

EpiViral Newsletter

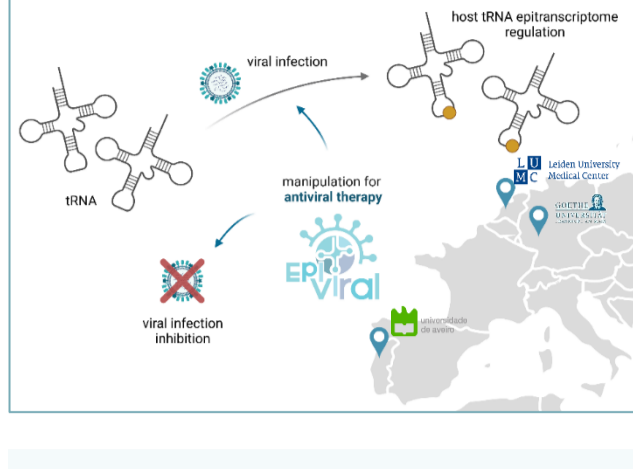
nº2 | June 2023

Welcome message

Dear readers,

Welcome to the second issue of the EpiViral Newsletter. This issue aims to provide up to date news on the past events and information concerning the upcoming activities.

Dr Daniela Ribeiro
Project Coordinator



EpiViral – Viruses and Epitranscriptomics: seeking novel targets for antiviral therapy

EpiViral aims to intensify, increase and consolidate scientific research on Virology and RNA biology at the [Institute of Biomedicine \(iBiMED\)](#), University of Aveiro (UAVR) by twinning with two world-leading institutions, the [Leiden University Medical Center \(LUMC\)](#) and the [Goethe University Frankfurt \(GUF\)](#).

EpiViral Retreats

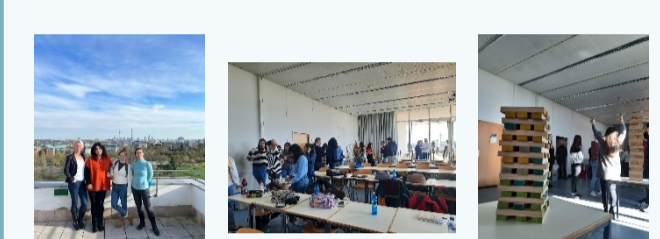
Aveiro | July 2022

The EpiViral teams met for the first time in the city of Aveiro. Twenty-eight students made a brief presentation about their personal interests and work. In this two-days event, social activities were also organized, including a boat trip in the city's canals, a visit to the "Ovos Moles" factory and outdoor team building activities at Pateira de Fermentelos.



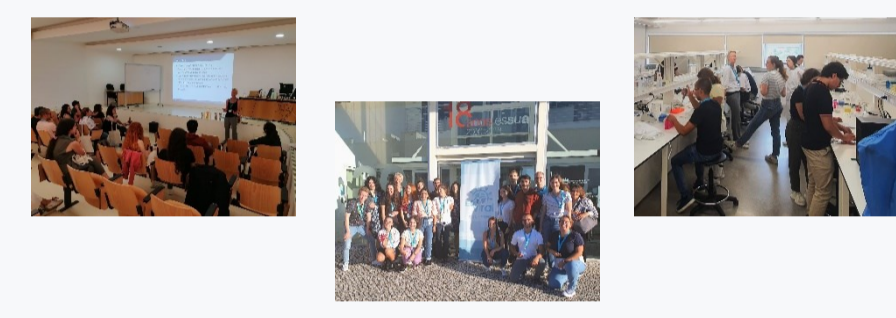
Frankfurt | April 2023

In this two-day retreat, thirty-two students presented their work, allowing the teams to discuss their projects, sharing new ideas and potential new collaborative projects. Social activities included a guided tour in Frankfurt, a river cruise, and a team building activity.



EpiViral Summer School | 6th to 9th September 2023

The 2022 edition of the EpiViral Summer School – RNA Viruses: interactions with hosts, vectors and cells, was held at the iBiMED – Department of Medical Sciences in a hybrid format. Participants learned about the life cycle of different viruses and the interplay with their host cells, as well as about antiviral therapies and vaccines. Participants also received hands-on training on standard and state-of-the-art virology techniques.



EpiViral Satellite Events



In the past year, EpiViral has been involved in the organization of several meetings and workshops. EpiViral team members were involved in the organization of two scientific meetings - the 8th OEPM2022 and the VI iBiMED Symposium-, and in the organization of a career development workshop - the 1st Joint Twinning Soft Transferable Skills Workshop, at the University of Aveiro. EpiViral also sponsored the attendance of the keynote speakers, Jonathan Yewdell and Christina Ehrhardt.

EpiViral Staff and Researchers' Exchanges

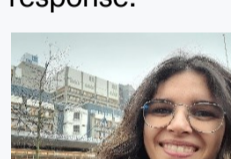
Staff Exchange | October 2022

Six staff elements of the Research Support Office of UAVR were received at LMUC by Pieter de Koning, the advisor for EU Research Grants and member of the Directorate of Research Policy at this institution. This visit was conducted with the aim of strengthening the research management and administration skills at UAVR.



Staff Exchange | March 2023

Mariana Marques, a doctoral student from iBiMED, visited the laboratory of Marjolein Kikkert at LUMC, in March 2023. During this trip she also had the opportunity to visit the Amsterdam Medical Center. With this research exchange, she acquired experience in new methodologies and techniques to study the antiviral response.



EpiViral Virtual Workshops

Workshop on Pulse chase methodologies

Organized by the EpiViral team members from GUF, this workshop allowed iBiMED PhD students to learn how to identify tRNA modifications in the context of viral infections.

Workshop on Coronavirus production and infection studies

With this workshop, organized by the EpiViral team members from LMUC, iBiMED PhD students learned methodologies and techniques to optimize coronavirus infection studies in BSL-2 conditions.

EpiViral Workshops and Conference Attendance

The EpiViral project fosters networking and conference attendance of early-stage researchers from iBiMED. In the last year, different members of the EpiViral team attended and presented their work in ten conferences and courses, such as the American Society for Virology 2022 Annual Meeting, the EMBO course - Applying design principles to schematic figures, the 8th Open European of Peroxisomes Meeting, the EMBO symposium - The complex life of RNA, the Translation Machinery in Health and Disease Conference, the IX ptRNA meeting, the XLVIII Annual Meeting of the Portuguese Society for Immunology, the EMBO course - Measuring translational dynamics by ribosome profiling, the 8th European Conference of Virology and the 28th annual RNA Society meeting. Moreover, Marisa Pereira, Diana Ribeiro, and Alexandre Nunes EpiViral students at iBiMED, have been awarded with travel grants to attend the EMBO symposium - The complex life of RNA and EMBO course - Measuring translational dynamics by ribosome profiling.

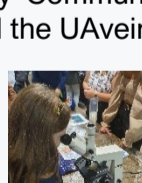


EpiViral Young Scientists Conference Attendance Award

The 4th edition of this award supported the participation of three early-stage researchers from iBiMED in international conferences. The awardees attended and presented their work at conferences such as the 8th European Congress of Virology and the EMBO course - Signal regulation by protein phosphatases.

EpiViral Outreach Activities

The EpiViral team has participate in different outreach activities for the general public, such as the European Researcher's Night 2022, the Coffee with Science Cycles on Healthy Communities, the Letters with Science Program, XPERIMENTA-UA, and the UAveiro Summer Academy



Publications

- [Determining the Importance of Peroxisomal Proteins for Viral Infections in Cultured Mammalian Cells.](#) Marques M, Ferreira AR, Ribeiro D. *Methods Mol Biol.* 2023
- [Tools to Investigate the Peroxisome-Dependent Antiviral Response.](#) Ramos B., Ferreira A.R., Ribeiro D. *Methods Mol Biol.* 2023
- [Peroxisomes and Viruses: Overview on Current Knowledge and Experimental Approaches.](#) Ferreira V., Ferreira A. R., Ribeiro D. *Methods Mol Biol.* 2023
- [The physiological functions of human peroxisomes.](#) Wanders R. J. A, Baes M., Ribeiro D., Ferdinandusse S. and Waterham H. *Physiological Reviews* 2023 Jan 1;103(1):957-1024.
- [Amyloid pathology reduces ELP3 expression and tRNA modifications leading to impaired proteostasis in Alzheimer's disease models.](#) Pereira M., Ribeiro D. R., Berg M., Tsai A. P., Nho K., Kaiser S., Moutinho M., Soares A. R. *BioRxiv.* 2023
- [Engineering potent live attenuated coronavirus vaccines by targeted inactivation of the immune evasive viral deubiquitinase.](#) Myeni S.K., Bredenbeek P.J., Knaap R.C.M., Dalebout T.J., Morales S.T., Sidorov I.A., Linger M.E., Oreshkova N., van Zanen-Gerhardt S., Zander S.A.L., Enjuanes L., Sola I., Snijder E.J., Kikkert M. *Nat Commun.* 2023
- [Ubiquitin variants potentially inhibit SARS-CoV-2 PLpro and viral replication via a novel site distal to the protease active site.](#) van Vliet V.J.E., Huynh N., Palà J., Patel A., Singer A., Slater C., Chung J., van Huizen M., Teyra J., Miersch S., Luu G.K., Ye W., Sharma N., Ganaie S.S., Russell R., Chen C., Maynard M., Amarasinghe G.K., B.L., Kikkert M., Sidhu S.S. *PLoS Pathog.* 2022

UP NEXT

- [Sep 2023 | Summer School on Deciphering the epitranscriptome: analysis of tRNA and mRNA modifications, Aveiro](#)
- [Dec 2023 | EpiViral Symposium: Innate Immunity in Viral Infection, Leiden](#)
- [July 2023 | Virtual Workshop on Improving protein detection in the context of viral infections](#)

For more information, please visit our website: www.epiviral.eu



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