

Complete Program

Monday 18	
8.30 - 9.00 am	Registration and Welcome Coffee
	SPYWATCH Opening Ceremony
9.00 - 10.00 am	<p>Stefano BRONZINI - Rector of the University of Bari Aldo Moro</p> <p>Luigi PALMIERI - Head of the Department of Biosciences, Biotechnologies and Biopharmaceutics</p> <p>Grazia Paola NICCHIA - Summer School Director</p>
	<p>Aquaporins: methods for studying the physiology and biophysics of water channel proteins Chair Grazia Paola NICCHIA</p>
10.00 - 10.30 am	<p>The brain aquaporin water channel: biophysics, supramolecular structures, cell volume regulation mechanisms and water transport assays Grazia Paola NICCHIA, University of Bari Aldo Moro, Italy</p>
10.30 - 11.30 am	<p>Discrete biophysics: single protein experiments and theory James A. BROZIK, Washington State University, USA</p>
11.30 - 12.30 am	<p>Non-invasive hydrodynamic imaging at cellular resolution Kevin WEBB, University of Nottingham, UK</p>
	<p>Biomaterials and protein channels: why and how Chair Luigi AMBROSIO</p>
12.30 - 1.30 pm	<p>Glial-material interface: materials, devices and approaches to unveil the role of astrocyte protein channels in brain function Valentina BENFENATI, ISOF CNR, Italy</p>
1.30 - 2.30 pm	Lunch Break
2.30 - 3.25 pm	<p>Bioactive biomaterials for skeletal tissue regeneration Luigi AMBROSIO, IPCB CNR, Italy</p>
3.25 - 4.20 pm	<p>Water and ion channel related actin dynamics in controlling collective behaviour of a neuronal cells Wolfgang LOSERT, University of Maryland, USA</p>



4.20 – 4.30 pm	Conclusions – Luigi AMBROSIO and Sofi BIN-SALAMON, Co-Chairs ITA-USA bilateral S&T working group on advanced smart material
4.30 – 5.00 pm	Coffee Break
	Oral Session
5.00 – 5.30 pm	FRET visualization of second messengers in epithelial cells Grazia TAMMA, University of Bari Aldo Moro, Italy
5.30 – 6.00 pm	Biophysical characterization of water and solute permeability of biological and artificial membranes: the stopped-flow light scattering approach Giuseppe CALAMITA, University of Bari Aldo Moro, Italy
6.30 pm	A walk in the old city

Tuesday 19

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	H-Seeds Event
8.30 - 9.00 am	<p>Gianluca FARINOLA - Rector Delegate for Research and Innovation University of Bari Aldo Moro</p> <p>Grazia Paola NICCHIA - Coordinator of Horizon Europe Seeds</p> <p>Interdisciplinary approach for a multiscale study of the neurophysiology of cerebral gliomas (INTERGLIO)</p>
9.00 - 9.20 am	<p>Aquaporin-4 water channel isoforms in glioma</p> <p>Raffaella MESSINA, University of Bari Aldo Moro, Italy</p>
9.20 - 9.40 am	<p>Plasma treated water solution for RONS delivery</p> <p>Pietro FAVIA, University of Bari Aldo Moro, Italy</p>
9.40 - 10.00 am	<p>Correlation plenoptic microscopy</p> <p>Milena D'ANGELO, University of Bari Aldo Moro, Italy</p>
10.00 - 11.00 am	<p>Tumor angiogenesis: new insights in an old paradigm</p> <p>Domenico RIBATTI, University of Bari Aldo Moro, Italy</p>
11.00 - 11.30 am	Coffee Break
	Oral Session
11.30 - 12.00 am	<p>Looking at cells through the confocal microscope: are we getting closer to the truth?</p> <p>Giuseppe PROCINO, University of Bari Aldo Moro, Italy</p>
12.00 - 12.30 am	<p>Live-cell microscopy to decipher organelle dynamics. From sample preparation to tracking analysis</p> <p>Francesco PISANI, University of Bari Aldo Moro, Italy</p>
12.30 - 1.30 pm	<p>High resolution STED and PALM / STORM microscopy for the study of supramolecular protein structures</p> <p>Antonio FRIGERI, University of Bari Aldo Moro, Italy</p>
1.30 - 2.30 pm	Lunch Break



Studing localized signalling: metodologies and implications Chair Konstantinos LEFKIMMIATIS	
2.30 – 3.30 pm	The study of membrane transports: a journey in cellular functions with important outcomes to human health Monica CARMOSINO, University of Basilicata, Italy
3.30 – 4.30 pm	Using life cell imaging to investigate signalling in time and space Konstantinos LEFKIMMIATIS, University of Pavia, Italy
4.30 – 5.00 pm	Coffee Break
	Oral Session
5.00 – 5.30 pm	Single cell imaging techniques for the study of spatio-temporal dynamics of Ca²⁺ -mediated signals Matilde COLELLA, University of Bari Aldo Moro, Italy
5.30 – 6.00 pm	Measuring the electrophysiological activity of isolated cells and polarized epithelia: the patch-clamp technique and the Ussing chamber system Andrea GERBINO, University of Bari Aldo Moro, Italy
7.00 pm	Social Dinner

Wednesday 20

	Technical Activities	1	2	3	4	5	6
8.30 – 11.00 am	Group	A	F	E	D	C	B
11.00 – 1.30 pm	Group	B	A	F	E	D	C
1.30 – 2.30 pm	Lunch Break						
	Technical Activities	1	2	3	4	5	6
2.30 – 5.00 pm	Group	C	B	A	F	E	D
5.00 – 7.30 pm	Group	D	C	B	A	F	E



Thursday 21

	Technical Activities	1	2	3	4	5	6
8.30 - 11.00 am	Group	E	D	C	B	A	F
	Masmec Day						
11.00 - 11.30 am	Bus transfer to MASMEC						
11.30 - 12.30 am	Presentation of MASMEC SpA						
12.30 - 1.30 pm	Introduction to automation in molecular diagnostic laboratories						
1.30 - 2.30 pm	Lunch Break						
2.30 - 4.00 pm	Automatic extraction of nucleic acids from different biological samples						
4.00-4.30 pm	Coffee Break						
4.30 - 7.30 pm	Laboratory experience on high-throughput platforms						

Friday 22

	Technical Activities	1	2	3	4	5	6
8.30 - 11.00 am	Group	F	E	D	C	B	A
11.00 - 1.30 pm	Round Table Discussion						
1.30 - 2.30 pm	Lunch Break						
2.30 - 6.00 pm	Final Test and Concluding Remarks						