



SUPRALIFE NEWSLETTER #4 DECEMBER 2024

Dear SupraLife Friends and Colleagues,

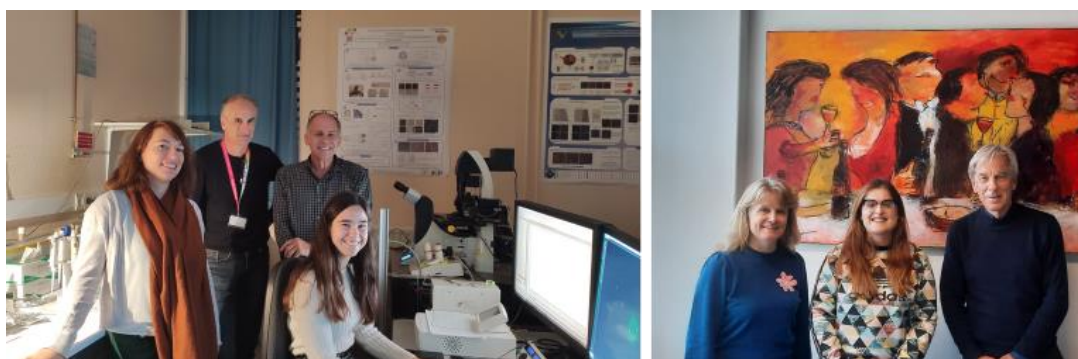
Welcome to the fourth SupraLife's Newsletter!

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SHORT-TERM ON-SITE TRAINING ACTIVITIES AND STAFF EXCHANGES/VISITS AT THE EINDHOVEN UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF BORDEAUX | 2024

The SupraLife's consortium began the short-term on-site training activities in 2024. Cristiana Sousa and Vera Sousa, PhD students at the University of Aveiro (UAVR, Portugal), initiated their fruitful short-term training activities at the University of Bordeaux (UBx, France) and Eindhoven University of Technology (TU/e, The Netherlands) in May and September 2024, respectively. Cristiana Sousa is working on the development of light-responsive polymersomes and compartmentalized systems with Sébastien Lecommandoux, Angela Mutschler and Emmanuel Ibarboure at UBx and Vera Sousa is working on the development of supramolecular hydrogels with E.W. "Bert" Meijer and Patricia Dankers at TU/e. To date, both acquired practical research training and became acquainted with specific chemical strategies and cutting-edge technologies to characterize the developed supramolecular biomaterials/systems. Cristiana and Vera already gathered interesting data whose research will continue in 2025. They adapted well to the new working environment and culture and had the chance to attend several events and meetings, improve their knowledge and expertise and contribute to the group activities.



In October 2024, João F. Mano performed a staff exchange/visit at UBx to exchange knowledge, discuss on-going research activities and gathered results with Sébastien Lecommandoux, Angela Mutschler, Colin Bonduelle, Elisabeth Garanger and Emmanuel Ibarboure. This staff exchange was also a great opportunity to exchange on the project progress and discuss future activities and actions to be accomplished in between UAVR and UBx. This activity and the on-site exchanges launched the seeds for fruitful scientific collaborations, which will be key for the successful implementation of SupraLife.



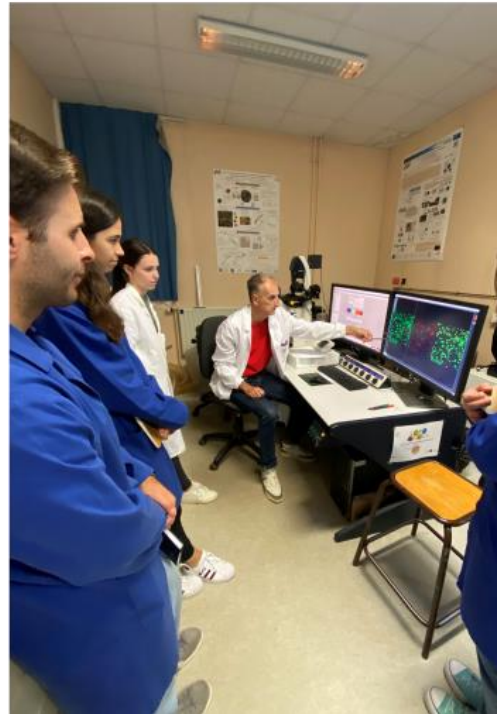
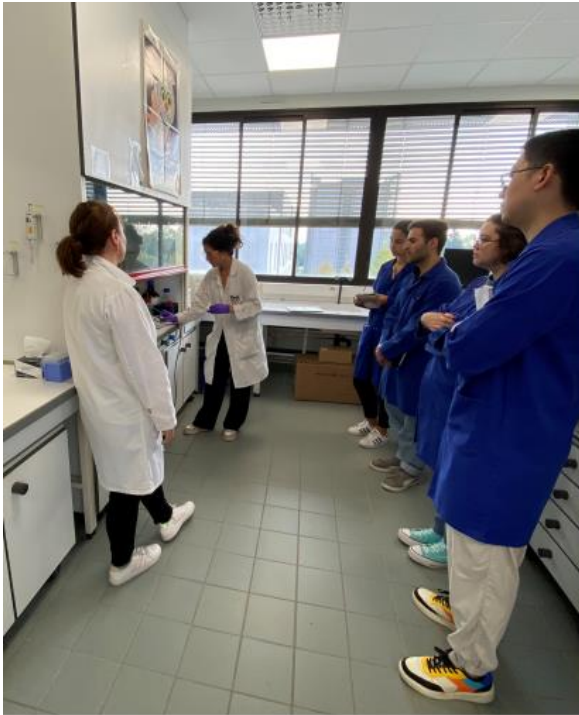
HANDS-ON WORKSHOP AT THE UNIVERSITY OF BORDEAUX | BORDEAUX, FRANCE | 23-25 SEPTEMBER 2024

Sébastien Lecommandoux, Angela Mutschler, Elisabeth Garanger and Colin Bonduelle hosted a three-day cutting-edge workshop on the "Synthesis and advanced characterization of block copolymers at the nanoscale" at the University of Bordeaux, France, from 23rd to 25th September 2024. The event featured top-level scientific lectures in the microfluidic formulation of polymersomes, production of giant and compartmentalized polymersomes, production and purification of recombinant polypeptides, and aqueous ring-opening polymerization induced self-assembly.

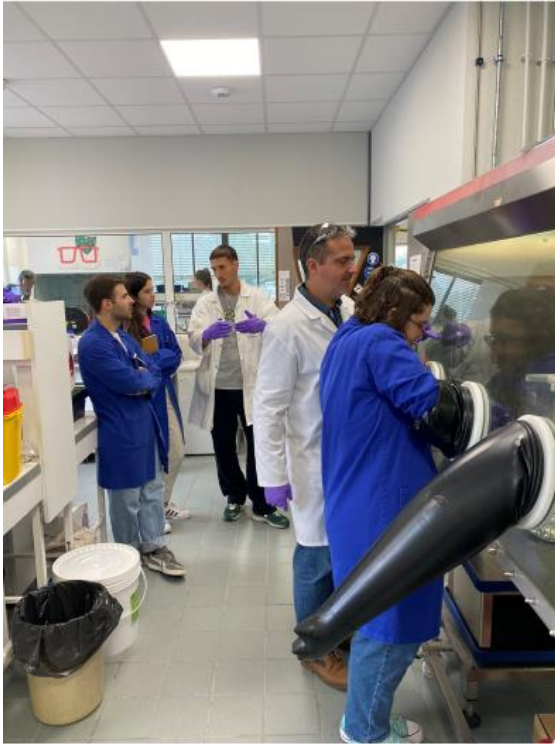


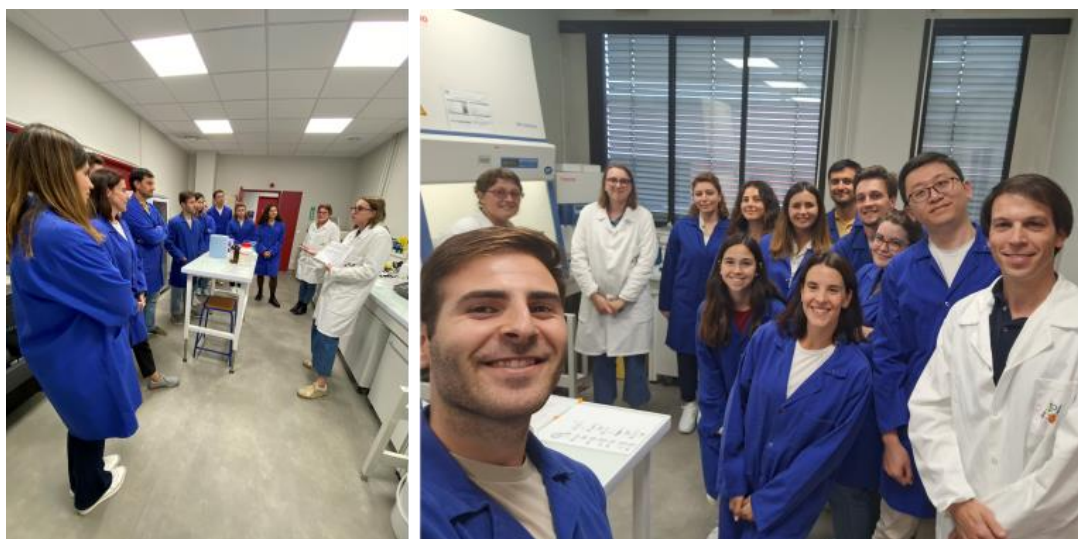
The workshop also included laboratory rotation schemes, demonstrations, and practical hands-on training on cutting-edge techniques for (macro)molecular synthesis and characterization of polymeric materials and self-assembled supramolecular systems. Those included microfluidics for the preparation of polymersomes at the nanoscale; flow-through cell dissolution testing apparatus to monitor the drug release profile; high-resolution confocal laser scanning microscopy to monitor the photo-induced degradation and drug release in giant and compartmentalized polymersomes; chemical tools for enabling the synthesis of amphiphilic polymers, polypeptides and self-assembled nano-objects in one-step; and detailed extraction and purification procedures to obtain recombinant polypeptides.

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The workshop promoted knowledge exchange and ensured a high quality educational training to students and researchers from UAVR and TU/e in the synthesis and advanced characterization of block polymers and self-assembled polymeric nanostructures. All participants emphasized the truly inspirational lectures, knowledge sharing and networking opportunities, as well as the very well organized lab activities. Collaborative research projects are currently ongoing aiming for the development of light-responsive polymersomes and compartmentalized structures for biomedical and healthcare purposes.



The workshop also included a short-term visit by the UAVR's Research Support Office to UBx, from 23rd to 26th September 2024, to exchange knowledge, experiences and best practices with the research management staff at UBx. The visit was hosted by Floriane Worm. During this short-term visit the participants exchanged on several topics, including best practices on project management, how to write competitive EU proposals, how to enhance the interaction in between research support offices and the scientific community, tools to discover funding opportunities, and how to boost the translation of research outputs to society.



EUROPEAN RESEARCHERS' NIGHT | FÁBRICA CENTRO CIÊNCIA VIVA DE AVEIRO | AVEIRO, PORTUGAL | 27 SEPTEMBER 2024

The SupraLife's team at the University of Aveiro participated in the European Researchers' Night last September 27th at Fábrica Centro Ciência Viva de Aveiro, inspiring and engaging with the general public and contributing to improving society's awareness of science. This science outreach event was a fantastic opportunity to share our research on supramolecular hydrogels, free-standing membranes, 3D bioprinting structures, bioinspired materials/surfaces and superhydrophobic surfaces, as well as its impact on healthcare with the general public, including children, youth and all curious minds willing to learn more about our science and SupraLife's goals. What a great day to celebrate the joy and the importance of science for society! An experience to repeat, for sure!



SECOND SCIENTIFIC RETREAT | PORTO, PORTUGAL | 15-18 NOVEMBER 2024



The Second Scientific Retreat of the SupraLife EU-funded project, entitled “Strengthening ties, unleashing opportunities”, took place in Porto from 15-18th November 2024, following a similar format to the successful First Retreat held in the Douro region in 2023. The event brought together students, researchers and staff from the University of Aveiro (UAVR, Portugal), Eindhoven University of Technology (TU/e, Netherlands), the University of Bordeaux (UBx, France) and its affiliated entities the Polytechnic Institute of Bordeaux (Bordeaux INP, France) and the National Centre for Scientific Research (CNRS, France) to advance the knowledge on the development of bioinspired supramolecular biomaterials and self-assembled systems. This retreat followed the First Retreat, continuing to strengthen the project’s commitment to fostering scientific collaboration and driving innovative research.

The scientific program included individual scientific talks by the consortium partners on emergent topics, including molecular nanorobotics, self-assembled polymeric nanostructures, (multi)compartmentalized stimuli-responsive polymeric systems, and supramolecular biomaterials for nanomedicine, controlled drug/therapeutics delivery, tissue engineering and regenerative medicine.



The scientific program also included interactive and fruitful exchanges over poster sessions, by pairing students and researchers with diverse backgrounds and affiliated with the different institutions of the consortium, to encourage networking and "thinking

outside-the-box".

The participants shared the research progress on the abovementioned topics, including the research attempted at the partner's institutions in the framework of the short-term training activities and envisioned applications in biomedicine and healthcare, and exchanged on future activities and actions to be pursued in the framework of SupraLife.



The Second Scientific Retreat encouraged interdisciplinary knowledge exchanges and collaborative thinking, and stimulated creativity to fulfill SupraLife's goals.



The retreat was also an opportunity for the consortium partners to strengthen ties in an informal and inspiring atmosphere while visiting some of the most iconic places and enjoying the beautiful city of Porto. In particular, the participants visited the historic Burmester Wine Cellar in Vila Nova de Gaia and enjoyed a guided wine-tasting experience. Immersed in the rich traditions of Port wine production, the participants explored the cellar's heritage while learning about the craftsmanship behind its renowned wines.



The dinner at the restaurant “O Fado” offered participants not only a chance to enjoy traditional Portuguese cuisine, but also an immersive cultural experience through live Fado music, Portugal’s iconic genre recognized by UNESCO as an Intangible Cultural Heritage of Humanity. The soulful melodies and lyrics of Fado captivated the participants, providing a unique glimpse into Portugal's cultural identity.



INFO SESSION ON EIC PATHFINDER 2025 AT THE UNIVERSITY OF AVEIRO | AVEIRO, PORTUGAL | 26 NOVEMBER 2024

The University of Aveiro (UAVR, Portugal) joined efforts with the Agência Nacional de Inovação (ANI) in organizing an insightful info session, capacity building and training event dedicated to funding opportunities under the European Innovation Council (EIC) Pathfinder 2025. The event entitled "NCPInTheHouse 2024 – EIC Pathfinder: From the lab to the market", which took place at the UAVR's Rectory building on 26th November 2024, was moderated by Luísa Sal from the UAVR's Research Support Office. It was free of charge and open to the whole UAVR's community.

The event was split into two parts:

- Part I (10:30 am-12:30 pm) – Academic Acts Room, UAVR's Rectory

This session included an informative presentation by Ricardo Carvalho, National Contact Point at ANI, on the EIC goals, instruments, type and open calls, and latest developments in the EIC Pathfinder program for 2025, highlighting the new challenges. Also during the morning, an info session devoted to the importance of the intellectual

property protection strategy in EU-funded projects, in particular in the EIC panorama took place headed by Anabela Carvalho (Patentree).

- Part II (2:00 pm-5:00 pm) – Senate Room, UAVR's Rectory

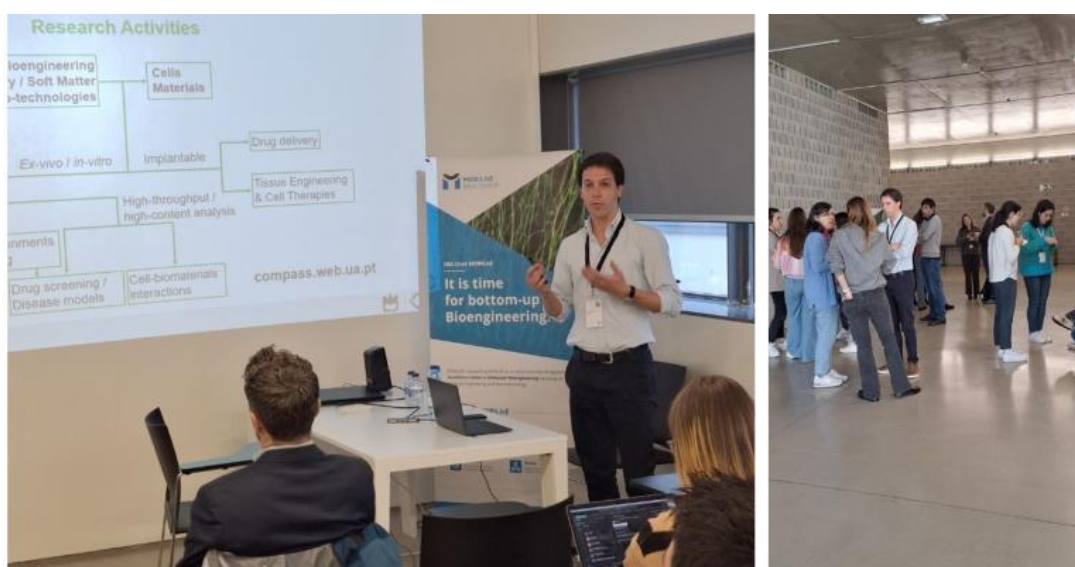
This session was dedicated to a set of bilateral meetings (NCP x Entities) aiming to frame ideas and clarify specific doubts related with EIC Pathfinder. The sessions were scheduled in advance by interested students and researchers a UAVR to maximize the efficiency of this exercise.



This initiative, which was well received and sparked the interest of the UAVR's community, aimed at informing and training the scientific, technological and entrepreneurial community in terms of funding opportunities (with projects of up to 4 M€) for disruptive ideas and scientific developments of low technological maturity (up to TRL 4).

2ND ADVANCED TRAINING COURSE IN MOLECULAR BIOENGINEERING HELD IN PORTO | PORTO, PORTUGAL | 2-6 DECEMBER 2024

SupraLife's project coordinator João Borges (UAVR, Portugal) delivered an invited lecture at the 2nd Advanced Training Course in Molecular Bioengineering, entitled "Molecularly engineered interfaces for biomedical applications", which took place at the Institute for Research and Innovation in Health (i3S), University of Porto, from 2nd to 6th December 2024. He presented the work on the Layer-by-Layer assembly of soft self-assembling nanobiomaterials for biomedical applications developed in the framework of SupraLife. The talk was well received by the audience and ignited stimulating discussions. João also took the chance to advertise the SupraLife's project goals, activities and events planned for 2025.



SCIENCE OUTREACH AND PUBLIC ENGAGEMENT ACTIVITIES

MEET THE SCIENTIST | FÁBRICA CENTRO CIÊNCIA VIVA DE AVEIRO | 13 DECEMBER 2024

On 13th December 2024, João Borges (UAVR, Portugal) had the pleasure to engage in science outreach activities by actively participating in the "Meet the scientist" initiative promoted by the Fábrica Centro Ciência Viva de Aveiro. He had a lot of fun sharing the joy and key role of chemistry in everyday life, as well as some of the work developed in the framework of SupraLife with 9-10 years old children from the Aveiro's primary school EB Barrocas. It was great to exchange with children, answer to their questions and curiosities, and convey the importance of science for society.



UPCOMING SUPRALIFE'S CAPACITY BUILDING AND TRAINING ACTIVITIES

**SUPRALIFE THIRD SCHOOL TO BE HELD AT THE UNIVERSITY OF AVEIRO |
AVEIRO, PORTUGAL | 9-14 MARCH 2025**

SUPRALIFE
Third School

Supramolecular Multifunctional
Biomaterials

Register

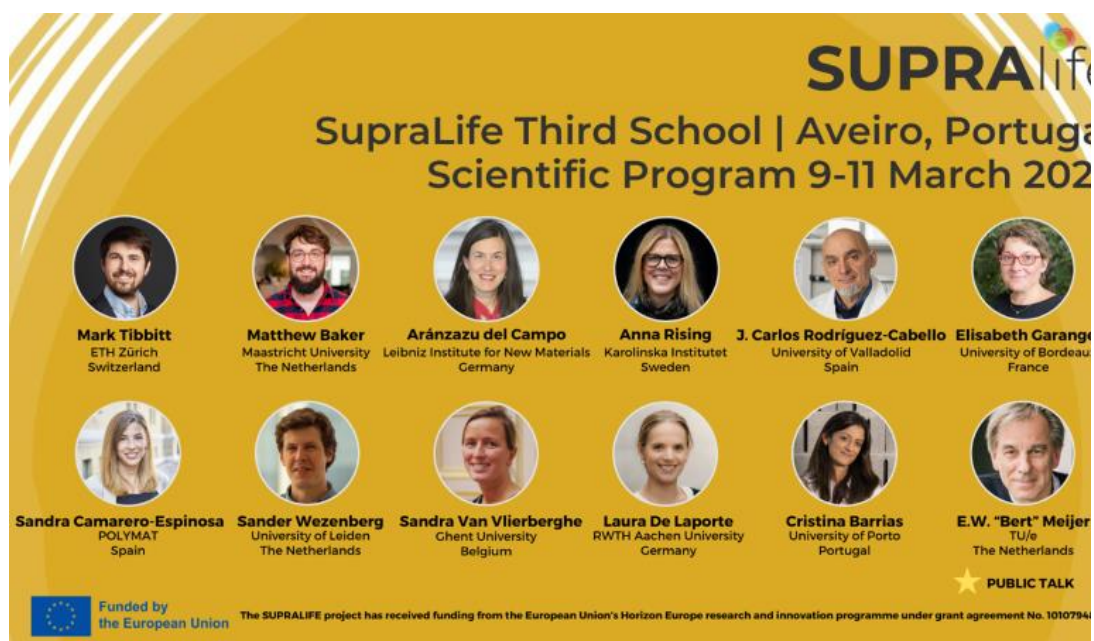
SUPRALIFE

The [SupraLife Third School](#), themed "Supramolecular Multifunctional Biomaterials", will be held at the University of Aveiro, Portugal, from 9-14th March 2025.













The program will be split in two parts:

- [Scientific Program](#), running from 9-11th March 2025, which aims at teaching fundamental-to-advanced concepts to students and researchers with backgrounds in chemistry, biochemistry, (bio)materials science, biomedical engineering, bioengineering, biotechnology and biology on the molecular design, synthesis, development and advanced characterization of supramolecular and macromolecular multifunctional biomaterials and systems for biomedical applications and healthcare.

The scientific program will consist of plenary lectures by world-leading experts in the supramolecular and biomaterials' chemistry fields who will share their extensive experience and expertise and present a comprehensive overview of their group's research activities.



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SupraLife Third School | Aveiro, Portugal
Scientific Program 9-11 March 2025

 Mark Tibbitt ETH Zürich Switzerland	 Matthew Baker Maastricht University The Netherlands	 Aránzazu del Campo Leibniz Institute for New Materials Germany	 Anna Rising Karolinska Institutet Sweden	 J. Carlos Rodríguez-Cabello University of Valladolid Spain	 Elisabeth Garanger University of Bordeaux France
 Sandra Camarero-Espinosa POLYMAT Spain	 Sander Wezenberg University of Leiden The Netherlands	 Sandra Van Vlierberghe Ghent University Belgium	 Laura De Laporte RWTH Aachen University Germany	 Cristina Barrias University of Porto Portugal	 E.W. "Bert" Meijer TU/e The Netherlands

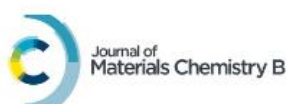
Funded by the European Union
The SUPRALIFE project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 1010794

★ PUBLIC TALK

The scientific program will also include oral and poster presentations, selected from contributed abstracts submitted by participants, in fields that include the topics of dynamic, adaptive, self-healing and injectable polymeric hydrogels, (multi)stimuli-responsive soft biomaterials, 3D and 4D (bio)printed multifunctional (bio)materials, multiscale/hierarchical biomaterials, bioinspired surfaces and structures, biomimetic and bioinspired supramolecular structures and molecular systems, and their use in nanomedicine, drug/therapeutics delivery, biosensing, tissue engineering or regenerative medicine.

Awards will be given to the best oral communication and to the best three poster communications. The best oral communication award will be sponsored

by [Metatissue](#) and the three best poster awards will be sponsored by [Biomaterials Science](#), [Journal of Materials Chemistry B](#) and [Materials Advances](#) from the [Royal Society of Chemistry](#).



- [Soft Transferable Skills' Training Program](#), running from 12-14th March 2025, which aims to advance the professional development and widen the career perspectives of students and researchers, irrespectively of their background and area of specialization, to outperform in their professional duties and career paths. The topics to be covered include job hunting in science, CV clinics/coaching, roads to leadership, roads to success, networking and career development, the power of volunteering, social media for science, regeneration into action for the greater good, innovation and money making, and AI tools in practice. The line-up of invited speakers for this program can be found below.

The soft skills program is a joint effort of the EU-funded Twinning projects SupraLife (GA nr. 101079482), EPIBOOST (GA nr. 101078991), FONDA (GA nr. 101079134) and ERA Chair project BESIDE (GA nr. 951389), all coordinated by the University of Aveiro, and is free to all the University of Aveiro's community (registration is mandatory).



FONDA EPIBOOST SUPRALIFE

3rd Joint Soft Transferable Skills Training Program 12-14 March 2025 | Aveiro, Portugal

 Pedro Arcanjo Bluepharma PT	 Andreia Cruz Oceano Fresco PT	 Simão Soares SilicoLife PT	 Catarina Custódio Metatissue PT	 Ana Moniz Executive Coach & Trainer, PT	 Joana Moscoso Native Scientists & Chaperone, PT	 Jana Asselme Ghent Univers BE
 Victor Mascarenhas Innovation Consultant PT	 Fernando Gomollón-Bel Agata, UK	 Rute Pereira EJR-Quartz - ESA PT	 Miguel Leal Science Crunchers PT	 Carla Lourenço CORDAP PT	 Ole Nielsen Univ. Copenhagen DN	 Margarida Sar Univ. West of Eng UK

 Funded by the European Union

The SUPRALIFE, FONDA, and EPIBOOST twinning projects have received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101079482, 101079134 and 101078991, respectively. The ERA Chair project BESIDE has received funding from the European Union Horizon 2020 research and innovation programme under grant agreement No. 951389.



FONDA EPIBOOST SUPRALIFE

3rd Joint Soft Transferable Skills Training Program 12-14 March 2025 | Aveiro, Portugal

 Tiago Brandão Rodrigues Former Minister of Education PT	 João Borges Univ. Aveiro PT	 Rita Almeida Univ. Aveiro PT	 Rui Munhá FCT PT	 Mara Freire RYA-Purification Technologies PT	 Hugo Prazeres i3S, Univ. Porto PT
 Natacha Fontes Sogrape PT	 Eugénia Barroca Sustainable Ocean Alliance PT	 Pedro Sá BioLiving PT	 Nuno Negrões Univ. Aveiro PT	 António Costa Univ. Aveiro PT	 Eduardo More Univ. Brasília BR

 Funded by the European Union

The SUPRALIFE, FONDA, and EPIBOOST twinning projects have received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101079482, 101079134 and 101078991, respectively. The ERA Chair project BESIDE has received funding from the European Union Horizon 2020 research and innovation programme under grant agreement No. 951389.

Registration is open at: <https://www.supralife.eu/thirdschool/#registersection>
Please note the early-bird registration deadline is set to 31st January 2025.

We look forward to welcoming and meeting you in Aveiro next March!

INTERNATIONAL SYMPOSIUM AT TERMIS-EU 2025 | FREIBURG, GERMANY | 20-23 MAY 2025



SUPRAlif

SYMPOSIUM @ TERMIS-EU 2025

Designing advanced bioinspired materials by merging natural macromolecules with supramolecular chemistry

INVITED SPEAKERS



PATRICIA DANKERS
Eindhoven University of Technology
The Netherlands



JOÃO BORGES
University of Aveiro
Portugal



The SUPRALIFE project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 10107941

The SupraLife's consortium will be at the TERMIS-EU 2025 congress in Freiburg, Germany, from 20-23 May 2025!

We will be hosting our own symposium entitled “Designing advanced bioinspired materials by merging natural macromolecules with supramolecular chemistry” having Patricia Dankers (Eindhoven University of Technology, The Netherlands) and João Borges (University of Aveiro, Portugal) as invited speakers. They will be sharing their team efforts and engaging with the biomaterials community on the development of artificial extracellular matrix (ECM)-mimetic biomaterials by combining natural macromolecules with supramolecular chemistry aiming to engineer tissue-inspired biomaterials. Emphasis will be given to the interplay between natural biopolymers (e.g., polysaccharides, proteins) and small synthetic building blocks that self-assemble into supramolecular polymers towards the development of advanced supra(macro)molecular biomaterials that could better recreate the complexity, dynamics, bioactive and mechanical signals of the native ECM. Besides the two invited lectures, the symposium will include oral communications by contributed abstracts.

We look forward to sharing our research, connecting and engaging in fruitful exchanges and collaborative efforts with the biomaterials' community in moving towards advanced therapies to shape the future of tissue engineering and regenerative medicine!

**HANDS-ON WORKSHOP AT THE UNIVERSITY OF AVEIRO | AVEIRO,
PORTUGAL | 24-26 SEPTEMBER 2025**



We are pleased to announce that the third and last SupraLife hands-on thematic workshop will take place at the University of Aveiro, Portugal, from 24-26th September 2025. Following-up on the successful workshops organized at the Eindhoven University of Technology (2023) and University of Bordeaux (2024), the upcoming workshop will feature invited lectures by experienced scientists and practical hands-on training sessions devoted to the multi-scale processing and advanced characterization of supramolecular biomaterials and biomedical devices aiming to foster the exchange of knowledge and expertise, and stimulate collaborative efforts among the consortium participants. Lab-rotation schemes will be implemented to maximize the efficiency of this exercise. The event will provide valuable networking opportunities while also enabling participants to get acquainted with the Portuguese's culture and experience the vibrant city of Aveiro!

FINAL INTERNATIONAL SCIENTIFIC CONFERENCE AT THE UNIVERSITY OF
AVEIRO | AVEIRO, PORTUGAL | 29 SEPTEMBER - 3 OCTOBER 2025



We are excited to announce that the SupraLife Final International Conference will be held in Aveiro, Portugal, from 29th September to the 3rd October 2025. The conference motto will be on advancing the frontiers of supramolecular multifunctional biomaterials and systems for biomedical applications and healthcare and we are happy to announce a fantastic and diverse line-up of plenary speakers (see below). For further updates on the Final International Conference, including deadlines for abstract submission for oral and poster communications and early-bird registration, please check in due course the just launched website - <https://www.supralife.eu/finalconference/> - and social media channels ([X](#), [LinkedIn](#)).

We look forward to meeting you in Aveiro next September/October 2025!



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The SupraLife's consortium wishes all our team members, collaborators, friends and followers a joyful Holiday Season and a (SUPRA)Happy, Healthy and Prosperous New Year 2025!

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