



Grant Agreement Number: 952183
Project Acronym: BOW
Project Full Title: Biogenic Organotropic Wetsuits
Start date of the project: November 1st, 2020
Duration: 48 months
Project Coordinator: Paolo Bergese (CSGI)
Project Officer: Ioannis Amarantos
Project Website: www.bowproject.eu
Project e-mail address: bow@csgi.unifi.it

D6.10: Training materials elaborated during BOW project

DELIVERABLE INFORMATION	
Deliverable N°	6.10
Deliverable Title	Training materials elaborated during BOW project
WP N°	WP6
Lead beneficiary	CSGI
Contributing partners	All the Consortium
Type	Public deliverable
Due Submission Date:	31/10/2024
Lead authors:	Irene Trapani
Actual Submission Date:	30/10/2024
Version of deliverable	Final

DISSEMINATION LEVEL		
PU	Public	☒
PP	Restricted to other programme participants (including the Commission Services)	☐
RE	Restricted to a group specified by the consortium (including the Commission Services)	☐
CO	Confidential, only for members of the consortium (including the Commission Services)	☐

TYPE		
R	Document, report	☐
DEM	Demonstrator, pilot, prototype	☐
DEC	Websites, patent filing, videos, etc.	☒
OTHER		☐

REVISION HISTORY		
Date	Authors and Contributors	Comments
01/10/2024	Irene Trapani (CSGI)	First Draft
17/10/2024	Andrea Zandrini (CSGI), Miriam Romano (CSGI)	Review and editing
30/10/2024	Paolo Bergese (CSGI), Irene Trapani (CSGI)	Final version

The statements made herein do not necessarily have the consent or agreement of the BOW consortium.

Copyright © 2020 - BOW Consortium - All rights reserved.

This document and its contents remain the property of the beneficiaries of the Consortium. It may contain information subject to intellectual property rights. No intellectual property rights are granted by the delivery of this document or the disclosure of its content. Reproduction or circulation of this document to any third party is prohibited without the consent of the author(s).

THIS DOCUMENT IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS DOCUMENT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



INDEX

1. EXECUTIVE SUMMARY	4
2. PHD SCHOOLS	4
1.1. XXVII SCHOOL OF PURE AND APPLIED BIOPHYSICS IN EVS	4
2.2 THE NANO CHEMISTRY CAMP 2024	6
3. LECTURES	9

INDEX OF FIGURES

FIGURE 1 - PARTICIPANTS TO XXVII SCHOOL OF PURE AND APPLIED BIOPHYSICS IN EVS.	5
FIGURE 2 - PROF. MARCA WAUBEN LECTURES AT THE XXVII SCHOOL OF PURE AND APPLIED BIOPHYSICS IN EVS.	5
FIGURE 3 - COVER PAGES OF THE LECTURES GIVEN BY BOW RESEARCHERS TO XXVII SCHOOL OF PURE AND APPLIED BIOPHYSICS IN EVS.	6
FIGURE 4 - PARTICIPANTS OF NANO CHEMISTRY CAMP 2024.	7
FIGURE 5 - BOW COORDINATOR PAOLO BERGESE, DIRECTOR OF THE NANO CHEMISTRY CAMP 2024, WITH NOBEL LAUREATE ANDRE GEIM, WHO GAVE THE KEYNOTE LECTURE.	7
FIGURE 6 - BOW RESEARCHER PROF. LANDFESTER'S LECTURE AT THE NANO CHEMISTRY CAMP 2024.	8
FIGURE 7 - COVER PAGE OF PROF. LANDFESTER'S LESSON	8
FIGURE 8 - FLYER FOR A LECTURE GIVEN IN THE HIGH SCHOOL "F. CARACCILO - G. DA PROCIDA", PROCIDA, ITALY.	10
FIGURE 9 - FLYER FOR A LECTURE GIVEN IN THE ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLA LOMBARDIA E DELL'EMILIA ROMAGNA "BRUNO UBERTINI", BRESCIA, ITALY.	10

INDEX OF TABLES

TABLE 1 - LECTURES GIVEN BY PARTNERS IN HIGH SCHOOL AND UNIVERSITY SETTINGS	9
--	----------



1. Executive Summary

D6.10 provides a comprehensive report on the training initiatives organized and co-organized by the project and the related training materials. The training and teaching program mainly consisted of **two international PhD schools** directly co-organized by the BOW Consortium: the XXVII School of Pure and Applied Biophysics, focused on extracellular vesicles (EVs), and the Nanochemistry Camp 2024, which delivered insights on central topics in nanochemistry, including extracellular nanoparticles. Additionally, the program included lectures delivered by BOW Consortium members **in universities, other research institutions and secondary schools**. The **teaching materials** consist of the PowerPoint slides used by the lecturers at the events. These materials were shared with all the participants and **are available upon request** from the BOW secretary. Below are cover pages and flyers from select lectures.

2. PhD Schools

1.1. XXVII School of Pure and Applied Biophysics in EVs

The XXVII School of Pure and Applied Biophysics, titled "Extracellular Vesicles: from Biophysical to Translational Challenges," took place from February 6th to 10th, 2023, in Venice (<http://venice2023.ibf.cnr.it/>).

The school was fully organized by BOW researchers, with Mauro Manno (CNR) serving as the Scientific Coordinator. Paolo Bergese (CSGI, BOW coordinator) and Antonella Bongiovanni (CNR) were the Scientific Committee, while Giorgia Adamo (CNR), Angela Paterna (CNR), Estella Rao (CNR), and Andrea Zendrini (CSGI) comprised the Organizing Committee. The school received support from the Società Italiana di Biofisica Pura e Applicata (SIBPA), the Istituto Veneto di Scienze Lettere e Arti (IVSLA), and the Italian Society for Extracellular Vesicles (EVIta).

The school attracted the attention of 50+ young researchers from 10+ countries, focusing on cutting-edge research topics of significant scientific and educational impact, including: (i) colloidal and surface properties of extracellular vesicles (EVs), (ii) techniques for biophysical characterization, (iii) comparison of EVs with other synthetic and extracellular nanoparticles, and (iv) EV manipulation and engineering.

The students had the opportunity to engage directly with globally renowned researchers in the field of EVs in a friendly and informal environment. The expert panel included three BOW researchers: Paolo Arosio (ETHZ), Paolo Bergese (CSGI, BOW coordinator), and Debora Berti (CSGI).





Figure 1 - Participants to XXVII School of Pure and Applied Biophysics in EVs.



Figure 2 - Prof. Marca Wauben lectures at the XXVII School of Pure and Applied Biophysics in EVs.



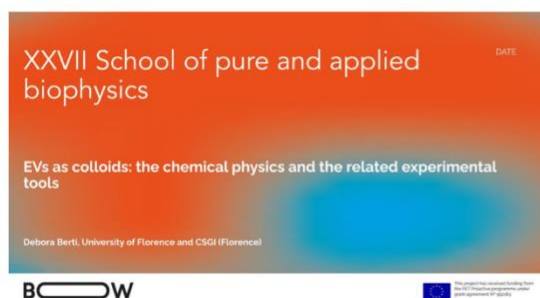


Figure 3 - Cover Pages of the lectures given by BOW researchers to XXVII School of Pure and Applied Biophysics in EVs.

2.2 The Nanochemistry Camp 2024

The (first edition of) "Nanochemistry Camp 2024" took place from 21st to 28th September 2024 (<https://www.istiseo.org/courses/doctoral-nanochemistry-camp/>). The school constitutes the second effort of the BOW project towards the training and development of young researchers, and targeted Master's and PhD students, as well as junior post-doctoral researchers. The school provided top-tier, cutting-edge insights on pivotal topics in nanochemistry—including nano-catalysis, sustainable chemistry, molecular magnetism, synthetic biology, soft matter, and drug delivery—many of which form the foundation of BOW research. The school was conceived with an innovative format that united students with globally renowned experts in (nano)chemistry, including Nobel laureates. Set in a comfortable, informal environment at one of the most beautiful campsites overlooking Lake Iseo, the program fostered engaging, high-level discussions.

BOW coordinator Paolo Bergese (CSGI) and BOW researcher Andrea Zendrini (CSGI) served as the School Director and Scientific Secretary, respectively. Among the distinguished speakers were BOW researcher Katarina Landfester (MPG) and 2010 Nobel Prize winner Prof. Andre K. Geim.

The school gathered 30+ students from 10+ different countries and 15+ different universities.

The school has been co-organised with the University of Brescia and the I.S.E.O. Institute (<https://www.istiseo.org/>).





Figure 4 - Participants of Nanochemistry Camp 2024.



Figure 5 - BOW Coordinator Paolo Bergese, director of the Nanochemistry Camp 2024, with Nobel laureate Andre Geim, who gave the keynote lecture.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952183

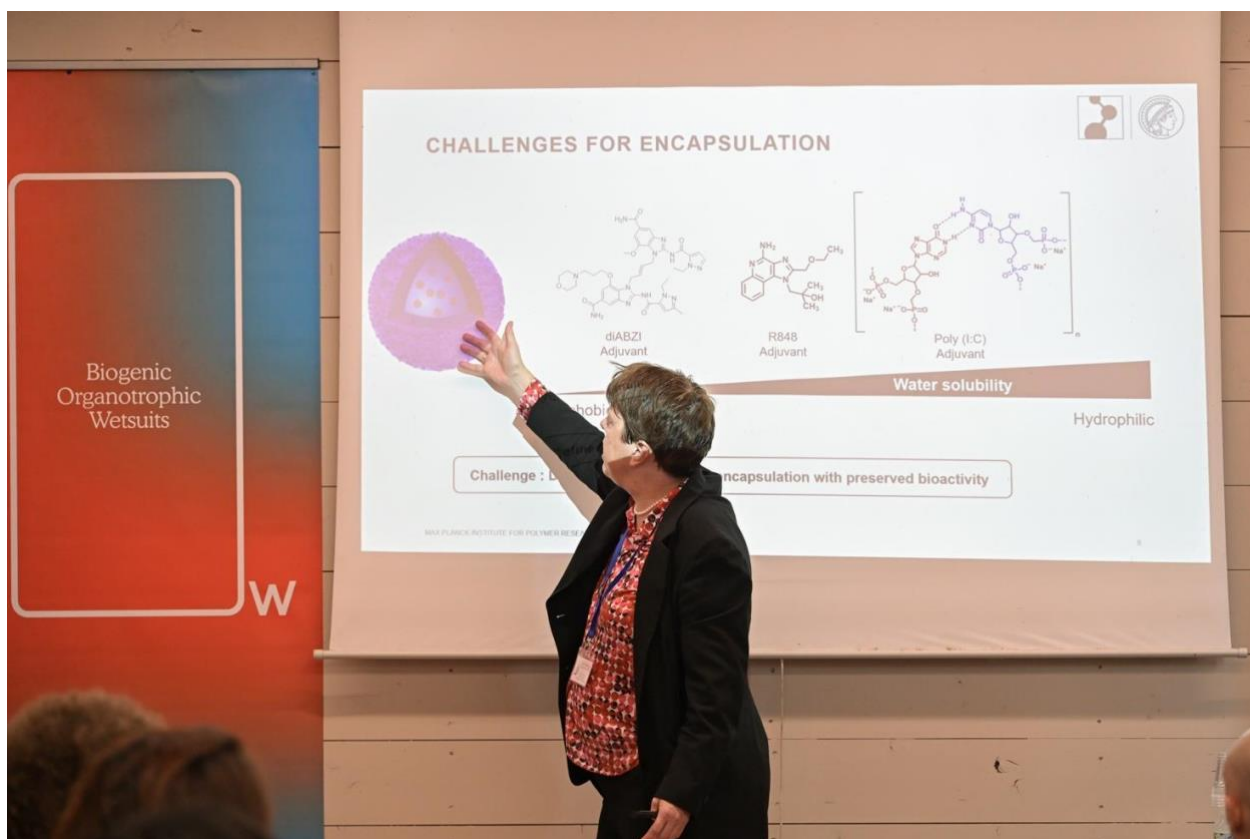


Figure 6 - BOW researcher Prof. Landfester's lecture at the Nanochemistry Camp 2024.

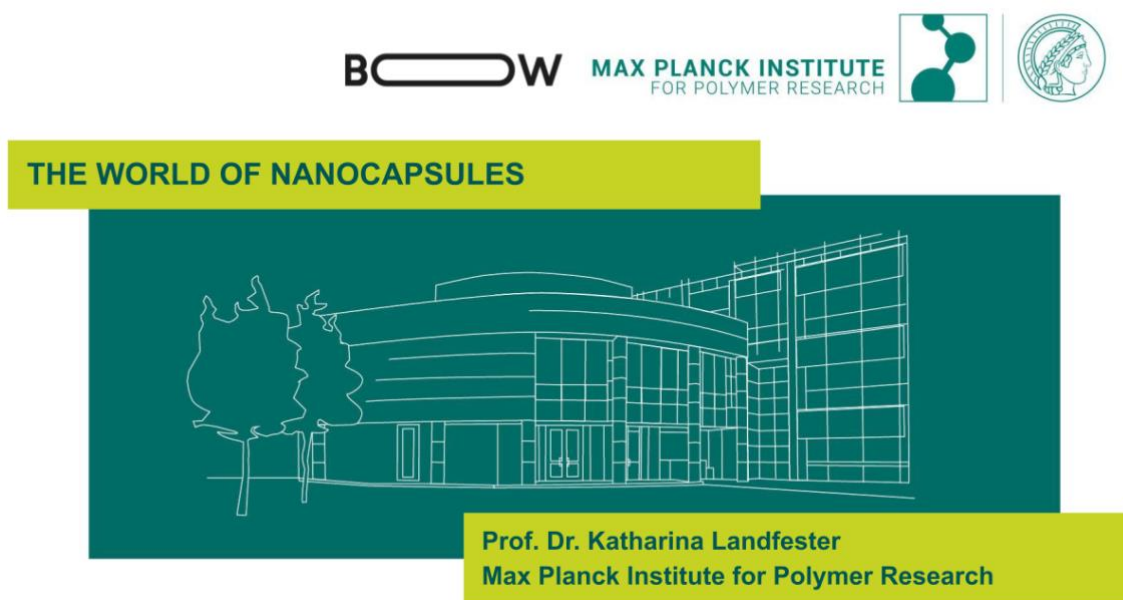


Figure 7 - Cover page of Prof. Landfester's lesson



3. Lectures

BOW researchers have delivered a series of lectures in high schools, research institutes, and universities, as outlined in Table 1.

Table 1 - Lectures given by partners in high school and university settings

Date	Lecturer	Title	Location
21/4/2021	Pamela Santonicola (CNR)	Use of the <i>C. elegans</i> model system in the study of neurodegenerative diseases	Convitto "G. Bruno" Maddaloni - Caserta
25/10/2021	Elia di Schiavi (CNR)	Complete mapping of the nervous system of the small nematode <i>C. elegans</i> is a valuable tool for human health	Festival della Scienza 2021
27/04/2022	Pamela Santonicola (CNR)	Use of the <i>C. elegans</i> model system in the study of neurodegenerative diseases	Liceo Margherita di Savoia - Napoli
20/05/2022	Miriam Romano (CSGI)	Extracellular vesicles and their role as therapeutic agents both in regenerative medicine and as drug delivery	University of Milan, Milan, Italy
07/09/2022	Miriam Romano (CSGI), Paolo Bergese (CSGI)	Bio-nanoscience – Scientific Talk "On the border between chemistry, physics and biology" (https://caracciolodaprocida.edu.it/blog-news/al-confinet-ra-chimica-fisica-e-biologia/)	Istituto Superiore Statale "F. Caracciolo - G. Da Procida - Procida (High School), Procida, Naples, Italy
30/09/2022	Andrea Zendrini (CSGI)	"Biogenic nanoparticles. The mechanisms of communication between cells" (https://www.unibs.it/en/node/5813)	University of Brescia - Notte dei ricercatori 2022
07/11/2022	Paolo Bergese (CSGI), Andrea Zendrini (CSGI)	Exosomes, extracellular vesicles and (nano)friends: Fundamentals, bio-analytical aspects and applications in the veterinary sector	Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini" - Brescia
24/02/2023	Pamela Santonicola (CNR)	The <i>C. elegans</i> model system	Area di Ricerca NA1 - Napoli
12/04/2023	Pamela Santonicola (CNR)	<i>Caenorhabditis elegans</i> as animal model system	Area di Ricerca NA1 - Napoli
17/05/2023	Andrea Zendrini (CNR)	Biogenic nanoparticles: a multipurpose knife for disease diagnosis, prognosis and treatment	University of Milan, Milan, Italy
05/02/2024	Debora Berti (CSGI)	Leveraging biomolecular interactions from nano to meso-scale to build hybrid systems	XXVIII School of Pure and Applied Biophysics - Venice
18/03/2024	Giuseppina Zampi (CNR)	<i>Caenorhabditis elegans</i> as an animal model system	Area di Ricerca NA1 - Napoli
20/06/2024	Lucrezia Caselli (CSGI)	Application of SANS to chemistry and material Science (www.sisn.it/formazione/tnt-summer-school)	TNT – Training on Neutron Techniques Summer School: Small Angle Neutron Scattering & Reflectometry - Bolzano
10/10/24	Lucrezia Caselli (CNR)	Integrating lipid scaffolds and inorganic nanoparticles to develop hybrid functional materials for nanomedicine (https://www.ba.ic.cnr.it/nanomedicine2024/)	Nanomedicine School - Florence





Figure 8 - Flyer for a lecture given in the high school "F. Caracciolo - G. Da Procida", Procida, Italy.



Figure 9 - Flyer for a lecture given in the Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini", Brescia, Italy.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952183