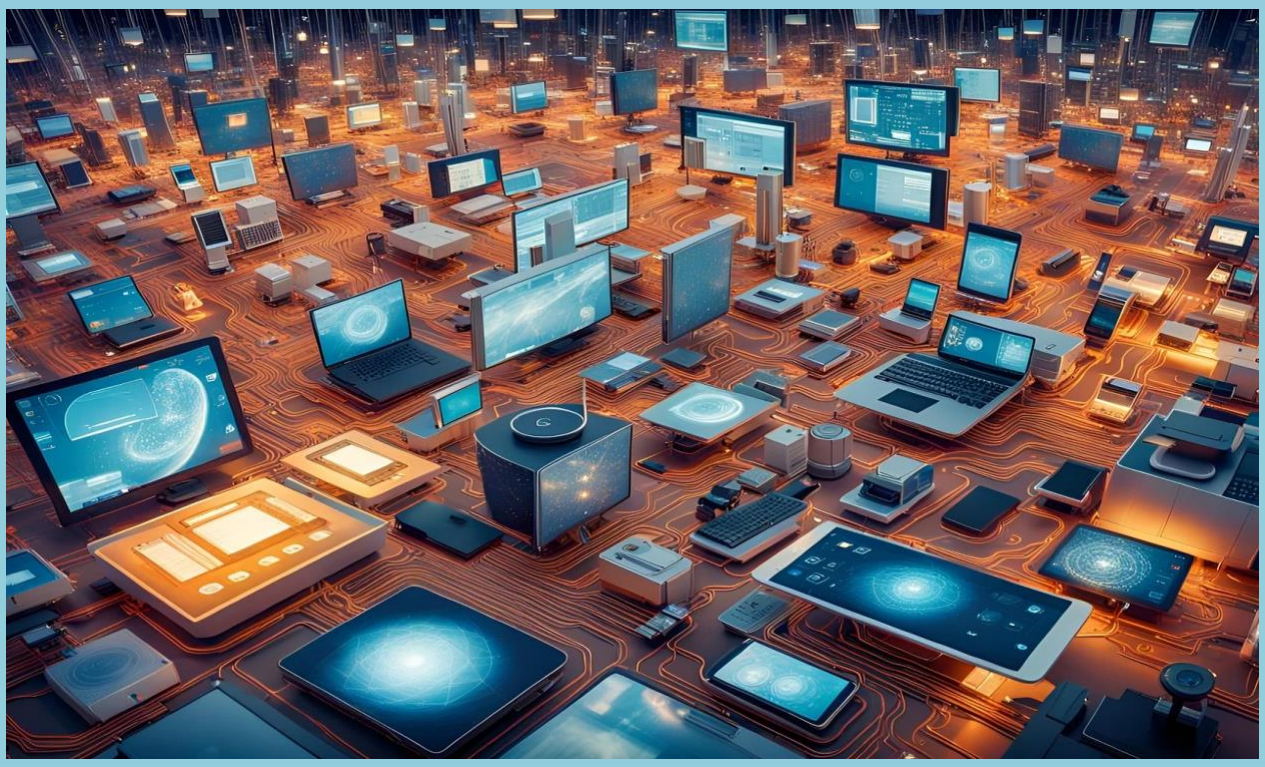
EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

PROTEOCURE Newsletter

09

October 2024 • Autumn issue http://proteocure.eu

A SOUND PROTEOME FOR A SOUND BODY:
TARGETING PROTEOLYSIS FOR PROTEOME REMODELING



ProteoCURE : Network of networks

ACTIVITIES & HIGHLIGHTS

by the ProteoCURE dissemination committee

We officially started our fourth year of activities with the opening of the different grant opportunities to apply. Thanks to your participation and the engagement of the ProteoCURE management we increased our budget for the final year. In exceptional cases a fifth year can be obtained but this is uncertain. What we should retain of the ProteoCURE benefits is the intense bilateral and multi-lateral collaborative efforts stablished between our members. In some cases, these collaborations have already produced publications or obtained /applied to grants to continue working together. Another important aspect is the formation of young scientist trough Short Term Scientific Missions (STSM), our training courses/schools and our active webinar series. In this last year we hope these exchanges will be intensified and productivity will reach maximum levels. Even if we officially have one more year with ProteoCURE, we should think about the way we want to continue working together. One possibility considered was applying to obtains another integrative COST action in which most of our actual members can be integrated. We are all hoping this application will be successful but we will have more opportunities that will appear along 2025 that we can discuss in our CG meetings or during our 2025 annual meeting. Whatever the subject and the leaders of the next action we hope we can continue working together in this community that became a network of networks.

Founded by the European Union

COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

PAST SCIENTIFIC EVENTS

TRAINING SCHOOL: "Basics and Perspectives of Mass Spectrometry-Based Proteomics" Freiburg, Germany, 16-20 of September 2024.

The training school, was a remarkable success. Thanks to the efforts of organizers Prof. Oliver Schilling, Prof. Oded Kleifeld, and Prof. Gunnar Dittmar, 26 participants from across ProteoCure member countries were immersed in a five-day program that expertly combined both theoretical and hands-on learning, covering the entire proteomics workflow from experimental design to data analysis. Key topics included quantitative proteomics, protein-protein interaction studies, post-translational modifications, and degradomics. Participants were particularly enthusiastic about the hands-on lab sessions, where they applied mass spectrometry techniques to real samples, and learning the use of the R language for data processing and statistical analysis. This practical experience, combined with expert lectures from leaders in the field, equipped attendees with the tools to design and execute their own proteomic experiments with greater confidence and precision. The collaborative atmosphere of the event also fostered new scientific partnerships and strengthened the ProteoCure network. With overwhelmingly positive feedback, it's highly likely that this successful training will be organized again next year, further advancing expertise within the community.

The training school was held in honor of the late Prof. Dr. Ulrich auf dem Keller; an innovative degradomics researcher and an inspiring academic teacher. We sincerely thank the organizing committee for their tremendous effort.

Plant Proteases 2024: Fostering Innovation and Collaboration in Plant Science. Stuttgart, September 3-5 2024.

The recent Plant Proteases 2024 conference brought together leading experts in basic and applied plant sciences focusing on the vital roles of plant proteases in both in vivo and in vitro contexts, exploring their potential for biotechnological applications. The event welcomed esteemed ProteoCure speakers from prestigious institutions, including Renier van der Hoorn (University of Oxford), Nuria Sanchez Coll (CRAG Barcelona), and Marina Klemenčič (University of Ljubljana). Sessions covered a wide range of topics, from the mechanisms of plant proteases to their roles in development, aging, and interactions with biotic and abiotic factors, uniting an enthusiastic group of over 50 researchers from 10 different countries. The conference was particularly successful in promoting connections within young researchers and innovators of the proteolysis community, with almost 60% of attendees being early-career researchers who actively participated as speakers and poster presenters.

Three best presentations by early-career researchers were selected by public voting and received a prize donated by the Journal of Experimental Botany. Congratulations to Margot Raffeiner, Giuliana Hessler, and Shamik Mazumdar for their award-winning presentations! Engaging discussions flourished during the poster sessions and coffee breaks, emphasizing the importance of mentorship and knowledge transfer in shaping the next generation of researchers.

We warmly thank the organisers, Prof. Andreas Schaller, Dr. Annick Stintzi, and Prof. Pitter Huesgen, as well as everyone involved for making Plant Proteases 2024 a resounding success and look forward to the exciting developments that will arise from this vibrant community!"

FUTURE SCIENTIFIC EVENTS

SAVE THE DATES:
4th Annual meeting of ProteoCure May 20, 2025 - May 23, 2025
Venue Heraklion, Greece. Organizer Makis Skoulakis.
For more information visit our Web page

COMING ProteoCURE WEBINARS

- **November 7:** Dr. Moé Abbas, Utrecht University, Netherlands

Title: An Oxygen Sensing Mechanism for Altitude Adaptation in Plants

- **November 14:** Dr. Ayala Shiber, Technion, Israel Institute of Technology

Title: Ribosome association with ubiquitin and ubiquitin-like modifiers regulates the suppression of translation during early stress responses

- **November 21:** Dr. Leo James, University of Cambridge, UK

Title: to be announced in our web page

- **December 12:** Prof. Devrim Gözüaçık, Koç University, Turkey

Title: to be announced in our web page

ANNOUNCEMENTS-CALLS

PROTEOCURE CALLS 2024-2025

Our new grant period has started and the calls will be announced in the coming weeks. Applications to get support for STSMs, ITC conferences, dissemination conferences, organization of meetings and organization of training schools will open soon. Please visit our web page for more information.
ALL CALLS WILL BE OPEN SOON

Special issue on TPD

Dear ProteoCurers, Elah Pick will be editing a special number on Targeted Protein Degradation (TPD). The aim is to advance our understanding of TPD and its role in managing proteotoxic stress and disease progression.

About the collection: TPD has rapidly gained attention for its potential to target undruggable proteins involved in various diseases. At the forefront are Proteolysis-Targeting Chimeras (PROTACs), which harness the ubiquitin-proteasome system to selectively degrade harmful proteins. Since their introduction, additional TPD methods have been developed, expanding the scope to novel targets such as membrane proteins, protein aggregates, and organelles.

This collection is designed to foster the exchange of knowledge and accelerate progress in this field(s). Which journals participate? The collection will be featured across several high- impact journals, including Nature Communications, Communications Biology, Communications Chemistry, and Scientific Reports. This provides flexibility in choosing the most suitable journal for your work and simplifies the process of finding reviewers, making submission easier and more efficient. More details about the participating journals can be found here: https://www.nature.com/collections/chbcfafjfc

PUBLISH RELEVANT INFORMATION IN OUR WEB PAGE OR NEWSLETTER IS EASY.
Send us an email to: dissemination@proteocure.eu

INTERVIEWS WITH OTHER SCIENTST LEADING COST ACTIONS

Dear colleagues, with the intention to get closer to other COST actions and promote collaborations between our members we have contacted some of their representatives to know how can we work together. Here we contacted Eva Martinez-Balibrea, IMMUNO-model COST action: https://www.immuno-model.eu/

IMMUNO-model

Q1. What are your major goals and activities?

Immunotherapy treatments have brought about a paradigm shift in modern oncology, but not all patients benefit from them. To conduct effective pre-clinical research that translates into real therapeutic advances, valid and standardized models are needed. Unfortunately, the reality is that these models are scarce and not well established. The main objectives of IMMUNO-model are: 1. to create an international network of researchers, companies, patient associations, and other stakeholders interested in the development, implementation, and standardization of pre-clinical models in immuno-oncology; 2. to collect information on existing models and make it accessible to everyone; 3. to help disseminate these methods within the scientific community to advance research in immunotherapies so that they reach as many patients as possible.

Q2. Tell us about success stories from your COST

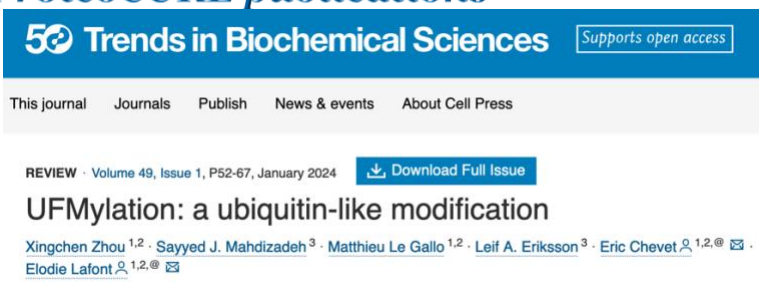
In these two years, with over 250 members, we have organized various meetings, workshops, and conferences that have addressed the most relevant aspects related to the central theme of our Action. To date, we have organized two training schools and awarded more than 20 STSMS grants, from which a significant number of women from ITC countries have benefited. Additionally, two Task Forces have been initiated: one aiming to compile the protocols on pre-clinical models from the members of the Action and another aiming to compile available immunogenomics data. As for publications, we are preparing a book chapter with different protocols and a special issue in Frontiers in Immunology on cell therapy and immuno-models.

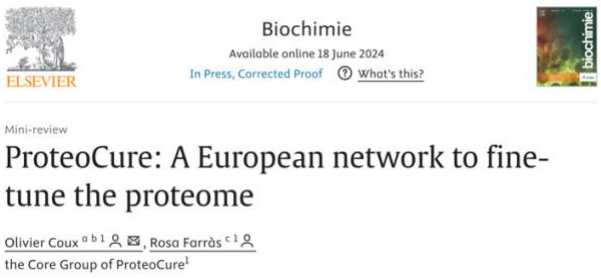
Q3. How could you envision some possible interactions with Proteocure?

To continue growing, it is essential to seek new partnerships; one possibility is to interact with ProteoCure. For example, the development of new protein degraders against proteins involved in tumor immunosuppression requires valid models to test their efficacy and toxicity. To assess potential synergies, a joint workshop or another activity could be organized.

Dr Martinez-Balibrea is group Leader, Resistance, Chemotherapy and Predictive Biomarkers group, ProCURE (ICO) and CARE (IGTP) programs. Campus Can Ruti - IGTP – Badalona, Spain

ProteoCURE publications





Zhou X, Mahdizadeh SJ, Le Gallo M, Eriksson LA, Chevet E, Lafont E. UFMylation: a ubiquitin-like modification. Trends Biochem Sci. 2024 Jan;49(1):52-67.

Coux O, Farràs R; Core Group of ProteoCure. ProteoCure: A European network to fine-tune the proteome.Biochimie. 2024 Jun 18:S0300-9084(24)00140-8.

Follow us

ProteoCURE action receives funding from COST (European Cooperation in Science and Technology) Action CA20113