



PROTEOSTASIS



COST ACTION BM1307 PROTEOSTASIS

E-NEWSLETTER

Issue 5/ Spring 2017

To close our third year together, welcome to the fifth issue of the COST ACTION BM1307 PROTEOSTASIS e-newsletter, which presents a brief summary of the work carried out so far.

Remember that there are several communication tools and channels to keep up with our activities, either **via Twitter** and **Facebook** or **Youtube**, where teaser videos of our activities are regularly uploaded. Indeed, you can easily find all these information and links at our **Website**:

<http://cost-proteostasis.eu>

Please, **SEND US** the information on your activities within **PROTEOSTASIS**. And feel free to resend this newsletter to any of your colleagues!!!



@Proteostasis

twitter.com/proteostasis



www.youtube.com/channel/UCmQZiJ9a4OfS97T6Q2-g_sA



www.facebook.com/pages/Proteostasis/839198092811311

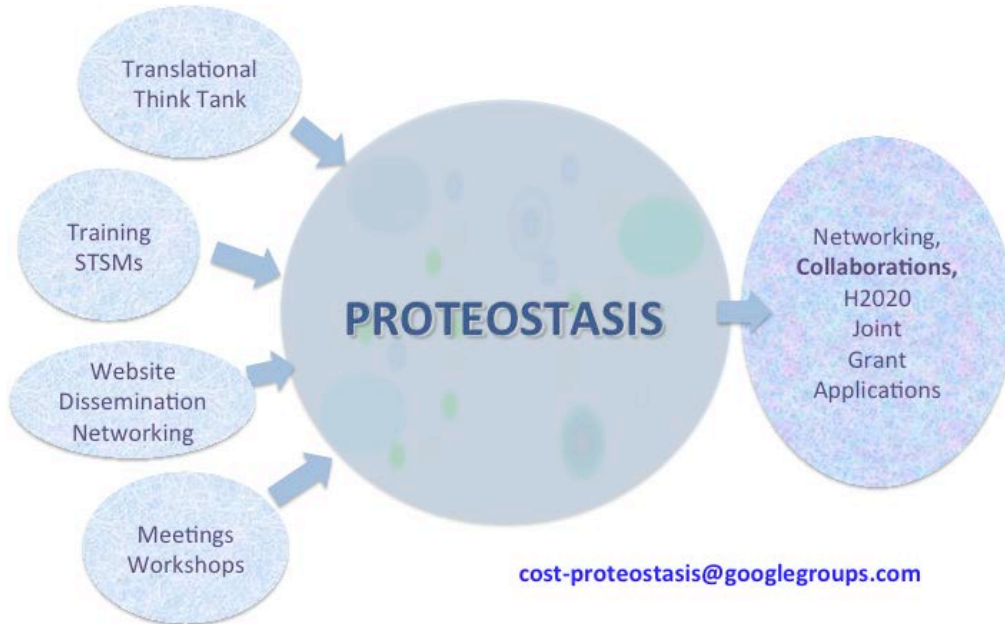
Go and visit our short video reports of our activities on



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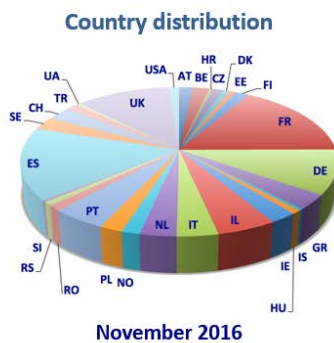


WHAT WE ARE NOW...

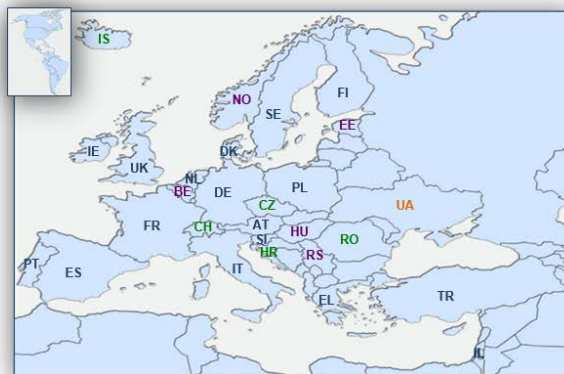


PROTEOSTASIS Action is more than a list of meetings and workshops related to the proteostasis field, but also a mean for generating new knowledge and training of young scientists, a translational think tank and a platform to generate collaborations, networking, joint grant applications.

New incorporation: Cornell University, USA, represented by Klass Van Wijk



Participant Countries: 27 COST + 1 NNC + 1 IPC



Participant Groups: 260



Activities during the 3r Period May 2016- April 2017

MEETINGS AND WORKSHOPS

PROTEOSTASIS and its biological implications. (comprising the PROTEOSTASIS MC and WG Meetings)

2nd-5th November 2016, Lisboa, Portugal

<http://cedoc.unl.pt/proteostasis2016/#>

<https://www.youtube.com/watch?v=nYH9cxJy82o>

This was the most important activity of the PROTEOSTASIS network for the period as it comprised the MC Meeting and the WGs meeting. Initiated by Dr Petek Ballar (MC Member of Turkey), the meeting took place in Portugal. The meeting counted with than attendance of more than 130 participants from several EU countries, including also international attendees. The meeting covered sessions on different aspects of ubiquitin, ubiquitin-like proteins, autophagy and intracellular proteolysis in order to facilitate the interaction, collaboration and exchange of "know-how" between researchers and students working in this topic.

This meeting strengthened the network of scientists within PROTEOSTASIS, therefore all the sessions were planned according to interest of PROTEOSTASIS members and covering the Working Groups of the network. The meeting receiving also the support of the Company of Biologists.



Plant Proteostasis: towards a green based industry

27th-28th September 2016, Barcelona, Spain

<http://www.bdebate.org/en/forum/plant-proteostasis-towards-green-based-industry>

<https://www.youtube.com/watch?v=-G2SOTwu7cA>

This workshop brought together experts in basic and applied plant sciences, and experts in plant industrial uses beyond the food industry, specifically those involved in the conversion of biomass into renewable materials and energy, to identify current challenges and to seek solutions for the transition to a sustainable economy.

This 2-day workshop was divided in 3 sessions (I- Molecular Mechanisms in Plant Proteostasis; II- Research Approaches in Plant Proteostasis, and III- Industrial Uses of Plants) that includes 30- and 45-minute presentations and roundtables for debate. A total of 25 speakers was invited to the workshop, of which, 8 were PROTEOSTASIS participants. Dissemination of the congress was made through B-Debate website, newsletter and mass media for reaching the scientific community and the society in general.

The meeting counted with the participation of almost 100 attendees with different backgrounds (from basic science to industry), from a great a variety of countries, including the USA, Taiwan and Saudi Arabia.



24th Euroconference on Apoptosis - Cell death in health and disease

28th- 30th September 2016, Barcelona, Spain

<http://www.ecdo.eu/ecdo2016/>

<https://www.youtube.com/watch?v=Q0tHDrYoaQ8>

The ECDO Conference on Cell Death has a long tradition of scientific excellence and lively debate, and the format of the conference, with its emphasis on poster sessions and oral communications, together with communal lunches and social programs, creates an ideal environment for stimulating discussion and contact between participants at all levels.

This meeting involved the study of cell death. Most cell death types are induced/regulated by intracellular proteolysis and ubiquitination events. By attending the ECDO 2016 meeting, members of the PROTEOSTASIS network were able to exchange cutting-edge information throughout a broad scientific community, discuss the impact of their findings, and establish collaborations. Furthermore, this was a great opportunity to integrate the knowledge in the field and to support further collaborations with world recognized scientists within and outside the PROTEOSTASIS network.

More than 200 participants from EU and other countries attended the meeting and shared the recent advancements in the field.





Zomes IX: PCI complexes and Ubiquitin defining a hub for protein homeostasis

14th-17th February 2017, Rome, Italy

<http://www.zomesix.com/>

<https://www.youtube.com/watch?v=2bNeHG0eKHQ&t=4s>

The ZOMES meeting focused on the biology of the three "PCI" complexes, the proteasome, the COP9 signalosome, and eIF3 and on ubiquitin ligases. The study of large protein complexes -"ZOMES" - poses unique issues and difficulties, and the ZOMES meetings aim at providing a forum for discussing the connections between these complexes and central signaling pathways.

A great number of the invited speakers of the meeting were active members of PROTEOSTASIS taking in consideration this a "hot topic" for the Action. The main topic of this meeting was on the core components of the ubiquitin-proteasome pathway, which is one of the key regulator of cellular proteostasis. The meeting also brought together PROTEOSTASIS and non-PROTEOSTASIS scientist, as well as, industries to foster collaboration and training.

More than 100 participants attended the meeting and established new collaborations.



SHORT TERM SCIENTIFIC MISSIONS

8 new STSMs granted.

New call launched in May 2017.



Carina Holmberg-Still

Carina Holmberg
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For more information check:

<http://cost-proteostasis.eu/stsm-summary/>

TRAINING SCHOOLS & PRACTICAL COURSES

New approaches to study Ub and UbL modifications

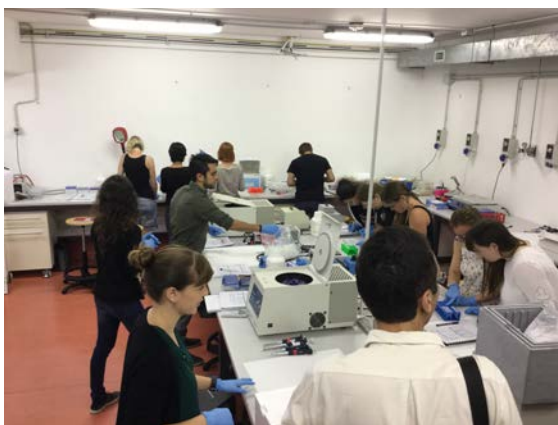
17th - 24th Sept 2016, Capo Caccia, Italy

<http://events.embo.org/16-ubiquitin/>

<https://www.youtube.com/watch?v=kd-sJI0bM1o>

In order to meet the training needs of early-career scientists involved in PROTEOSTASIS, this course provided them with a solid understanding of the complexity and potential pitfalls in ubiquitin and ubiquitin-like protein research. The course consisted of entry-level, educational lectures by distinguished leaders in the field, and has a strong practical component, whereby practicals in various methods allow students to gain experience with in vitro biochemistry, chemical biology and bioinformatics experiments, in part on their own, provided samples. The specialised skill- and technique-set to interrogate ubiquitin and ubiquitin-like modifications in vitro and in cells should in particular benefit scientists from laboratories that are unfamiliar with these methods. We hope to raise awareness of open questions in the field, and help researchers interrogate their own systems in a meaningful and high-quality manner.

It counted with 15 trainers and 20 trainees who have well-assessed the learning opportunities delivered by this training school.



Redox Regulation of Metabolic Processes

19th - 25th Sept 2016, Spetses, Greece

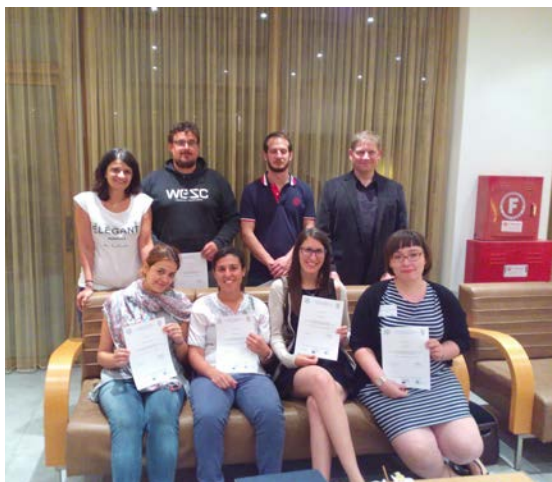
<http://www.nutrigenomik.uni-jena.de/Spetses2016>

<https://www.youtube.com/watch?v=y8XGgA9o9Qo&t=51s>

This training school was co-organized by PROTEOSTASIS and the COST Action EU-ROS (<http://www.nutrigenomik.uni-jena.de/Spetses2016>).

To gain an understanding of the role of reactive oxygen species in metabolism and in the regulation of pivotal metabolic processes. This course covered these new developments in five days with different foci: general principles of redox regulation (day 1), the interaction between reactive species and metabolic processes and signalling cascades (day 2), novel methods and approaches (day 3), mitochondria as sources and targets of reactive species (day 4), protein oxidation and its effects on protein maintenance and turnover (day 5). The program included lectures, posters, tutorials ("meet the expert" sessions) and oral poster presentation sessions that enabled young scientists to interact with some of the best international experts in the field of free radical research and redox regulation.

Almost 60 trainees and more than 15 trainers attended this Training School.





TRANSLATIONAL PROJECTS

This is a list of the translational projects so far:

(I) Role of TRIM Ubiquitin ligases in systemic lupus erythematosus and Parkinson

Meroni, Jefferies, Desagher, Hay, Ovaa, Blattner, El Oualid

(II) Tackling proteases: from fundamental mechanisms to clinical implications.

Clague, Urbé, Outeiro, Marfany, Holmberg-Still, Vitorino, Nicholson, JA Rodriguez

(III) Autophagy in physiology and pathology

Escalante, Danek, de Franceschi, Hermann, Menezes, Velayos-Baeza, Zoladek, Alonso

(IV) Cancer: Molecular pathways and clinical challenges

Carracedo, Barrio, Urruticoechea, Farràs, Soubeyran, MS Rodriguez

(V) Aging and Neurodegeneration: Diagnosis and therapeutics

Scheper, Blattner, Sanz, Menezes, Chondrogianni, Korolchuk, Ferrús, Skoulakis

(VI) UPS disease biomarkers and potential drug targets

MS Rodriguez, Matthiesen, Vertegaal, Roué, Perez-Galan, Ovaa, Carracedo, Barrio, Hay

(VII) Bioactive compounds as potential therapeutic agents to protein misfolding diseases

Menezes, Skoulakis

WEBINARS



Webinars

Nov 30th. 2016. Webinar on “Autophagic Clearance of Proteasomes via Protein Quality Control Pathways”.

Posted: 15 November, 2016

Event Date: 30 November, 2016

Event Time: 3pm GMT

Webinar of “Proteostasis webinars series” on Wednesday, 30th November 2016, 3pm GMT.

Prof. Richard Vierstra presented his webinar on “Autophagic Clearance of Proteasomes via Protein Quality Control Pathways”.

He described his recent findings of a mechanistically conserved proteaphagy, a new protein quality control pathway that directs the autophagic elimination of proteasomes from both the nucleus and cytoplasm during nitrogen starvation or upon inactivation.



Dr. Richard Vierstra
Washington University

http://ll4.workcaststr.net/10856/1843196992014643/10856_20161206181007905_30November2016_BioTechne_V2.mp4

DISSEMINATION MEETINGS



Dr. Rosa Barrio, Chair of the Action, disseminates PROTEOSTASIS at the “2nd Meeting of National Researchers in Hematology”

Posted: 19 December, 2016

Dr. Rosa Barrio, Chair of PROTEOSTASIS, disseminated the network achievements and outstanding Work at the “2nd Meeting of National Researchers in Hematology” held in Madrid (Spain) on the 11th November 2016. Dr. Barrio delivered a talk on protein homeostasis and its potential application and contributions to biomedical advancements. Dr. Barrio presented the network activities and the transfer of knowledge between the members of PROTEOSTASIS. The network called the attention of the participant medical and non-academic sectors.

Dr. Rosa Barrio, Chair of the Action, disseminates PROTEOSTASIS at the “UBIQUITIN & CELLULAR REGULATION” Meeting in Montana, USA

Posted: 14 July, 2016



Dr. Rosa Barrio, Chair of the Action, disseminates PROTEOSTASIS at the “ADEHLI Congress- Post Translational Modifications: From Bench to Bedside”

Posted: 20 October, 2016

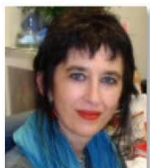




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