

GIORNATE DEL DOTTORATO NAZIONALE

Innovazione nella diagnosi, prevenzione e terapia delle infezioni a rischio endemico-pandemico

13-17 maggio 2024

Certosa di Pontignano, Siena

Programma

Monday – 13th May

14.00 – 14.30 **OPENING SESSION**

Session 1 **Viral infections**

Chairs: Mirko Cortese, Mauro Pistello, Annalisa Santucci

14.30 – 15.30	<i>Advanced microscopy technologies to study virus infectious cycle</i>	Mirko Cortese Università della Campania "Luigi Vanvitelli"
15.30 – 15.50	<i>Small molecules: advanced antiviral therapies in the fight against emerging viruses</i>	Maria Rita Leccese Sapienza Università di Roma
15.50 – 16.10	<i>Identification of host factors required for SARS-CoV-2 replication as potential target for development of broad-spectrum antivirals</i>	Federica Camerota Università della Campania "Luigi Vanvitelli"
16.10 – 16.40	Coffee break	
16.40 – 17.40	<i>Emerging virus of pandemic potential</i>	Mauro Pistello Università di Pisa
17.40 – 18.00	<i>Antiviral drug development to counteract vector-borne emerging and re-emerging infections</i>	Chiara Paletti Università di Siena
18.00 – 18.20	<i>Development of potent and broad-spectrum antiviral compounds against respiratory viruses with both epidemic and pandemic potential</i>	Alessia Zago Università di Padova
18.20 – 18.40	<i>Synthetic approaches to novel peptidomimetic SARS-CoV-2 protease inhibitors</i>	Maria Chiara Pieroni Università di Siena
19.30	Dinner	

Tuesday- 14th May

Session 2	Virus-host interaction <i>Chair: Lucia Nencioni, Eliana Coccia, Francesco Dotta</i>	
08.30 – 09.30	<i>Investigating the complex network of virus - host interactions to develop cell-targeted approaches against influenza virus infection</i>	Lucia Nencioni Sapienza Università di Roma
09.30 – 09.50	<i>HSPGs involvement in viral infections</i>	Giulio Bonucci Università di Siena
09.50 – 10.10	<i>Further studies on Torque Teno Virus (TTV) as a marker of immune status</i>	Lilia Cinti Sapienza Università di Roma
10.10 – 10.30	<i>N-acylethanolamine metabolism and Flavivirus: definition of novel antiviral targets for pan-flavivirus therapy</i>	Giulia Sciandrone Università di Pisa
10.30 – 11.00	Coffee break	
Session 3	Bacterial physiology and new drug targets <i>Chair: Pietro Alifano, Agnese Magnani, Luisa Bracci</i>	
11.00 – 12.00	<i>The complementary roles of applied and basic research: how the study of industrial microorganisms can shed light on basic cellular physiology</i>	Pietro Alifano Università del Salento
12.00 – 12.20	<i>Exploring the function of new Rid family members to find new targets for antibacterial therapy</i>	Andrea Giuliano Università del Salento
12.20 – 12.40	<i>Characterization of new drugs against Mycobacterium tuberculosis</i>	Enrica Campagnaro Università di Padova
12.40 – 13.00	<i>Anti-microbial activity from natural sources 11</i>	Roberta Barletta Università di Siena
13.00 – 14.20	Lunch	
Session 4	Animal infection models <i>Chairs: Marco Rinaldo Oggioni, Elena Pettini</i>	
14.20 – 15.20	<i>Use of Animal Models in Preclinical Research and Italian Legislation</i>	Elena Pettini Università di Siena
15.20 – 16.20	<i>Translational models of infection</i>	Marco Rinaldo Oggioni Università di Bologna
16:20 – 16:50	Coffee break	
16.50 – 17.10	<i>Characterization of a mouse model of invasive Non-Typhoidal Salmonella disease for the evaluation of new iNTS vaccine candidates</i>	Valentina Mocci Università di Siena
17.10 – 17.30	<i>Ex-vivo perfusion: analysis of multispectral images of human spleen sections</i>	Giulia Cattabriga Università di Bologna
20.00	Dinner	

Wednesday- May 15, 2024

Session 5		Antimicrobial resistance and new antibiotics <i>Chairs: Gian Maria Rossolini, Arianna Tavanti</i>
08.30 – 09.30	<i>La complessità evolutiva dell'antibiotico-resistenza dal punto di vista biologico e clinico"</i>	Gian Maria Rossolini Università di Firenze
09.30 – 09.50	<i>Enhancing the efficacy of bacteriophages for the treatment of infections caused by Multidrug-Resistant bacteria</i>	Sara Bolognini Università di Pisa
09.50 – 10.10	<i>Exploring the unsolved questions about ceftobiprole resistance in Enterococcus faecalis through an in-depth analysis of PBPs and peptidoglycan remodeling</i>	Paola Conti Università di Catania
10.10 – 10.30	<i>Metagenomic analysis for the characterization of resistant pathogens carried by healthy residents or migrants from Latin America rural communities</i>	Chiara Chilleri Università di Firenze
10.30 – 11.00	Coffee break	
11.00 – 12.00	<i>Recent advances and challenges of biosensing in point-of-care bacterial detection</i>	Arianna Tavanti Università di Pisa
12.00 – 12.20	<i>Development of Innovative Antibacterial Strategies Targeting Critical Priority Antibiotic-resistant Pathogens</i>	Sacha Michele Idriss Cancade Università di Siena
12.20 – 13.10	<i>Discovery and development of antibacterial drugs in the era of resistance</i>	Jean Denis Doquier Università di Siena
13.10 – 13.30	<i>Bacterial-derived extracellular vesicles: new player in antimicrobial resistance"</i>	Marco Catania Università di Catania
13.30 – 14.30	Lunch	
Session 6		Host response and vaccines (Part I) <i>Chair: Annalisa Ciabattini, Mario Milco D'Elis</i>
14.30 – 15.10	<i>The B cell response to vaccination</i>	Annalisa Ciabattini Università di Siena
15.10 – 15.30	<i>Discovery and validation of biomarkers of the immune response associated with infections and vaccinations</i>	Martin Mihula Humanitas University
15.30 – 15.50	<i>Development of Long Pentraxin PTX3 as an Infection Biomarker</i>	Francesca Vaino Humanitas University
15.50 – 16.10	<i>Unravelling plant derived exosomes as novel, safe and efficient delivery systems for drugs and vaccines: isolation, characterization and labelling with MRI contrast agents</i>	Chiara Romiti Università di Torino
16.40	<i>Visit to Siena Vaccines Centre</i>	
20.00	Dinner	

Thursday – 16th May

Session 7	Host response and vaccines (Part II) <i>Chairs: Rino Rappuoli, Cosima Baldari, Vincenzo Sorrentino</i>	
08.30 – 09.30	<i>Passive and active immunization for old and emerging infectious diseases</i>	Rino Rappuoli Fondazione Biotechopolio Siena
09.30 – 09.50	<i>Longitudinal analysis of spike specific antibody and memory B cell responses in SOT recipients following SARS-CoV-2 mRNA vaccination</i>	Chiara Coppola Università di Siena
09.50 – 10.30	<i>Antigenic sin drives a convergent broadly neutralizing B cell response evaded by SARS-COV-2JN.1</i>	Emanuele Andreano Fondazione Toscana Life Science
10.30 – 11.00	Coffee break	
11.00 – 12.00	<i>Mechanisms of cytotoxicity mediated by T lymphocytes</i>	Cosima Baldari Università di Siena
12.00 – 12.20	<i>T-cells in Helicobacter Pylori infection</i>	Evangelia Asvestopoulou Università di Siena
12.20 – 12.40	<i>The immune synapse: an immune response biomarker to evaluate the efficacy of vaccination strategies</i>	Samuele Montano Università di Siena
12.40 – 13.20	<i>RNA sequencing for studying the vaccine immune response</i>	Francesco Santoro Università di Siena
13.20 – 14.20	Lunch	
Session 8	Monoclonal antibodies <i>Chairs: Luca Varani, Claudia Sala, Eliana Coccia</i>	
14.20 – 15.20	<i>Multispecific antibodies against infectious diseases</i>	Luca Varani Institute for Research of Bellinzona
15.20 – 15.40	<i>Development of functional assays for monoclonal antibody testing</i>	Ludovica Soldateschi Università di Siena
15.40 – 16.10	Coffee break	
16.10 – 16.50	<i>Human monoclonal antibodies against antibiotic-resistant bacteria</i>	Claudia Sala Fondazione Toscana Life Science
16.50 – 17.10	<i>Isolation of monoclonal antibodies against Klebsiella pneumoniae ST101</i>	Laura Capoccia Università di Siena
Session 9	Horizon Europe Research Programme and Intellectual Property Rights <i>Chair: Donata Medagliani</i>	
17.10 – 18.10	<i>Horizon Europe</i>	Donata Franzì Università di Siena
18.10 – 19.00	<i>Protection of Intellectual Property Rights</i>	Alessandra Romeo Università di Siena
20.00	Dinner	

Friday – 17th May

Session 10	Infectious diseases and host response	
	<i>Chairs: Alessandro Bartoloni, Guido Sebastiani</i>	
08.30 – 09.30	<i>Neglected Tropical Diseases in Italy</i>	Alessandro Bartoloni Università di Firenze
09.30 – 09.50	<i>Immunological features of post-COVID-19 lung sequelae: study and validation of novel non-invasive biomarkers</i>	Irene Paggi Università di Siena
09.50 – 10.10	<i>Impact of antibiotic heteroresistance on the clinical outcomes of infections due to carbapenem-resistant Gram-negative bacteria and on the emergence and spread of resistance to new beta-lactams</i>	Maurizio Guastalegname Università di Firenze
10.10 – 10.30	<i>A Novel Magnetic Resonance Imaging tool for the diagnosis and monitoring of infectious diseases</i>	Chiara Papi Università di Torino
10.30 – 11.00	Coffee break	
11.00 – 12.00	<i>Small non-coding RNAs as regulators of immune responses in autoimmune diseases</i>	Guido Sebastiani Università di Siena
12.00 – 12.20	<i>Deciphering the role of Interferon Type 1 against Mycobacterium paratuberculosis infection and Human Endogenous Retroviruses reactivation</i>	Alshiba Fayaz Università di Sassari
12.20 – 12.40	<i>Development of a city-level Digital Twin through non-invasive metagenomic sensing of epidemic dynamics</i>	Federico Magnani Università di Bologna
12.40 – 13.00	<i>Conclusions</i>	
13.00	Farwell lunch and departures	