>“Messaggio di benvenuto”</i></p> <p>Arti Ahluwalia, Università di Pisa, Direttrice del Centro 3R <i>“Presentazione del Centro 3R”</i></p> <p>Valeria Chiono, Politecnico di Torino <i>“Introduzione del programma del convegno”</i></p>
Normative ed etica Chair: Arti Ahluwalia, Livia Visai	
9:30 – 10:00	Roberto Cippitani , Studio Legale Cippitani, Di Gioacchino e Iozzolino, Roma <i>“Ethical Issues in EU Biomedical Research”</i>
10:00 – 10:20	Piero Costa , Presidente BioPMed Cluster, Direttore tecnico Intrauma SpA, Torino <i>“Regulatory affairs for medical devices: state of the art and challenges for manufacturers”</i>
10:20 – 10:35	Maurizio Mori , Presidente del Comitato Etico per la Ricerca del Politecnico di Torino <i>“Presentation of the Ethics Committee for Research of Politecnico di Torino”</i>
10:35 – 11:30	<p>Caffè virtuale con I sessione POSTER Tematica 1: Ethics and teaching</p> <p>Webex Link: Clicca qui</p>
Modelli animali in vivo (Refinement) Chair: Anna Maria Bassi, Gabriella Nicolini	
11:30 – 11:50	Valeria Poli , Università di Torino <i>“Is animal experimentation still necessary? A deep look at cancer research”</i>
11:50 – 12:10	Luigi Aurisicchio , TakisBiotech <i>“COVID-19 vaccines and the changing paradigm for drug development”</i>
12:10 – 12:30	Gabriele Ceccarelli , Università di Pavia <i>“Rigenera protocol: elucidation of the mechanisms involved in wound healing”</i>
Pausa pranzo con intrattenimento musicale con il contributo del Conservatorio Statale “Antonio Vivaldi” di Alessandria	
Modelli in vitro: Modelli di Ingegneria Tissutale e Bioreattori (Reduction, Replacement) Chair: Valeria Chiono, Diana Massai, Chiara Tonda-Turo	
13:30 – 13:50	Gianluca Ciardelli , Politecnico di Torino <i>“Exploiting the versatility of polyurethanes in the modelling of pathological human tissues”</i>
13:50 – 14:10	Monica Mattioli Belmonte , Università Politecnica delle Marche <i>“Bone and gut microbiota crosstalk: a novel 3D in vitro approach”</i>
14:10 – 14:30	Anna Maria Bassi , Università di Genova <i>“A millifluidic-based 3D-platform as a useful tool for the efficacy of glaucoma therapeutic strategies”</i>
14:30 – 14:50	Maurizio Pesce , Centro Cardiologico Monzino <i>“Modeling human saphenous vein grafts arterialization with platforms recapitulating mechanical stress in the vascular wall unravels a direct role of mechanical forces in programming of aorto-coronary bypass grafts failure”</i>
14:50 – 15:05	Giorgia Cerqueni , Università Politecnica delle Marche <i>“An osteochondral bio-engineered model to in-vitro mimicking osteoarthritis”</i>
15:05 – 15:20	Michela Licciardello , Politecnico di Torino <i>“An in vitro Lung Biomimetic Model”</i>
15:20 – 15:35	Fiorella Scagnoli , IRCCS Ospedale San Raffaele Milano <i>“Advanced human 3D cell cultures to mimic Chronic Lymphocytic Leukemia (CLL) circulation”</i>
Industrial Applications of 3Rs Principle – Part 1 (English Session) Chair: Irene Carmagnola, Mara Terzini, Francesca Frascella	
15:35 – 15:50	Toni Iborra , NovaSpider <i>“Connecting 3D Printing, electrospinning and melt-electrowriting (MEW)”</i>



15:50 – 16:05	Tommaso Sbrana, IVTech <i>“IVTech: the next generation of in-vitro models”</i>
16:05 – 16:20	Dimitria Bonizol, Rheolution <i>“Soft Matter Analytics, an innovative solution for biomaterial mechanical testing”</i>
16:20 – 17:00	Caffè virtuale con II sessione POSTER Tematica 2: In vitro models: TE and bioreactors Webex Link: Clicca qui
Modelli in vitro: Modelli 2D, Microfluidica e Organoidi (Reduction, Replacement) Chair: Lucia Napione, Paola Petrini	
17:00 – 17:20	Helena Kandarova, SNP 3Rs Slovak National Platform for 3Rs, President of European Society for Toxicology in Vitro (ESTIV) <i>“New OECD TG on reconstructed human skin models for Phototoxicity testing – 25 years of science successfully implemented into the regulations” (English talk)</i>
17:20 – 17:40	Silvia Bolognin, University of Luxembourg <i>“A brain organoid model to study Parkinson’s Disease”</i>
17:40 – 18:00	Alberto Rainer, Università Campus Bio-Medico di Roma <i>“Modelli di NAFLD-on-a-chip per lo screening di nutraceutici”</i>
18:00 – 18:20	Giuseppe Chirico, Università Milano-Bicocca <i>“IN2SIGHT: a bioengineered chip for a paradigm shift in in-vivo imaging”</i>
18:20 – 18:35	Marco Campisi, Politecnico di Torino <i>“Preclinical microphysiological systems of ALK+ Anaplastic Large cells lymphoma and vascular interactions for in vitro prediction of drug efficacy in a 3D microfluidic chip”</i>
18:35 – 18:50	Deyanira Contartese, IRCCS Istituto Ortopedico Rizzoli <i>“Development and characterization of a novel human 3D model of bone metastasis from breast carcinoma in vitro cultured”</i>
18:50 – 19:05	Lorenzo P. Coppadoro, Politecnico di Milano <i>“Towards reliable in vitro models – new bi-compartmental platforms for replicating tissue barriers”</i>
19:05 – 20:00	III sessione POSTER Tematica 3: In vitro models: 2D cell cultures, microfluidics, and organoids Webex Link: Clicca qui

1 ottobre 2021

9:00 – 9:15	Connessione alla piattaforma: video di benvenuto
Industrial Applications of 3Rs Principle – Part 2 (English Session) Chair: Irene Carmagnola, Mara Terzini	
9:15 – 9:30	Salvatore Simmini, StemCell Technologies <i>“Human Pluripotent Stem Cell-Derived Organoids and Their Potential to Reduce the Use of Animal Models in Research”</i>
9:30 – 9:45	Francesco Bacchi, CellDynamics <i>“A flow-based method for the biophysical characterization of 3D cell cultures in terms of size, weight and mass density”</i>
9:45 – 10:00	Silvia Letasiova, MatTek <i>“Development, pre-validation and validation of the EpiDerm in vitro skin irritation protocol for medical device extracts”</i>
10:00 – 10:15	Paola Occhetta, BiomimiX <i>“Beating organs-on-chip as technological platforms in drug screening: advanced in vitro models of human physiology and pathology”</i>
10:15 – 10:30	Monica Marzagalli, React4Life <i>“Fluid-dynamic Multi-In Vitro Organ-MIVO® based assays for in vitro drug testing”</i>



10:50 – 11:30	Caffè virtuale con IV sessione POSTER Tematica 4: In silico models Webex Link: Clicca qui
Modelli <i>in silico</i> (Reduction, Replacement) Chair: Marco Deriu, Simona Celi, Alberto Rainer	
11:30 – 11:50	Simona Celi , Fondazione Toscana Gabriele Monasterio <i>"In silico models as non-animal methods for biomedical research in cardiovascular diseases: where are we now?"</i>
11:50 – 12:10	Paolo Milazzo , Università di Pisa <i>"In-silico modeling of biochemical pathways"</i>
12:10 – 12:30	Jack Tuszyński , Politecnico di Torino <i>"How systems biology of cancer signaling pathways can inform optimized combination chemotherapy design" (English talk)</i>
12:30 – 12:45	Daniele Bianchi , Università di Pavia <i>"Coupling in-silico and ex-vivo porcine model for the evaluation of biomechanical impact of TEVAR"</i>
12:45 – 13:00	Marcello Miceli , Politecnico di Torino <i>"Elucidating molecular connection between IAHS onset and Alsin protein by means of Homology Modelling and Molecular Dynamics"</i>
13:00 – 13:15	Cecile Valsecchi , Università Milano-Bicocca <i>"Nuclear receptor modulators: catching information by machine learning"</i>
13:15 – 14:30	Pausa pranzo
Educazione nelle 3R Chair: Gabriella Nicolini, Valeria Chiono	
14:30 – 14:50	Laura Gribaldo , JRC European Commission <i>"Education and Training: a European Parliament pilot project"</i>
14:50 – 15:00	Gabriella Nicolini e Valeria Chiono , con la partecipazione di una delegazione di studenti del corso "New Advances in Alternative Preclinical Trials" del Politecnico di Torino <i>"Teaching the 3Rs principle: teachers and students' perspectives"</i>
European initiatives supporting 3Rs Principle (English Session) Chair: Arti Ahluwalia, Anna Maria Bassi	
15:00 – 15:20	Adrian Smith , Norecopa <i>"Norecopa: a database of global 3R resources for better Science"</i>
15:20 – 15:40	Stefan Hippenstiel , Charité 3R <i>"Charité 3R – 3R implementation at a university hospital"</i>
15:40 – 16:00	J.B.F. (Jan) van der Valk , Utrecht 3Rs-Centre <i>"Supporting the 3Rs worldwide: The 3Rs-database program"</i>
16:00 – 16:20	Helena Kandarova , SNP 3Rs Slovak National Platform for 3Rs, President of European Society for Toxicology in Vitro (ESTIV) <i>"SNP 3Rs Slovak National Platform for 3Rs: Thinking Globally - acting locally"</i>
16:20 – 16:40	Centro 3R representatives and speakers of the session <i>"Final discussion"</i>
16:40 – 17:10	Cerimonia di premiazione ed intrattenimento musicale con il contributo del Conservatorio Statale "Antonio Vivaldi" di Alessandria
17:10 – 17:15	Comitato Organizzatore <i>Ringraziamenti e saluti</i>
Arrivederci al prossimo Convegno del Centro 3R: video di chiusura	



Comitato Organizzatore

Irene Carmagnola, Valeria Chiono, Francesca Frascella, Lucia Napione,
Diana Massai, Mara Terzini, Chiara Tonda-Turo (Politecnico di Torino)

Comitato Scientifico

Valentina Citi, Elisabetta Rosellini (Università di Pisa)
Barbara Marengo, Laura Pastorino (Università di Genova)
Cristina Lanni, Mayra Paolillo (Università di Pavia)
Gabriella Nicolini, Chiara Urani (Università Milano Bicocca)
Federica Boschetti, Sara Mantero (Politecnico di Milano)
Diego Gallo, Clara Mattu (Politecnico di Torino)
Alberto Rainer, Marcello D'Amelio (Università Campus Bio-Medico di Roma)





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SI RINGRAZIANO

Dipartimento di Ingegneria Meccanica e Aerospaziale

Dipartimento di Scienza Applicata e Tecnologia



Politecnico
di Torino

