



EuPA

EUROPEAN PROTEOMICS ASSOCIATION

EUPA NEWSLETTER

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PROTEOMIC FORUM | EUPA 2022
XIV Annual Congress of the European Proteomics Association
3–7 April 2022 | Leipzig/Germany | www.proteomic-forum.com

MESSAGE FROM THE EDITOR

Dear Colleagues and EuPA Members,

It is a real pleasure for me to launch the new issue of the EuPA Newsletter, and I would like to start by sincerely thanking all contributors!

In this third issue, you will find contributions from EuPA awardees. Please do not hesitate to contact me if you are interested in contributing to a future EuPA Newsletter (Core Facilities, Art & Science, etc.). Don't miss your chance to contribute to the literal story of EuPA!

In addition, the Newsletter team is looking for volunteers to help out in a variety of ways. Again, feel free to contact me if you are interested in contributing to making these Newsletters happen!

The EuPA Newsletter will be disseminated every quarter, and the next issue is planned for December 2022. So go ahead and contact me today, so we can make this next Newsletter together!!!

Enjoy reading.

Nicolas Desbenoit, EuPA Newsletter Editor (✉ n.desbenoit@cbmn.u-bordeaux.fr), on behalf of the EuPA Conference and Communication Committee.

Please find below some instructions:

Independent of the type of contribution, please provide the name of the author or authors, affiliations, e-mail address, and a picture of the main author. You can also include figures and legends, as well as references. Times New Roman will be used as font, with size 12 and interline at 1.5. Concerning the length of the contributions: Thesis abstract (½-1 pages), Students / ECRs overviews (3-5 pages), Invited EuPA speakers (½-1 page), European Core Facilities (1-2 pages), and Sponsors (1-2 pages).

Concerning the core facility section and following the instructions above, please, provide a short description (staff, website, equipment, bioinformatic tools, etc.), applications / main axis, national / European / international networks, involvement in education, and contact. Picture(s) would be appreciated. The idea is to promote European facilities which are members of EuPA and to disseminate to other learned societies interested in proteomic aspects.

EUPA CONGRESS AWARDEES

- **EuPA VISION AND COMMITMENT AWARD (VACA)**
 - ✓ *Maïke Langini, Medicines Discovery Catapult, United Kingdom*

- **BIOINFORMATICS FOR MASS SPECTROMETRY AWARD (BMSA)**
 - ✓ *Ralf Gabriels, University of Ghent, Belgium*

- **EuPA BEST DOCTORAL THESIS AWARD**
 - ✓ *Claudia Ctortecka, Research Institute of Molecular Pathology (IMP), Austria*

- **EuPA BREAKTHROUGH IN PROTEOMICS AWARD**
 - ✓ *Maarten Dhaenens, University of Ghent, Belgium*

- **EuPA JUAN-PABLO ALBAR (JPA) PROTEOME PIONEER AWARD**
 - ✓ *Fernando Corrales, Spanish National Centre for Biotechnology, Spain*

- **EuPA TECHNOLOGY AWARD**
 - ✓ *Bruker Daltonik GmbH, Germany*

- **EuPA POSTER PRIZE**
 - ✓ *Rudolf Kupčik, Hradec Kralove, Czech Republic*

- **EuPA TRAVEL GRANTS**
 - ✓ *Katie Dunphy, Ireland*
 - ✓ *Daniel Polasky, USA*
 - ✓ *Megan Ford, United Kingdom*
 - ✓ *Lukas Schmidt, United Kingdom*

PERSONAL PERSPECTIVES – WRITINGS OF THE EUPA CONGRESS AWARDEES

MAARTEN DHAENENS



(Ghent University, Belgium ✉ maarten.dhaenens@ugent.be).

I was awarded the very first “EuPA Breakthrough in Proteomics Award” at EuPA2022 in Leipzig for our work on using mass spectrometry for viral peptide detection as a diagnostic tool and pandemic preparedness. This recognition was associated to my name, but is an appraisal of the work done by a rather unconventional collaborative effort sparked by a very unconventional event...

Ironically, the PhD student defending his PhD on the final day before the first full lock down in Belgium (Sander Willems) had worked on a very fundamental novel data structure called ion-networks. Four days later, the next PhD in line, Bart Van Puyvelde, started a very concrete and directly applicable assay development to help alleviate the pressure on the testing facilities available at the time. It was a complete 180° switch from high resolution mass spectrometry bioinformatics towards clinical MRM-based thinking, completely new to us. Therefore, we came up with the idea of making our own “Cov-MS assay development kit” with dilution series of recombinant proteins. We sent out a call to the community (the more experienced targeted labs) to help see what MS is capable of doing. I am extremely thankful to all the parties, including industry, clinical and academic labs, which responded to the call and helped frame the capabilities of MS for detecting peptides directly in matrix of nasopharyngeal swabs (Cov-MS).

It is this team effort that assured us that few, if any, labs would ever be able to develop a more sensitive and robust MS assay without prior enrichment of the target peptides. I am therefore equally thankful to SISCAPA, who joined the effort early on and developed reagents for peptide immune-enrichment to the targets we had defined during the first year of the pandemic. Instantly, the sensitivity of the assay improved a 1000-fold, the assay could be uncoupled from the matrix (enabling even the detection of peptides in plasma and saliva) and the LCMS run time reduce down to two minutes, significantly improving throughput. The Cov²MS assay can now be implemented in any clinical lab that has access to the latest triple quadrupole technology and holds great promise for early detection of future pathogenic threats, because it is insensitive to patient pooling.

As we are extending the peptide immune-enrichment reagent panel to other viruses like influenza and RSV, we believe that this viral detection assay holds incredible potential to supplement the Nucleic Acid Amplification Tests (NAAT's) and will help prepare society for potential future pathogen outbreaks.

MEGAN FORD

(University of Liverpool, ✉ M.Ford@liverpool.ac.uk).

After finishing my undergraduate studies in 2020, I joined Dean Naisbitt and Xiaoli Meng for a PhD position looking into the causes of adverse drug reactions. Specifically, at T-cell activation, including drug and protein-antigens generated and their potential mechanisms of presentation. At the start of my PhD project, the main focus was on cell culture and T-cell cloning. However due to the application of proteomics this has meant my project is now mostly proteomics based and driven by the data I have found.

I presented this work as a poster at EuPA 2022, where I was awarded the student travel grant. My flights and hotel were paid for without any cost to my supervisor and this allowed me to attend. This was my first conference and it was very well organised. I thoroughly enjoyed the YPIC day which gave insight into careers including in industry and academia. The talks were on many broad topics including some on immunopeptidomics which I am mostly interested in. The breaks in between the sessions and the conference dinner allowed me to connect with different people, including those from YPIC. I was also honoured to co-chair my first session on systems biology and medicine symposium on the final day.



CLAUDIA CTORTECKA

(*Research Institute of Molecular Pathology (IMP), Vienna, Austria, & currently Broad Institute of MIT & Harvard, US, ✉ cctortec@broadinstitute.org*).

First and foremost, I would like to take the opportunity to thank the committee and especially the Young Proteomics Investigator Club again for choosing my thesis for this award. That was, and still is a great honor, which I hope draws additional attention to the field of low-input and single-cell proteomics. The increasing interest in such sensitive measurements was also omnipresent at the Proteomics forum, which I had the pleasure to attend and receive the award. The EuPA2022 was my first in-person conference since the pandemic started and I was both excited and intimidated to attend such a big event from overseas. Nevertheless, I was positively surprised by the quality of both the plenary and short talks as well as the diversity of the posters presented throughout the conference. The efforts of the organization team and free testing in Leipzig made it increasingly comfortable to participate in the social events and inspiring discussions during the YPIC get-togethers. For me personally it was most rewarding to finally come back to in depth discussions during and after the Q&A sessions with a wide range of scientists specializing in diverse areas. Moreover, the interactions with leaders of the field and motivated vendors during the round table discussions organized by YPIC and the poster sessions was extremely helpful to my ongoing projects. Lastly but most importantly, it was great to finally reunite with old friends and make new ones, from which I brought home various new ideas, insights, and excitement. I will be looking forward to upcoming EuPA meetings.



MAIKE LANGINI

(*Medicines Discovery Catapult, Alderley Edge, UK, ✉ maike.langini@md.catapult.org.uk*).

Please let me take this chance to thank the people who nominated and voted to hand the EuPA vision and commitment award to me. I am really honoured to have received it. To think that I never would have joined YPIC without a nudge from my supervisor and colleagues back in 2018. Positive recognition of once effort such as this is always appreciated but even more so in this case as it highlights that the work we have done as YPIC is well received throughout our community. Hopefully, we can keep on this path and support the ECRs even better in the next years. Please contact us or me if you have any new ideas or want to get actively involved. Naturally, I am also thankful to my employer as they support me in these extracurricular endeavours. While the recognition is really great, the best part in all the work that led to me receiving this reward was meeting so many likeminded people. I hope you had as good a time at the EuPA2022 conference in Leipzig, Germany, as I did and maybe we will get a chance to meet at the EuPA2023 conference in Newcastle, UK.



FERNANDO J. CORRALES



(National Center for Biotechnology, CSIC, Madrid, Spain, ✉ fcorrales@cnb.csic.es).

I few hints of my proteomic journey

It has been with great pleasure that I have received the EuPA Juan Pablo Albar Proteomics Pioneer award in 2022 and a great honor indeed to be among those eminent scientists that have received it before me. I feel an enormous gratitude for different reasons, some are personal and other more related with my activity during the last 25 years or so. Along the way, I have had the privilege to work with many people, I'm in debt with, as they are who have really made possible that I receive this award. You may allow me to dedicate the following lines to recall a few hints from these years as a tribute to all of them.

My first contact with mass spectrometry was at the University of Cambridge during my postdoc, back to mid-90s, where we used a magnetic sector instrument to confirm the amino acid substitutions we engineered in the sequence of small proteins to determine the contribution of the targeted residue in the folding process of the protein. Not a very challenging aim from the current perspective, but it served me to learn about the capabilities of this technology to do biochemistry and protein chemistry. Back in Spain I started my research as a junior scientist dedicated to understand the molecular basis of liver diseases. We were focused on a specific metabolic pathway, one carbon metabolism with special attention to the methionine cycle and we learn that it has an enzymatic configuration very specific in hepatocytes, different to other tissues. Nowadays, we understand that this pathway is the connection between intermediate metabolism and epigenetic regulation and therefore makes this pathway a master regulator of cell growth and differentiation. The silencing of the first enzyme of methionine cycle, MAT, compromises the synthesis of SAM, the methyl group donor in most transmethylation reactions, and leads to the progression of a liver disease of increasing severity, up to HCC. It was on late 90s and early 2000s when we decided to start a proteome wide analysis of the liver to investigate how MAT deficiency induces the development of NASH and, ultimately, liver cancer, old fashion 2DE-based separation and peptide mass fingerprinting. We found very early alterations that explained the sequence of events along the evolution of the disease, starting months before any pathological alteration was detectable with the regulation of a protein that leads to mitochondrial failure, metabolic imbalance and NASH in a primary stage.

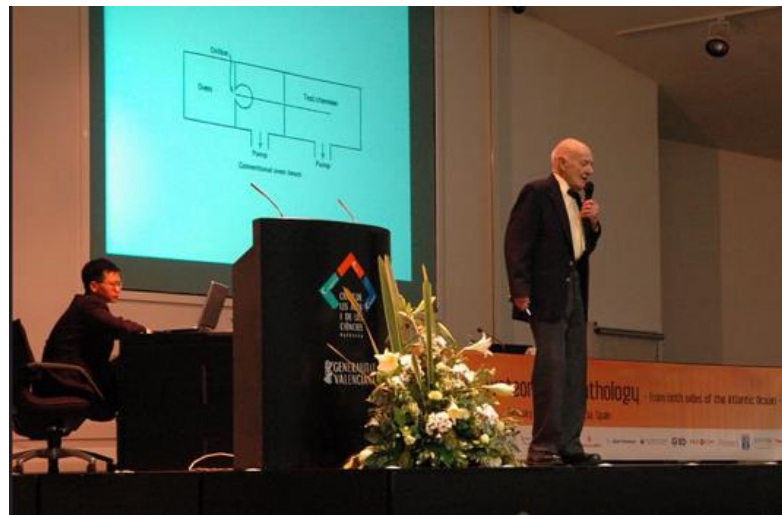
This was our first paper using proteomics that allowed us to join the Spanish proteomics community that met for the first time in 2003 in Cordoba, where the essence of the Spanish proteomics community was set. I do still remember the fantastic visit to the Mosque-Cathedral by night and, most

importantly, the pioneer discussions on whether we should move on and found the Spanish Proteomics Society. The final decision was to support the initiative and the main motivation was to have the opportunity to be part of the EuPA and the SEProt was finally founded in 2004. Next year in 2005, the EuPA was actually founded during the 1st Congress of the SEProt and, two years later, the first EuPA Conference was organized conjointly with the 2nd SEProt Congress in Valencia. It was really a remarkable event that was organized by Juanjo Calvete where we could attend the outstanding talk of John Fenn, who taught us how to make elephants fly on the ESI ionization source. Since then, SEProt progress, projects and initiatives have been intimately integrated in those promoted by EuPA and have been only possible thanks to the effort of a terrific community and to the support of very good friends: Garry, Peter, Joel, Pier Giorgio, Luca or Jean Charles. I have had also the great pleasure to be part of the EC of EuPA with Andrea, Karl, Albert, Paola, Viviana, Oxana and during these years we have witnessed a terrific growth of EuPA initiatives including EuBic and YPIC among others. I think the work of the youngest branch of EuPA is absolutely brilliant, EuPA will be in such good hands in the coming years!

Let me just finish by paying tribute to the person who lends his name to this award. Juan Pablo, who was able to mix the essence of science, sport and adventure to face new challenges, gathering people and ultimately making friends, striving for new knowledge at the service of humanity. Juan Pablo left us a legacy of optimism and strength that surely will help us to go ahead looking at the future with enthusiasm. You may think this is not an easy task in these turbulent times but as a wise Spanish guy (Lucio Anneo Seneca) used to say about 2000 years ago (actually from Córdoba, where the SEProt was conceived) “there is no favorable wind for the sailor who doesn’t know where to go“. I believe that our community clearly see which is the right direction. Proteomics has reached its maturity and offers unbeatable opportunities to understand biology and to translate this knowledge into applications in different fields for the benefit of the humanity. Moreover, EuPA has an outstanding leading team, full of energy, who have delineated a clear roadmap to achieve the ambitious aims of the European Proteomics Community and warrant a principal role for EuPA in the future development of proteomics, always under a collaborative and friendly atmosphere.



Inaugural meeting and Founding Members of the Spanish Proteomics Society



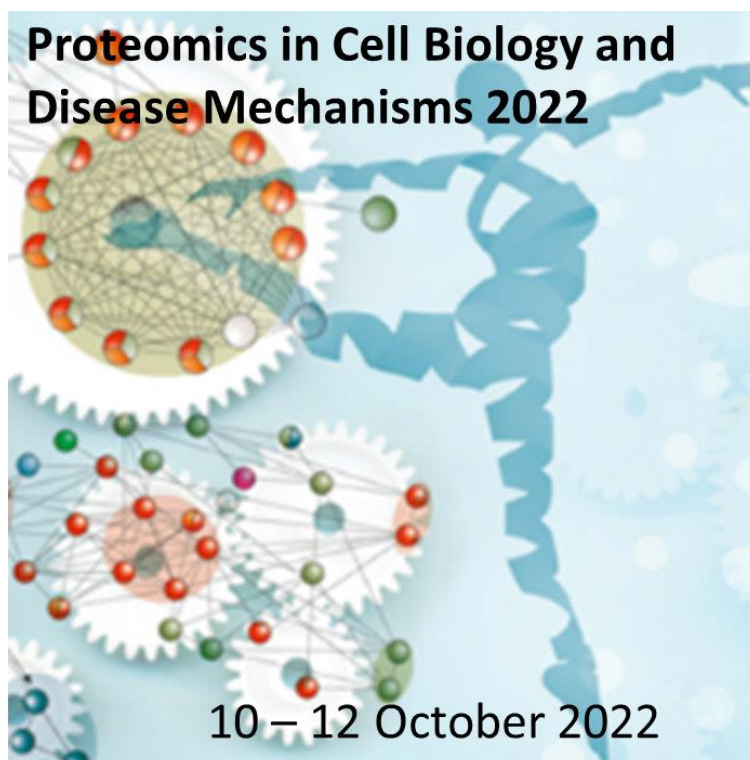
John Fenn explaining how to make elephants fly during his talk in the 1st EuPA and 2nd SEProt Congress.

UPCOMING EVENTS IN PROTEOMICS

PROTEOMICS IN CELL BIOLOGY AND DISEASE MECHANISMS 2022

<https://coursesandconferences.wellcomeconnectingscience.org/event/proteomics-in-cell-biology-and-disease-mechanisms-20221010/>

October 10th – October 12th, 2022, Wellcome Genome Campus, Hinxton, United-Kingdom



TuPA INTERNATIONAL PROTEOMICS CONGRESS – 4TH TURKISH NATIONAL PROTEOMICS CONGRESS

<https://www.proteomikderneği.org/TuPA2022>

October 14th – 15, 2022, Izmir, Turkey

TuPA International Proteomics Congress

4th Turkish National Proteomics Congress

Dokuz Eylül University / İzmir, Türkiye

14-15 October 2022

www.tupa2022.org



Speakers

- **Dr. Tiziana Bonaldi**
European Institute of Oncology, Italy
- **Prof. Ahmet Okay Çağlayan**
Dokuz Eylül University
- **Assoc. Prof. Hasan Demirci**
Koç University
- **Prof. Miral Dizdaroğlu**
National Institute of Standards and Technology, USA
- **Dr. Şerife Ayaz Güner**
İzmir Institute of Technology
- **Assoc. Prof. Alexander R. Ivanov**
Northeastern University, USA
- **Dr. Melis Kant**
National Institute of Standards and Technology, USA
- **Assoc. Prof. Gizem Çalibaşı Koçal**
Dokuz Eylül University
- **Prof. Joreon Krijgsveld**
DKFZ, Heidelberg University, Germany
- **Prof. Michael L. Nielsen**
University of Copenhagen
- **Assoc. Prof. Güneş Özhan**
İzmir Biomedicine and Genome Center
- **Dr. Jale Şahin**
TÜBİTAK
- **Assoc. Prof. Nurcan Tunçbağ**
Koç University
- **Prof. Talat Yalçın**
İzmir Institute of Technology
- **Dr. Dominic Winter**
Bonn University, Germany

Congress Organizing Committee	Abstract Categories	Important Dates
Honorary President Prof. Nükhet Hotar President Prof. Hüray İşlekel Secretary Dr. Gamze Tuna Prof. Talat Yalçın Assoc. Prof. Nurhan Özlü Dr. Merve Akış Dr. Nazlı Eceem Dal Bekar M. Sc. Meltem Kaya Hande Tiraje Oğuzhan	<ul style="list-style-type: none">• Cell Biology and Functional Proteomics• Structural Proteomics• Multi-omics Approaches• Post Translational Modification Analysis• Bioinformatics• Plant / Animal and Nutrition• Clinical Applications• Proteogenomics• Proteomics in Model Organisms• New Approaches in Proteomics (Other)• Multiple Analysis of DNA Damage Repair Proteins	Abstract Submission Deadline 20 September 2022 Course Submission Deadline 20 September 2022 Early Registration Deadline 23 September 2022

Targeted Proteomics Analysis Course 13 October 2022 (Theoretical and Practical)



evronas
events

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**EMBO PRACTICAL COURSE TARGETED PROTEOMICS: EXPERIMENTAL
DESIGN AND DATA ANALYSIS**

<https://meetings.embo.org/event/22-proteomics>

November 13th – November 18th, 2022, Centre for Genomic Regulation, Barcelona, Spain



HUPO CANCUN

<https://2022.hupo.org/cancun-mexico/>

December 4th – 8th, 2022, Cancun, Mexico



EUBIC-MS DEVELOPERS MEETING 2023

<https://eubic-ms.org/events/2023-developers-meeting/>

January 15th – 20th, 2023, Monte Verità, Ticino, Switzerland



SHORT NEWS

THE NEW EUPA WEBSITE

The EuPA Conferences and Communication Committee has provided many efforts on the renewal of the EuPA website. So, it is with a great pleasure to announce you that the new website is launched!!! Please, enjoy it.

CONTRIBUTORS FOR THE CURRENT ISSUE

- *Dr. Nicolas Desbenoit as editor, & Dr. Eva Csoz as co-editor.*
- *The awardees: Maarten Dhaenens, Megan Ford, Claudia Ctortecka, Maike Langini, & Fernando Corrales.*
- *Catherine Gilbert & Michael David Tuck as proofreaders.*