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INTERNATIONAL PROTEOLYSIS SOCIETY

QUICKCUTS

Editors:

Leila Akkari (Netherlands Cancer Institute)
Margarete Heck (University of Edinburgh)

THE PREMIER RESOURCE FOR ALL YOUR IMPORTANT PROTEASE QUESTIONS

A Message From the President:

With our 11th General Meeting just around the corner, this is a very exciting time for the society. Every day, I see new members signing up and joining our vivid, open and friendly community of researchers dedicated to all aspects of proteolysis research. While this passion brought us together, every new member also makes the IPS more diverse and thus stronger. I can hardly await to meet you all very soon in the Czech Republic.

When you read these lines, many members in training have already received the good news about having been awarded an IPS Travel Award to support their participation in the General Meeting. I very much hope that all awardees will attend and present their excellent research in Mariánské Lázně. With its focus on supporting early career researchers, the society has also contributed to other proteolysis meetings. Please find in this issue a report from Jennifer Vandooren who chaired the 2019 Gordon Research Seminar on Metalloproteases held in Il Ciocco, Italy.

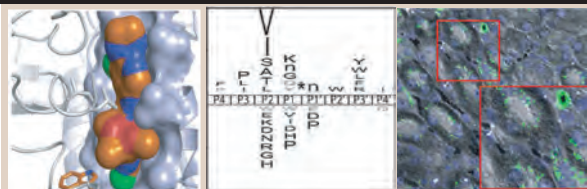
Sadly, with the passing of Marianne Jochum we lost an outstanding colleague and supporter of trainees in proteolysis research. Marianne not only co-organized the 2nd General Meeting of the IPS but for ten years also chaired the annual Winterschool on Proteinases and Their Inhibitors in Tiers, Italy, an event regularly attended by many members of the society. We will never forget Marianne and remember her here.

This year marks the 20th anniversary of the IPS, which was established in September 1999 on Mackinac Island, Michigan, USA. Ever since then the society is based on a unique atmosphere of trust, openness and friendship, fostering many fruitful collaborations and securing the lasting success of the IPS. After such a long time with this unwritten agreement, the council nevertheless felt it would be important to summarize the society's view on interpersonal relations in a Code of Conduct for members and meeting participants.

Let us all together celebrate IPS's 20th birthday during our General Meeting and continue making the society better and better to propel proteolysis research in exciting times of rapid advancements!

Finally, I want to thank Leila Akkari and Margarete Heck once again for all the work to compile this issue of QuickCuts.

Ulrich auf dem Keller, IPS President



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In memoriam: Professor Marianne Jochum (1946-2018)

On June 9, 2018, our colleague and friend Marianne Jochum passed away at the age of 71 due to neurological disease. During her 34-year career she made substantial and transforming contributions to the development of detection methods for specific inflammation markers that improved the prognosis of patients with imminent posttraumatic organ failure. She will be remembered not only for her impressive scientific achievements, but also as a great mentor, respected scientist, passionate colleague, and loyal friend.



Marianne Jochum studied Biology and Chemistry at the Ludwig-Maximilians-University (LMU) of Munich and performed her Ph.D. thesis entitled "Investigations on light-induced carotenoid synthesis at *Fusarium aqueductum*" at the Botanical Institute of the LMU. She received her Ph.D. in 1978. In the same year, she passed the 2nd State Examination at the LMU Munich in the subject Biology and Chemistry for teaching at grammar schools, but eventually decided to devote her life to science. For postdoctoral studies, Marianne Jochum was appointed assistant professor at the Division of Clinical Chemistry and Clinical Biochemistry in the Surgical Department of the LMU Munich directed by Hans Fritz. In 1989, her habilitation thesis on "Lysosomal Factors from Polymorphonuclear Granulocytes: Pathobiochemical, Diagnostic and Therapeutic Aspects" was awarded the E.K. Frey-Prize of the German Society of Internal Intensive-Care Medicine. Two years later, Marianne Jochum was appointed C3 Professor of Pathobiochemistry, and in 2001 assigned Head of the Division of Clinical Chemistry and Clinical Biochemistry at the Surgical Department until her retirement in 2012. Marianne Jochum focused her research activities on extracellularly secreted proteases and the development of prognostic applications for use in clinical medicine. Therefore, she performed numerous detailed studies on the levels of inflammatory proteins such as interleukins and various lysosomal proteases in sequentially collected blood samples from patients suffering from polytrauma. For that, she developed an ELISA that allows the sensitive and specific quantification of PMN-elastase in body fluids, which is now routinely used in the clinic. Using this assay, PMN-elastase was demonstrated to represent an independent prognostic marker in peripheral blood of patients prior to their development of severe complications such as intravascular coagulation and multiple organ failure. The introduction of a close monitoring of PMN-elastase in clinical routine reduced the mortality rate in patients with polytrauma from around 75% to only 25%, as it guided the timely cortisone-based intervention. In these studies, Marianne Jochum was supported by the expertise of her colleague Cornelia Gippner-Steppert and clinical surgeons including Jens Witte, Thomas Mussak, Peter Bibertaler and Matthias Schieker who accomplished their habilitation under her dedicated mentorship. In collaboration with the Fédération Internationale de Football Association (FIFA), Marianne Jochum was involved in a clinical study investigating the role of elevated levels of the neurospecific protein S100B in the blood circulation of professional footballers as a possible marker of acute neuronal damage upon intensive training and playing of headers. Later on, she became interested in functional cell biology associated with neoplastic and regenerative processes. In this context, Marianne Jochum supervised various projects investigating the role of receptor-mediated and intracellular signal transduction-associated molecular mechanisms such as protease expression and secretion as well as cell migration in tumor cells, immune cells, and mesenchymal stem cells in close collaboration with her colleagues Christian Sommerhoff, Alexander Faußner, Dorit Nögler, Beatrice Bachmeier, Peter Neth, and Christian Ries.

In memoriam: Professor Marianne Jochum (1946-2018)



From 1983-1996, Marianne Jochum contributed as principal investigator with four sequential projects to the SFB 207 of the LMU focusing on "Proteolysis-mediated pathomechanisms in trauma and acute inflammation". 1993-1996, she participated successfully in the BMFT priority program on "Pulmonary and respiratory diseases". 1997-2003, Marianne Jochum was the elected speaker of the SFB 469 of the LMU on "Induction and inhibition of proteolysis-mediated processes in inflammation and neoplasia". Furthermore, she was member of the Committee for Research and Teaching (FöFoLe) of the LMU Faculty of Medicine (1998-2012), the Commission for Research and Young Scientists and Knowledge and Technology Transfer of the LMU (2002-2007), the Senate of the LMU (2005-2007) and chair of the LMU Committee of Strategy (2007-2012).

In 2001, Marianne Jochum organized the 2nd General Meeting of the International Proteolysis Society (IPS) associated with the International Conference on Protease Inhibitors (ICPI) in Freising near Munich, comprising 9 symposia and 3 workshops, and hosting 450 participants from 29 countries. From 2003-2012, she was particularly successful in organizing the annual "Winter School on Proteinases and their Inhibitors" in Tiers, South Tirol, Italy. In continuation to the founders Hans Fritz and Vito Turk, Marianne Jochum carried the spirit of the Winter School family in Tiers, which was shaped by an atmosphere of intense and friendly discussions between young scientists and experts of high international reputation. The most unique social highlight of the annual Winter School, and Marianne Jochum's matter close to her heart, was the Farewell Dinner Party at the mediaeval Castle Prösels and the presentation of the exceptional "Fritzi Awards".

In addition to her research, Marianne Jochum is widely recognized as a dedicated mentor and valued supervisor. She always stood up for the concerns of her colleagues and supported their careers with great personal commitment. Marianne Jochum instilled genuine collegiality and loyalty across the generations of her students and colleagues. Her tragic, untimely death is a big loss to the world's protease community and to all her friends.

By Christian Ries & Hans Fritz



Meeting Report- GRC/GRS

GRS on Metalloproteases - Metalloproteases and Their Regulators in Homeostasis and Disease. 11 - 12 May, 2019

The Gordon Research Seminars on Metalloproteases was held at Lucca (Barga) in Italy and preceded the five day Gordon Research Conference on metalloproteases. The focus of this meeting was on metalloproteases (e.g. MMPs, ADAMs, ADAMTSs and astacins) and their regulators, with topics including structural biology and post-translational modifications, intracellular and pericellular functions and involvement in human diseases. The meeting was attended by international researchers from Belgium, Canada, Denmark, Germany, UK and USA. Being mainly organized for young scientists, the meeting was attended by 18 graduate students, 5 post-doctoral researchers and 4 principal investigators.



The Gordon Research Seminars on metalloproteases was a unique forum for graduate students and post-docs to present and exchange new data and innovative ideas. All attendees were able to actively participate by oral presentation (11 presenters) or poster presentation (23 poster presenters). In a keynote presentation, **Prof. Marie Kveiborg** (University of Copenhagen, Denmark) provide inspiring insights into ADAM-induced cancer progression. The meeting also featured an expert career panel to discuss career paths for young researchers and the future of metalloprotease research. In an informal and friendly setting, participants interacted with experienced researchers, including **Prof. Marie Kveiborg**, **Prof. Achim Krüger** (Klinikum Rechts der Isar, TU Munich, Germany) and **Prof. Roosmarijn Vandenbroucke** (VIB, Ghent University, Belgium).

Maria Cristina Miranda Vergara (University of Notre Dame, USA) received a travel award for being an excellent discussion leader. **Benjamin Schoeps** (Klinikum Rechts der Isar, Technical University of Munich, Germany) received a travel award for his presentation on new functions of TIMP-1. The travel award for best poster was given to **Chek Ziu Koo** (University of Birmingham, UK), who presented a poster on ADAM10 and tetraspanins. Most participants of the Gordon Research Seminars continued their stay by participating in the succeeding and outstanding Gordon Research Conference on metalloproteases, chaired by **Prof. Rama Khokha** and **Prof. Stephen J. Weiss**.

Jennifer Vandooren, 2019 Metalloproteases GRS chair

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IMPORTANT PROTEASE PAPERS I

Research Publications

CATHEPSINS

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Frontiers in Pharmacology. 2018. 9: Article 221. <https://doi.org/10.3389/fphar.2018.00221>

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eLife (2019) 8: e44478.

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Quantitative Multiplex Substrate Profiling of Peptidases by Mass Spectrometry.

Mol Cell Proteomics. 2019 May;18(5):968-981. doi: 10.1074/mcp.TIR118.001099.

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Identification of novel natural substrates of fibroblast activation protein - alpha by differential degradomics and proteomics.

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Specificity profiling of human trypsin-isoenzymes.

Biol Chem (2018) 399, 997-1007.

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Matrix Metalloproteinases Inactivate the Proinflammatory Activities of Secreted Moonlighting Tryptophanyl-tRNA Synthetase. *Journal of Biological Chemistry.* doi: 10.1074/jbc.RA119.009584.

IMPORTANT PROTEASE PAPERS V

MISCELLANEOUS

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The Anatomical Record. Epub June 17, 2019.

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Meeting Announcements

SERPIN2019: 19-22 September 2019

<https://www.serpins2019.com>



SEVILLE 19-22 SEPTEMBER

VENUE: MELIÁ SEVILLA

Organising Committee

Marie-Christine Bouton, Javier Corral, James Huntington,
James Whisstock and Lakshmi Wijeyewickrema

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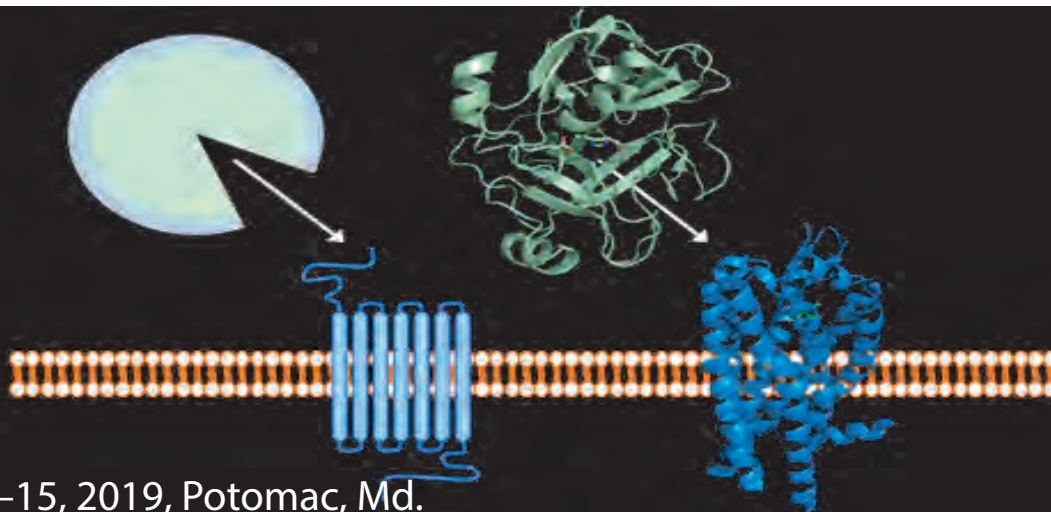


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Molecular
Innovations

Serine Proteases in Pericellular Proteolysis and Signaling

<http://www.asbmb.org/symposia/2019/serineproteases/>



September 12–15, 2019, Potomac, Md.

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Meeting Announcements

8th International Symposium on Kallikreins and Kallikrein-Related Peptidases.

<https://www.isk2019.cz>



11th General Meeting of the International Proteolysis Society

Training Workshops: September 28th-29th

Conference: September 29th- October 4th

<http://www.ips2019.cz>



11th General Meeting
of the International Proteolysis Society
'Interfaces in Proteolysis'
29 Sep - 4 Oct 2019, Czech Republic
Mariánské Lázně
Training workshops 28-29 Sep 2019, Praha

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Job Listings

- Postdoc in Protease Network Degradomics

DTU Bioengineering

The section of Protein Science and Signalling Biology at the [Department of Biotechnology and Biomedicine](#) has an opening for a position as postdoctoral researcher. The position will be available from October 2019 or soon thereafter.

The successful applicant will work within the research group '[Protease Network Degradomics](#)' headed by Professor Ulrich auf dem Keller. In our research group, we apply and develop advanced positional proteomics workflows to identify proteases, elucidate their interactions and determine their substrates in inflammation, repair and regeneration. With a major focus on the skin, we aim at elucidating interdependent proteolytic pathways and their disturbance in disease to provide a basis for the development of novel strategies for diagnostics and therapeutic intervention.

Responsibilities and tasks

Within a research project funded by the LEO Foundation, the newly recruited postdoctoral researcher will work on the functional characterization of newly identified protease targets in skin inflammation and repair.

Qualifications

Applicants should hold a PhD in a life sciences discipline, have excellent communication skills and be extensively trained in protein biochemistry, cell culture systems and biological sample preparation. Critical for this position is advanced experience with organotypic skin cultures and CRISPR genome editing. Prior experience in mass spectrometry-based proteomics is not mandatory but would be advantageous.

We offer

We offer an interesting and challenging job in an international environment focusing on education, research, scientific advice and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility. The Technical University of Denmark (DTU) is a leading technical university in northern Europe and benchmarks with the best universities in the world.

Salary and terms of employment

The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union. The positions will be located at the DTU Lyngby campus in a newly established research building hosting ultra-modern laboratories for protein science and the DTU Proteomics Core with state-of-the-art mass spectrometers. Initially, the position is for 2 years.

Additional information may be obtained from Prof. Ulrich auf dem Keller, uadk@dtu.dk.

Application procedure

Please submit your online application no later than **September 15, 2019** at

<https://www.bioengineering.dtu.dk/english/about/jobliste/job?id=302a432c-ac54-4019-b233-0eac8beff28>

- Postdoc Scholarship in Biochemistry, UNIFESP-EPM, São Paulo Brazil

- Postdoctoral Position in Proteomics and Protease Biology, University of British Columbia, Vancouver, Canada

- Postdoctoral Fellow Position in Drug Development, University of British Columbia, Vancouver, Canada

- M.Sc., Ph.D., and PDF positions, University of Sherbrooke (Québec), Canada

IPS Code of Conduct

International Proteolysis Society – Code of Conduct for members and meeting participants

The International Proteolysis Society (IPS) believes that diversity and inclusion of scientists belonging to different nationalities, backgrounds, age and gender help to create thriving, innovative and cooperative scientific communities. All members of the IPS and participants at all IPS events will conduct themselves in a professional manner, free from any form of discrimination, harassment or retaliation. Members and/or participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment. Creating a supportive environment to enable scientific discourse within the IPS and at IPS events is the responsibility of all members and/or participants.

Members and/or participants will endeavor to avoid any inappropriate actions or statements based on individual characteristics such as age, race, ethnicity, sexual orientation, gender identity, gender expression, marital status, nationality, political affiliation, career level, educational background or any other characteristic. We are committed to promoting and supporting a community where all people can interact in an atmosphere free of abusive or demeaning treatment. We are committed to the highest standards of civility and decency toward all and will not tolerate disruptive or harassing behavior of any kind. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, photography without permission and stalking.

The code of conduct covers inappropriate behavior in interpersonal relations and extends to scientific misconduct of any kind that could harm the IPS's mission to advance scientific research and ultimately contribute to human welfare.

Violations of this code of conduct policy should be reported to the IPS council, individual officers, or the President of the Society. Sanctions may range from verbal warning, to revocation of membership without refund for the paid term and exclusion from Society events. Retaliation for complaints of inappropriate conduct will not be tolerated. If a member and/or participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening.

INTERNATIONAL PROTEOLYSIS SOCIETY Council



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The International Proteolysis society is always keen to keep in touch! Email us today or find us on



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