

## EpiLipidNET Newsletter December 2022

### Greetings and Aims

Dear EpiLipidNET Community,

It has been a wonderful and very fruitful 2nd year for the EpiLipidNET Action and we finally had a chance to meet face to face! Now we are a community of over 350 researchers in love with lipids, their biology, chemistry and analytics. I would like to use the chance and thank all of you for the great collaborative work which already resulted in numerous multi-author publications, and successful joint grant applications. From my personal side, I am very grateful to have this opportunity to meet so many wonderful people and to host several brilliant young researchers in my laboratory via EpiLipidNET-provided STSMs (see this nice photo taken during Aveiro meeting with our lab members and YRI who visited us this year!). I wish all of you a very happy holiday time and looking forward to continue working together in 2023!



Maria Fedorova, Co-Chair of the Action

*This Newsletter aims to be a forum for updates on the COST Action EpiLipidNET (CA 19105) and presentation of ideas and opportunities to further contribute to networking.*

### News from Groups of Interest and Joint Grants

*Showcasing the added value of EpiLipidNET*

\*A group of interest in Food Lipidomics is being organized by Zipora Tietel and Rosário Domingues: If you are interested in joining, write to: [tietel\[at\]volcani.agri.gov.il](mailto:tietel[at]volcani.agri.gov.il).

\*MANA's Metabolomics in Precision Medicine Interest Group presented their first virtual workshop on "Bringing Metabolomics into the Home" (16th of November 2022), organized by Dajana Vuckovic and Heino Heyman. Email: [dajana.vuckovic\[at\]concordia.ca](mailto:dajana.vuckovic[at]concordia.ca).

At least **four cooperative projects** with participation of two or more countries from EpiLipidNET have been granted, funded both by National and European Institutions, and new applications are on the way. Check the next Newsletter for more detailed information.

## 🌀 News from the 3rd General Meeting (first one face-to face!)



The 3<sup>rd</sup> EpiLipidNET Action Meeting and young researchers and innovators (YRI) workshop took place in Aveiro (Portugal) from the 21<sup>st</sup> to the 23<sup>rd</sup> of September 2022. This warm, deep and interactive scientific meeting brought together 33 MC members from 25 COST countries. Of 123 attendees, more than 40 were young investigators or innovators. Besides oral communications, 41 posters were presented with lively discussions during the poster sessions and coffee breaks inspired by the delicious Portuguese confectionery. At the YRI meeting, young EpiLipidNET scientists presented their research in sessions dedicated to lipid metabolism, lipid technology and innovation and lipid in health and disease, and also had an opportunity to participate in the panel discussion on the future directions, career paths, chances and obstacles in the lipidomics field.



The awardees of YRI call for innovative ideas to promote collaborative projects and exchange of expertise in lipidomics were Philipp Jokesch “Oxylipidomics as a tool for identification of defense mechanisms neutralizing oxidized phospholipids”; Roman Bushuiev “Interpretation of tandem mass spectra with self-supervised machine learning”; Lorena Diaz-Sanchez and Jannik Sonnenberg “Lipidomic analysis of endothelial plasma membrane”. During the main event, sessions were designed to inform participants of the latest progress made within each WG. The topics discussed included the guidelines in the identification and annotation in lipidomics, current knowledge of biological significance and identification strategies of oxidized phospholipids, pre-analytical and analytical workflows for clinical lipidomics, endothelial lipid biology, and at the very end of the meeting was organized a hands-on, interactive session on outreach and public engagement.



Best poster awards, sponsored by Lipotype, went to: Katharina Hohenwallner and Garyfallia Gouna (on left, with Action Chairs). Congrats! The meeting fostered lively interactions between academia and industry, as well as work package planning, formation of groups of interest and collaborative projects. For more news, pictures and comments about this great meeting, please visit: [@EpiLipidNET](https://twitter.com/EpiLipidNET) and <https://www.epilipid.net/>.

## 🌀 Looking forward to the next General Meeting (one face-to face!)



The 4<sup>th</sup> EpiLipidNET Action Meeting and young researchers and innovators (YRI) workshop will take place in Toulouse (France) from the 10<sup>th</sup> to the 12<sup>th</sup> of July 2023 and will bring together the EpiLipidNET community.

Save the date!!

We are preparing an exciting program and activities for you. This will be an opportunity to meet new people and exchange new ideas and knowledge and find interesting collaborations. Looking forward to meeting you in Toulouse!

## 🌀 Recent EpiLipidNET Publications

Criscuolo A., Nepachalovich P., Garcia-del Rio D.F., Lange M., Ni Z., Baroni M., Cruciani G., Goracci L., Blüher M., Fedorova M. Analytical and computational workflow for in-depth analysis of oxidized complex lipids in blood plasma. [Nat Commun 2022;13\(1\):6547.](#)

Žarković N., Orehovec B., Baršić B., Tarle M., Kmet M., Lukšić I., Tatzber F., Wonisch W., Skrzydlewska E., Łuczaj W. Lipidomics Revealed Plasma Phospholipid Profile Differences between Deceased and Recovered COVID-19 Patients. [Biomolecules 2022;12\(10\):1488.](#)

Žarković N., Łuczaj W., Jarocka-Karpowicz I., Orehovec B., Baršić B., Tarle M., Kmet M., Lukšić I., Biernacki M., Skrzydlewska E. Diversified Effects of COVID-19 as a Consequence of the Differential Metabolism of Phospholipids and Lipid Peroxidation Evaluated in the Plasma of Survivors and Deceased Patients upon Admission to the Hospital. [Int J Mol Sci 2022;23\(19\):11810.](#)

Neves B., Pérez-Sala D., Ferreira H.B., Guerra I.M.S., Moreira A.S.P., Domingues P., Domingues M.R., Melo T. Understanding the nitrolipidome: From chemistry to mass spectrometry and biological significance of modified complex lipids. [Progress in Lipid Research 2022;87:101176.](#)

Maurício T., Aveiro S., Guedes S., Lopes D., Melo T., Neves B.M., Domingues R., Domingues P. Multi-Omic Profiling of Macrophages Treated with Phospholipids Containing Omega-3 and Omega-6 Fatty Acids Reveals Complex Immunomodulatory Adaptations at Protein, Lipid and Metabolic Levels. [Int J Mol Sci 2022;23\(4\):2139.](#)

Bartolomeu M., Vieira C., Dias M., Conde T., Couto D., Lopes D., Neves B., Melo T., Rey F., Alves E., Silva J., Abreu H., Almeida A., Domingues M.R. Bioprospecting antibiotic properties in photodynamic therapy of lipids from *Codium tomemosum* and *Chlorella vulgaris*. [Biochimie 2022; in press.](#)

## Special Issues guest edited by EpiLipidNET members

**IJMS** (ISSN 1422-0067) Special Issue: "New Insight into the Molecular Role of Lipids and Lipoproteins in Vascular Diseases". Guest Editors: S. Benítez & J.L. Sánchez-Quesada. Submission deadline: 20<sup>th</sup> December 2022.

Website: [https://www.mdpi.com/journal/ijms/special\\_issues/Lipids\\_Vascular](https://www.mdpi.com/journal/ijms/special_issues/Lipids_Vascular)

**Antioxidants** (ISSN 2076-3921) Special Issue: "Oxidative Stress Induced by High Salt Diet". Guest Editors: I. Drenjančević, B. Jelaković & J.H. Lombard. Submission deadline: 31<sup>st</sup> December 2022 .

Website: [https://www.mdpi.com/journal/antioxidants/special\\_issues/salt\\_diet](https://www.mdpi.com/journal/antioxidants/special_issues/salt_diet)

**Antioxidants** (ISSN 2076-3921) Special Issue: "Protein Lipoxidation at the Crossroads between Reactive Lipid Species and Redox Signaling" Guest Editors: D. Pérez-Sala & R Domingues. Submission deadline: 20<sup>th</sup> May 2023.

Website: [https://www.mdpi.com/journal/antioxidants/special\\_issues/7D4OIH7PJ](https://www.mdpi.com/journal/antioxidants/special_issues/7D4OIH7PJ)

**Antioxidants** (ISSN 2076-3921): Special Issue "Redox Homeostasis in Response to Exogenous Stimuli". Guest Editor: M. Jaganjac; Submission deadline: 30<sup>th</sup> November 2023; Website:

[https://www.mdpi.com/journal/antioxidants/special\\_issues/Redox\\_Homeostasis\\_in\\_Response\\_to\\_Exogenous\\_Stimuli](https://www.mdpi.com/journal/antioxidants/special_issues/Redox_Homeostasis_in_Response_to_Exogenous_Stimuli)

**Frontiers in Marine Science**, (ISSN 2296-7745): Special Issue "Biotechnology of Marine Microorganisms". Guest Editors: E. Flemetakis & S. Letsiou. Submission deadline: 29<sup>th</sup> December 2022; Website: <https://www.frontiersin.org/research-topics/30319/biotechnology-of-marine-microorganisms>

## Social Media Activities

EpiLipidNET WG5 is actively working to improve the presence of the Action in Social media. Please contact WG5 members ( <https://www.epilipid.net/wg5/> ) for posting the most exciting news

about our Action:

Twitter: <https://twitter.com/epilipidnet>

LinkedIn: <https://www.linkedin.com/company/epilipidnet/>

Expert map at <https://www.epilipid.net/directory/>

Newsletter: <https://www.epilipid.net/dissemination-outreach/>



**EpiLipidNET**  
@EpiLipidNET

COST Action EpiLipidNET; lipidomics, epilipidomics, oxidized lipids

[epilipid.net](https://www.epilipid.net) Joined October 2020

829 Following 1,117 Followers

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## Young Researchers and Innovators (YRI) News

Patricia Prabutzki has now taken over from Dr Tomas Pluskal as YRI Coordinator. Thanks to Tomas for his work and thanks Patricia for volunteering!

## News from the “EpiLipidNET constellation”

\*One day Workshop on “Oxylipins and Fatty acids from Marine Sources” to be held in Montpellier, France, 24<sup>th</sup> January 2023. Organized by T. Durand. For registration and information, please contact A. Guy at [alexandre.guy\[at\]jumontpellier.fr](mailto:alexandre.guy[at]jumontpellier.fr)

\*11th International Singapore Lipid Symposium, On site/online, March 21<sup>st</sup> – 23<sup>rd</sup>, 2023, <https://sling.sg/news-events/isls/>

\*Redox Biology in Translation. Annual Meeting of the Society for Free Radical Research-Europe. Vienna, Austria, 6-9 June, 2023. <https://www.redoxvienna2023.com/>



\*63<sup>rd</sup> International Conference on the Bioscience of Lipids. Palma de Mallorca, Spain, 2-5 October 2023.  
@icbl2023\_Palma.

<https://www.ciberobn.es/agenda/63rd-edition-of-the-international-conference-on-the-bioscience-of-lipids-icbl>.

\*COST Actions interacting with EpilipidNet:



Stratagem CA17104: New diagnostic and therapeutic tools against multidrug resistant tumours. <https://stratagem-cost.eu/>



# Happy holidays and the best for 2023!!

*Stay tuned for the new sections on WG groups and Young Researchers and Innovators. If you wish to be featured in the newsletter, either in the existing sections or proposing a new section, or wish to send feedback and information for upcoming Newsletters please contact:*

*Morana Jaganjac ([Morana.Jaganjac\[at\]irb.hr](mailto:Morana.Jaganjac[at]irb.hr))*

*Dolores Pérez-Sala ([dperezsala\[at\]cib.csic.es](mailto:dperezsala[at]cib.csic.es))*

*Evelina Charidemou, YRI section ([charidemou.evelina\[at\]lucy.ac.cy](mailto:charidemou.evelina[at]lucy.ac.cy))*

*Thank you!*