



Exploiting the multifunctional properties of polyphenols: from wastes to high value products

NEWSLETTER

Project

PHENOCYCLES aims at exploring innovative use of polyphenols (PP) and at validating methods for their extraction with a green chemistry approach. PP extracted from agro-industrial wastes and herbs with therapeutic value will be purified/fractionated with pilot-scale nano/ultrafiltration membranes to recover different PP fractions, to be employed in four distinct sectors: health, plant production, environment protection, material science.

Consortium

PHENOCYCLES consortium consists in 10 institutions (Universities or Research Centres) belonging to 7 countries, both European (Italy, Poland, Romania, Spain) and non-European (Argentina, Colombia, Uzbekistan). All the partners are involved in the research activities on polyphenols and in the exchange of participants, with the aim to increase their personal skills and the scientific level of each institution.

PHENOCYCLES is a project funded under EU Marie Skłodowska-Curie Actions (MSCA)
 Call: MSCA Staff Exchanges 2022 (HORIZON-MSCA-2022-SE-01)
 Project: [10.3030/101131420](https://cordis.europa.eu/project/id/103030101131420) Start date: 01 March 2024



Events

Many events involved PHENOCYCLES people during 2025. some significant activities are shown below, a list of all the event is available on the website (www.phenocycles.unito.it)

Friday, February 14th 2025 h14.00-18.30 - University of Turin

Joint workshop between SusWater and PHENOCYCLES projects on:
Biomasses as a valuable resource: recovery, treatments and applications

Wednesday, February 26th 2025 – National University of La Plata

During his stay at UNLP, **Prof. Lucas Santos-Juanes** delivered a lecture on pre- and postdoctoral fellowships available in Spain for students from outside the European Union.

This lecture was organized in collaboration with the Postgraduate Office of the Faculty of Exact Sciences at UNLP, and it was broadcast live and later uploaded to the YouTube platform (www.youtube.com/watch?v=5OdPpGJEN6U)

Oportunidades Académicas:
breve guía sobre contratos Pre y Post Doctorales en España

LUCAS SANTOS-JUANES JORDÀ
 Universidad Politécnica de Valencia (UPV)

Lucas Santos-Juanes Jordà es profesor titular de la Universidad Politécnica de Valencia (UPV) en el área de química-física. Su trabajo investigador se centra en la aplicación de procesos fotquímicos para el tratamiento de contaminantes en agua. Es co-autor de más de 50 publicaciones científicas en las áreas de ingeniería química y ciencia ambiental.



Miércoles 26 Febrero, 11:00 h
 Aula de Conferencias de Postgrado
 Edificio Abuelas Plaza de Mayo
 FACULTAD DE CIENCIAS EXACTAS



April 2025 CNR STEMS, Turin

Two colleagues from the CNR in Turin became senior researchers.

Congratulations from PHENOCYCLES to **Donatella Duraccio** and **Giovanna Gautier di Confiengo**.

Party with colleagues from CREA, UNITO and CNR to celebrate the promotion to senior researcher

UNIGHT, September 26th and 27th, Turin

UNITO and CNR-STEMS were involved in UNIGHT, this year focused on the topic “Attempts, Failures, Successes” and for the Phenocycles team the topic was declined as “wrong move, try again!”, as the gamification was at the center of the proposed activities.

UNITO and CNR-STEMS teams participated to the activities of three stands. At the stand “Piedmontese grapes and nanotechnology: tradition and innovation in the fight against breast cancer”, the Department of Drug Science and Technology team proposed a game board focused on the use of grapes polyphenols against the breast cancer engaged UNIGHT visitors. At the stand “Phenocycles for the recovery of agri-food waste” and CNR, Chemistry Department and CNR-STEMS teams played with a card game for kids and proposed an escape room for young and less young people on the topic of circular economy applied to the recovery of wine production. The winners of the game (and not only the winners...) received the brand new gadgets prepared to spread the Phenocycles principles: notebooks, pens and multifunction bottle opener/keychains, all marked with Phenocycles logo!



PHENOCYCLES Consortium

Coordinator:

(CREA) - Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, ITA

Participants:

(UNITO) - Università degli Studi Di Torino, ITA
 (WUT) - Universitatea de Vest Din Timișoara, ROM
 (CNR) - Consiglio Nazionale delle Ricerche, ITA
 (UPV) - Universitat Politècnica de Valencia, ESP
 (InHort) - Instytut Ogrodnictwa - Panstwowy Instytut Badawczy, POL

Partners:

(UdeA) - Universidad de Antioquia, COL
 (UNLP) - Universidad Nacional de La Plata, ARG
 (UNCo) - Universidad Nacional del Comahue, ARG
 (UPPSRI) - Plant Protection Scientific Research Institute, UZB

Secondment's stories

Lucas Santos-Juanes (UPV)

16 years after my postdoctoral stay at INIFTA (UNLP), I returned to La Plata with the hope of reconnecting with my Argentine colleagues (Maria Laura, Paula, Daniel, Mónica, Seba...). On my first night in La Plata, I was already able to greet some of them, as they took me out to dinner in the city center. The next day, I walked through the downtown streets to visit the city's most iconic places: the town hall, the cathedral, the forest, and the Estudiantes de La Plata stadium, which had been rebuilt during these years of absence. I quickly recalled some of the streets and restaurants, such as the magnificent Cervecería Modelo, a true classic in La Plata.

Since I arrived on a Friday, I had to wait until Monday to access INIFTA. There I found the emblematic building; the surroundings had changed with new constructions, but its silhouette remained unaltered. Its interior and façade, however, were undergoing major renovation works, which our colleagues are now enjoying.

During my stay, we reviewed the results obtained by PhD student Ada Montilla during her stay at UPV, as well as the planning of new tests. We also organized the submission of an abstract to the EAAOP held in Naples (Italy), where that work was presented.

The results obtained by our group at UPV were presented to the members of the UNLP group (see photo on the left).

I took advantage of my stay in La Plata to visit Professor Luciano Carlos from UNCO, who is also involved in this project. We reviewed the results obtained by PhD student Mariana Ramírez and also took the opportunity to enjoy the fantastic Argentine beef (see photo on the right).



Argentine beef is world-renowned, and I was able to enjoy it in different ways and in different places. I already miss it... and my colleagues as well.

Maria Laura Dittler (UNLP)

From mid-March to mid-April 2025, Maria Laura Dittler, a researcher from the University of La Plata, was with us at the CNR. It was a month of intense work, during which particle synthesis was carried out, numerous characterizations were performed, and many meetings were held, including with colleagues from UNITO. But it was also a wonderful month of socialising, talking and exchanging ideas. It was therefore an excellent opportunity to learn more about the work carried out by Maria Laura's workshop, which has given rise to many ideas for projects and collaborations. During the secondment Maria Laura has presented his research entitled "Development of mesoporous hydroxyapatite particles as vehicles with potential applications in controlled drug release for bone tissue disease" to several colleagues.



Left: Maria Laura at the seminar. Right: photo with the colleagues who attended the seminar.



Visit to the UniTO laboratories.



Maria Laura and CNR-UNITO team members enjoying an “apericena” in Torino

Daniel Cacciari (UNLP)

It's hard to sum up everything I experienced during my two-month secondment in Torino in just a few paragraphs, but I'll give it a try. I arrived in Italy on September 9th, 2025, carrying a huge sense of excitement—this was my first time setting foot in a country that's deeply connected to my family history (my grandfather was from Bologna, and Italian culture has always been strong in my family). From the moment I arrived in Torino, I was welcomed with open arms. Professor Giuliana Magnacca kindly came to pick me up at Porta Nuova station and took me to the residence where I'd be staying for the next two months. I spent the rest of that Tuesday afternoon exploring the neighbourhood and getting a first look at the city center.

Wednesday was my first day at UNITO, and it was full of emotions. Giuliana introduced me to everyone in the physical chemistry department, showed me the labs, made sure I had everything I needed to get started, and also took me to the pharmacy department, where other members of the project work. That's where I had the chance to reconnect with old friends—Dr. Giorgio Capaldi and Dr. Federico Verdini—who had completed their secondment in La Plata, Argentina, the year before. Over the following weeks, I had the chance to work on the synthesis of zirconium-based MOFs designed to adsorb the polyphenolic extracts that are the heart of this project. The goal was to improve their stability and create controlled-release systems for environmental and agricultural applications. Every result we obtained came from truly interdisciplinary work between the chemistry and pharmacy departments, supported throughout by Giuliana, Giorgio, and Federico.



Beyond the research I carried out during my secondment, I also had the chance to connect more deeply with Italian culture - something that has been present in my life since childhood. I met new people, made friends, and visited spectacular cities like Rome and Florence. Every weekend turned into a new adventure: traveling to small towns in the mountains around Torino, discovering hidden lakes, and walking through forest trails. Those two months were filled with unforgettable experiences and nothing but good memories. I want to use these final lines to express my deepest gratitude to Giuliana for all the support she gave me during my stay - without her, the experience would have been completely different. I also want to thank Giorgio and Federico for everything we shared, as well as the whole physical chemistry team, who welcomed me so warmly and truly made me feel part of the group, especially Luciana, Rita, and Francesco.

I'm absolutely sure I'll return to Italy - and especially to Torino. There's still so much left to do and discover, and it's always worth going back to the places where you've genuinely felt at home. Thank you for everything and the only thing that I have left to say is *Torino rimarrà sempre nel mio cuore, e so che un giorno ci rivedremo.*

Next events

Mid-Term Meeting, November 11th, and **Winter School**, November 12th-14th, 2025. Timișoara (ROU)