

XXVII - Edition 2023

SIBPA - Società Italiana di Biofisica Pura e Applicata

IVSLA - Istituto Veneto di Scienze Lettere ed Arti

EVITA - Società Italiana per le Vescicole Extracellulari

BOW - Biogenic Organotropic Wetsuits (EU project ID: 952183)

XXVII School of Pure and Applied Biophysics

on

"Extracellular vesicles: from biophysical to translational challenges"



Venice, - **Palazzo Franchetti**, 6-10 February, 2023

This school is endorsed by

EBSA - European Biophysical Societies' Association

ISEV - International Society for Extracellular Vesicles

➡ (School website) www.venice2023.ibf.cnr.it - **Flyer**

Topic

The **Società Italiana di Biofisica Pura e Applicata** (**SIBPA**), the **Istituto Veneto di Scienze Lettere e Arti** (**IVSLA**), along with the **Italian Society for Extracellular Vesicles** (**EVIta**) and the **H2020-FET-Proactive** project **BOW**, promote the XXVII School of Pure and Applied Biophysics on contemporary and emerging scientific topics related to Extracellular Vesicles (EVs):

- Ø EVs colloidal and surface properties,
- Ø techniques for biophysical characterization,
- Ø EVs versus other (synthetic and extracellular) nanoparticles,
- Ø EVs manipulation and engineering.

Lecturers

- Paolo Arosio (ETH Zurich)
- Patricia Bassereau (Inst. Curie, Paris)
- Paolo Bergese (Brescia Univ.)
- Debora Berti (Firenze Univ.)
- Sara Busatto (Harvard Med. School)
- Benedetta Bussolati (Torino Univ)
- Edit Buzas (Summelweis Univ, Budapest.)
- Loredana Casalis (Elettra Sincrotrone, Trieste)
- Alberto Diaspro (Genoa Univ.)
- Anna Kashkanova (Max Plank, Erlangen)
- Leonid Margolis (NIH, Bethesda)
- Rienk Nieuwland (UMC, Amsterdam)
- Amanda Silva (CNRS, Paris)
- Dirk Strunk (PMU Salzburg)
- Peter Vader (UMC, Utrecht)
- Marca Wauben (Utrecht Univ)

Sponsors

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Registration

Applications are encouraged from all young scientists (PhD students and postdocs). The participation fee is 600 €, which includes five nights accommodation. Students who do not need an accommodation may request a reduced fee (300 €). The deadline for pre-registration is October 15th 2022 -> // Extended to November 11th 2022 //

Scientific coordinator

Mauro Manno ([SIBPA](#)), *Institute of Biophysics, CNR, Palermo*

Scientific committee

Antonella Bongiovanni ([EVI](#)), *Inst. for Biomedical Research and Innovation, CNR, Palermo*

Paolo Bergese ([BOW](#)), *University of Brescia & Center for Colloid and Surface Science*

Director of the schools

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XXVII SCHOOL OF PURE AND APPLIED BIOPHYSICS

Extracellular vesicles: from biophysical to translational challenges

VENICE - Palazzo Franchetti - February 6-10, 2023

Program at a glance

	MONDAY 6	TUESDAY 7	WEDNESDAY 8	THURSDAY 9	FRIDAY 10
	(08:30) REGISTRATION				
09:00	WELCOME (Manno)				
09:30		BERGESE	MARGOLIS	WAUBEN	VADER
10:00	BUZAS				
10:30		Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:00	Coffee Break				
11:30		BERTI	BUSATTO	CASALIS	BUSSOLATI
12:00	DIASPRO				
12:30		LUNCH	Sponsor session	LUNCH	Conclusive remarks (BONGIOVANNI)
13:00	LUNCH		FREE AFTERNOON		
13:30		BASSEREAU		KASHKANOVA	
14:00	NIEUWLAND				
14:30		Coffee Break & Thought exchange supported by Posters		Coffee Break & Thought exchange supported by Posters	
15:00	Coffee Break & Thought exchange supported by Posters				
15:30		STRUNK		AROSIO	
16:00	SILVA-BRUN				
16:30		Tales of the day		Tales of the day	
17:00					
17:30					
18:00					
18:30					
				(20:00) SOCIAL DINNER	

- (i) EVs colloidal and surface properties
- (ii) EVs characterization by biophysical techniques
- (iii) EVs versus other (synthetic and extracellular) nanoparticles
- (vi) EVs manipulation and engineering



This school is endorsed by
**INTERNATIONAL SOCIETY for
EXTRACELLULAR VESICLES**



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Extracellular vesicles: from biophysical to translational challenges

— Definitive program —

Sunday – February 5th

> 14:00 – 20.00 Check-in at the hotel

Monday – February 6th

08:30 – 9.00 **REGISTRATION**

09:00 – 09.30	OPENING and WELCOME -	Mauro Manno (IT)
09:30 – 11:00	Edit Buzas (HU)	Current trends in Extracellular Vesicles Biology
11:00 – 11.30	Coffee Break	
11:30 – 13.00	Alberto Diaspro (IT)	Multimodal optical microscopy at the Nanoscale: from fluorescence to label-free imaging
13:00 – 14.00	LUNCH	
14:00 – 15:30	Rienk Nieuwland (NL)	Rigor and standardization in extracellular vesicle research
15:30 – 16.30	Coffee break & Thought exchange supported by poster	
16:30 – 18.00	Amanda Silva-Brun (FR)	EVs from bioproduction to biotherapy, bridging research and innovation
18:00 – 18:30	Tales of the day	

Tuesday – February 7th

09:00 – 10:30	Paolo Bergese (IT)	EV by the numbers
10:30 – 11.00	Coffee Break	
11:00 – 12.30	Debora Berti (IT)	EVs as colloids: the chemical physics and the related experimental tool
12:30 – 13.30	LUNCH	
13:30 – 15:00	Patricia Bassereau (FR)	Some general physical principles for vesicle generation from biomembranes and lipid/protein sorting
15:00 – 16.30	Coffee break & Thought exchange supported by poster	
16:30 – 18.00	Dirk Strunk (AU)	EV corona reloaded
18:00 – 18:30	Tales of the day	

Wednesday – February 8th

09:00 – 10:30	Leonid Margolis (USA)	Extracellular vesicles and viruses: close relatives or enemies?
10:30 – 11.00	Coffee Break	
11:00 – 12.30	Sara Busatto (USA)	Lipoproteins as key components of the tumor-derived extracellular vesicle interactome
12:30 – 12.50	Sponsor session	Sponsored speech by Lumicks

FREE AFTERNOON

Thursday – February 9th

09:00 – 10:20	Marca Wauben (NL)	Flow cytometric analysis of single Extracellular Vesicles: a rocky road towards the analysis of vesicle subsets and heterogeneity
10:20 – 11.10	Coffee Break & Poster session	
11:10 – 12.30	Loredana Casalis (IT)	Atomic Force Microscopy as a multi-parameter technique for EVs quantitative analysis: from high-resolution structure to EVs biomechanics
12:30 – 13.30	LUNCH	
14:00 – 15:20	Anna Kashkanova (DE)	Label-free microscopy in EV characterization
15:20 – 16.40	Coffee break & Thought exchange supported by poster	
16:40 – 18.00	Paolo Arosio (CH)	EVs isolation and detection: new tools by microfluidics and phase separation
18:00 – 18:30	Tales of the day	
20:00 –	SOCIAL DINNER	

Friday – February 10th

09:00 – 10:20	Pieter Vader (NL)	Extracellular Vesicle-mediated RNA Delivery: from Mechanistic Insights towards Therapeutic Applications
10:20 – 10.50	Coffee Break	
10:50 – 12.10	Benedetta Bussolati (IT)	Diagnostic and therapeutic applications for tissue repair: From Stem Cell to Biofluid EVs
12:10 – 12.30	Conclusive remarks -	Antonella Bongiovanni (IT)