



ProteoCure: Lessons and future perspectives

ACTIVITIES & HIGHLIGHTS

by the ProteoCURE dissemination committee

This issue is one of the last **ProteoCure** newsletter, as our COST Action comes to an end. Even though we are reaching the conclusion of our consortium, it is certainly not the end of our collaborations. Looking back at the various activities we have undertaken, this is a good time to reflect—to evaluate not only the aspects that did not work as expected, but also those that were highly successful. This kind of assessment is very important as we consider continuing our work within the framework of a new COST Action. One area that could be improved is the involvement of the private sector and clinicians in our COST Actions. Increasing interactions with these sectors will enhance both the translational impact and the visibility of our research. Nevertheless, in terms of progress in fundamental research, we have achieved many productive collaborations among group members. Other successful initiatives include our Short-Term Scientific Missions (STSMs), which enabled the training of many young researchers and had a significant impact on their scientific careers. These STSMs also strengthened collaborations within and beyond the **ProteoCure** laboratories—collaborations that will certainly continue beyond the end of our consortium. Our annual meetings were also a great success, providing valuable opportunities for face-to-face discussions. These rich, in-person exchanges had a unique quality compared to the virtual meetings we became accustomed to during the COVID period. The opportunity to meet and share ideas without time constraints is essential for challenging our research approaches and enhancing the quality of our investigations. The scientific content and organization of our annual meetings improved over time, culminating in our final and most successful meeting, held in Heraklion from May 20–23. You will find more information about this meeting in a dedicated section of this newsletter.

We still have at least three important activities planned before the end of our Action, which you will find described in the "Upcoming Activities" section of this newsletter. To prepare for a new Action, a dedicated meeting will be organized in a central European city in early autumn. The goal is to develop a competitive application to maximize our chances of success. We will keep you informed of any updates through our website and via email. The success of the **ProteoCure** Action is undoubtedly due to the enthusiastic participation of all of you. At the top of the list, we must highlight the responsiveness and commitment of our core leadership team, especially **Rosa Farràs**, **Olivier Coux**, and **Laetitia Poidevin**. Thank you all for making this network such a successful and inspiring one.

PAST SCIENTIFIC EVENTS

Mini-symposium on "Introduction to AI and AlphaFold2/3" Thursday, March 27, from 10 AM to 1 PM (CET). Organizers: Olivier Coux, Rosa Farràs, Laetitia Poidevin, Rune Matthiesen.

This event was very successful and we have more than 350 participants registered. This webinar included two presentations:

- Introduction to AI by Salomé Llabrés Prat (Universitat de Barcelona, Spain), covering AI fundamentals, machine learning algorithms, and their applications to protein folding.
- From AF2 to AF3: How to Use Them and What to Expect by Fabian Glaser (Technion, Israel), exploring AlphaFold methodologies, accuracy measures, and applications in structural biology.

42nd Winter School on Proteinases and Inhibitors. AKA: Extreme Hiker's guide through the universe of proteolysis. March 12-16 2025, Tiers am Rosengarten, South Tyrol, Italy. By Klaudia BRIX



Organizing Committee

Christian SOMMERHOFF, Institute of Laboratory Medicine, University of Munich

Boris TURK, Dept. Biochemistry & Mol. Biology, Jožef-Stefan-Institute, Ljubljana

Thomas REINHECKEL, Institute of Mol. Medicine and Cell Research, University of Freiburg

Klaudia BRIX, School of Engineering and Science, Jacobs University Bremen

Hans BRANDSTETTER, Dept. of Biosciences and Medical Biology, University of Salzburg

Here is for those of you who missed the 42nd Protease Winter School in Tiers which took place from 12 to 16 March 2025 in a beautiful setting close to the Rosengarten in the Dolomites. The Winter School was co-organized by ProteoCure (<https://proteocure.eu>) and that ensured participation of protease scientists from leading laboratories in Europe and almost all other continents. The essential questions that were answered concerned life in all its facets, the universe of proteolysis, and the interactome of proteases. There was a focus on diseases like cancer, neurodegeneration, and cardiovascular disorders. Of course, as with every Winter School on Proteinases & Their Inhibitors, a strong focus was laid on pathogens and viral infections, because they have the answers to all questions about how to cheat on a cell, a tissue, or an organism. Well, some of them are also important and helpful, fair enough. In any case, we all learned a lot from the next research generation hitchhiking through the universe of proteolysis. Specifically for the highly experimental character of this Winter School, there were technology-focused sessions on microscopy, spatial biology, and computational methods. Astonishingly, AI was not involved at all because it missed the deadline to submit its abstract. In keeping with the Winter School tradition, senior scientists introduced each of the seven session topics, but it was the young scientists who made our day by presenting their exciting research and discussing the next steps forward. Young investigator and best presenter awards were difficult to decide on, but the committee made it eventually, and we can only advise you to watch out for the 2026 Winter School. This will not be co-organized by **ProteoCure** as this concludes in autumn 2025. However, everybody from the 390+ groups working in the framework of **ProteoCure** are invited to come. Mark your calendars and look forward seeing us in Paradise from 11-15 March 2026 in Tiers, Italy.

How can you stay tuned? Check the website at <https://plus.ac.at/tiers>.



This event counted with the participation of European researchers to develop innovative strategies for selectively manipulating protein fate for therapeutic and biotechnological applications. The scientific program included a diverse set of sessions on current topics such as: Quality Control of Protein Biogenesis; Ubiquitin & Ubiquitin-like Modifiers; Proteolytic Machinery – Proteasome; Autophagy/Mitophagy/Lysosomal Proteases; From Bench to Bedside; Targeting Proteolysis – Drug Discovery.

A key highlight of this year's event was the **EMBO Keynote Lecture** delivered by **Professor Aaron Ciechanover**, recipient of the 2004 Nobel Prize in Chemistry. Professor Ciechanover shared insights from his groundbreaking work on ubiquitin conjugation and its crucial role in proteolysis—a discovery that revolutionized our understanding of cellular protein regulation and opened new therapeutic avenues, particularly in the treatment of cancer and neurodegenerative diseases.



In addition to the scientific sessions, attendees had the opportunity to engage in a conference excursion, featuring a visit to Knossos and dinner at a local winery with the participation of local musicians and a folkloric group that shared their dances and motivated the participation of all the audience



Prizes to young scientist for one oral presentation and two posters were attribute to: Simon Tack, Monica Pozo Rodriguez and Corentin Bouvier, respectively.



Congratulations to the local organizing comity for this immense success: **Georgia Chachami**. University of Thessaly, Greece; **Niki Chondrogianni**. National Hellenic Research Foundation, Greece; **Efthimios (Makis) Skoulakis**. Biomedical Sciences Research Center "Alexander Fleming", Greece.

Many thanks to the coordinators of ProteoCure for all your efforts during all these years: Rosa Farràs, (CIPF) Olivier Coux (IGMM-CNRS) and Laetitia Poidevin (CIPF).



FUTURE SCIENTIFIC EVENTS

EMBO SUMOylation: from discovery to translation Sept 22-25, 2025, La Grande Motte, France



Information and registrations:

<https://meetings.embo.org/event/25-sumoylation>

We are pleased to announce that registration is open for the EMBO Workshop: SUMOylation, from Discovery to Translation. This workshop will take place from September 22 to 25, 2025 in La Grande Motte, a seaside resort near Montpellier, France. If you wish to participate, don't wait to register as space is limited, and participants will be selected on a first-come, first-served basis. This meeting is supported by **ProteoCure** and travel grants are available for **ProteoCure** labs members.

We look forward to seeing you there

The organizers (G.Bossis, R.Barrio, G.Chachami, S.Muller, A.Sadanandom, A.Vertegaal).

2nd ProteoCure training school on "Basics and perspectives of mass-spectrometry-based proteomics" September 15-19 2025, at the University Medical Center, Freiburg, Germany.



After last year success of the first **ProteoCure** Training School on "Basics and perspectives of mass-spectrometry-based proteomics", we are glad to announce the second edition.

Save the dates!

More information in the web page: <https://www.uniklinik-freiburg.de/pathologie-en/proteocure-training-school.html>

ANNOUNCEMENTS

TRAVEL GRANTS

Travel supports are available for **ProteoCure** members and their laboratories to attend the "SUMOylation: from discovery to translation" meeting Sept 22-25, 2025 in France. Check the respective meeting webpage!

Travel grants will also be available to Attend the **ProteoCure** Training school on Proteomics. Information will be distributed via email all@proteocure.eu and posted in our webpage: <https://proteocure.eu/>

BLUESKY

Dear ProteoCURErs, FYI we have moved from Twitter/X to Bluesky? This is the ID on Bluesky [@proteocure.bsky.social](https://bsky.app/profile/proteocure.bsky.social)

PUBLISH RELEVANT INFORMATION IN OUR WEB PAGE OR NEWSLETTER IS EASY.

Send us an email to: dissemination@proteocure.eu

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ARTICLE OPEN

**Role of TRIM24 in the regulation of proteasome-autophagy crosstalk in bortezomib-resistant mantle cell lymphoma**

Corentin Bouvier^{1,14}, María Gonzalez-Santamarta^{1,14}, Núria Profitós-Pelejà^{2,14}, Marc Armengol², Grégoire Quinet^{3,4}, Quentin Alasseur⁵, Laurie Ceccato¹, Wendy Xolalpa⁶, Raimundo Freire^{3,4,7}, Julie Guillermet-Guibert⁸, Karine Reybier⁹, Anne-Marie Caminade¹, Hans C. Beck¹⁰, Ana Sofia Carvalho¹¹, Rune Matthiesen¹¹, Jean Christophe Rain¹², James D. Sutherland¹³, Rosa Barrio¹³, Gaël Roué^{2,5} and Manuel S. Rodriguez^{1,5,9}

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MOLECULAR TOXICOLOGY

**Comprehensive ubiquitome analysis reveals persistent mitochondrial remodeling disruptions from doxorubicin-induced cardiotoxicity in aged CD-1 male mice**

Sofia Reis Brandão^{1,2,3} · Elisa Lazzari⁴ · Rui Vitorino^{3,5,6} · Germana Meroni⁴ · Ana Reis-Mendes^{1,2,9} · Maria João Neuparth^{7,8} · Francisco Amado³ · Félix Carvalho^{1,2} · Rita Ferreira³ · Vera Marisa Costa^{1,2}

ARTICLE OPEN

**SUMOylation of the lysine-less tumor suppressor p14ARF counters ubiquitylation-dependent degradation**

Ahmed El Motiam^{1,2,3,11}, Yanis H. Bouzaher^{1,11}, Haifen Chen², Rocío Seoane^{1,4}, Santiago Vidal^{1,4}, María Blanquer¹, Rocío M. Tolosa¹, Beatriz Rodríguez-Lemus¹, José A. Herrera-Gavilán¹, Anxo Vidal¹, Ignacio Palmero⁵, Manuel S. Rodriguez⁶, James D. Sutherland⁷, Rosa Barrio⁸, Dimitris Xirodimas⁸, Manuel Collado^{1,9}, Rod Bremner¹⁰ and Carmen Rivas^{1,10}

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journal homepage: www.elsevier.com/locate/bbadis

**Proteome alterations in peripheral immune cells of DLBCL patients and evidence of cancer extracellular vesicles involvement**

Mostafa Ejtehadifar^a, Sara Zahedi^a, Paula Gameiro^b, José Cabeçadas^b, Manuel S. Rodriguez^c, Maria Gomes da Silva^b, Hans Christian Beck^d, Rune Matthiesen^{a,*}, Ana Sofia Carvalho^{a,*}

BioEssays

COMMENTARY OPEN ACCESS

Ubiquitin and Ubiquitin-Like Modifications in Organelle Stress Signaling: Ub, Ub, Ub, Ub, Stayin' Alive, Stayin' Alive

Elodie Lafont | Eric Chevet

INSERM UMR1242 Oncogenesis Stress Signaling, Université de Rennes, Rennes, France

Correspondence: Elodie Lafont (elodie.lafont@inserm.fr) | Eric Chevet (eric.chevet@inserm.fr)

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Cell Communication
 and Signaling

RESEARCH

Open Access

Cullin-RING ligase BioE3 reveals molecular-glue-induced neosubstrates and rewiring of the endogenous Cereblon ubiquitome

Laura Merino-Cacho¹, Orhi Barroso-Gomila^{1,8}, Mónica Pozo-Rodríguez¹, Veronica Muratore^{1,9,10}, Claudia Guinea-Pérez¹, Álvaro Serrano^{2,3}, Coralia Pérez¹, Sandra Cano-López¹, Ainhoa Urcullu¹, Mikel Azkargorta^{1,4}, Ibon Iloro^{1,4}, Carles Galdeano^{3,5}, Jordi Juárez-Jiménez^{2,3}, Ugo Mayor^{6,7}, Felix Elortza^{1,4}, Rosa Barrio^{1*} and James D. Sutherland^{1*}