

Send us your news to evbc@uni-jena.de.

For more frequent updates, please follow us on Twitter [EVirusBioinfC](https://twitter.com/EVirusBioinfC).

Selected Publications by EVBC Members

[All publications on Pubmed](#)

Detail of the molecular mechanisms underpinning Theilovirus protein-stimulated frameshifting. (Nucleic Acids Res: [10.1093/nar/gkab969](#))

Database of viroids and viroid-like circular RNAs, including retroviroid-like elements, small circular satellite RNAs, ribozymes, and retrozymes. (Nucleic Acids Res: [10.1093/nar/gkab974](#))

Viral abundance and diversity are major ecological factors that drive the selection and maintenance of CRISPR-Cas in microbial ecosystems. (Curr Biol: [10.1016/j.cub.2021.10.038](#))

Viral community analysis in a marine oxygen minimum zone indicates increased potential for viral manipulation of microbial physiological state. (ISME J: [10.1038/s41396-021-01143-1](#))

Low levels of circulation of seasonal influenza due to the ongoing SARS-CoV-2 pandemic might hamper the early identification of human avian influenza cases. (Clin Microbiol Infect: [10.1016/j.cmi.2021.11.005](#))

Analysis of complete genomes of archaeal tailed viruses suggests ancient divergence recurrent transfers between different biomes. (PLoS Biol: [10.1371/journal.pbio.3001442](#))

Rapid increase in enterovirus D68 infections, after widespread reopening after COVID-19 lockdown, requires reinforced clinical awareness. (Euro Surveill: [10.2807/1560-7917.ES.2021.26.45.2100998](#))

The architecture and complexity of the simian varicella virus transcriptome and provide new insights into the molecular biology underlying

infection. (PLoS Pathog: [10.1371/journal.ppat.1010084](#))

New taxonomy *Leviviricetes*: identification and future classification of hundreds of additional class members into this new taxonomic framework. (Microb Genom: [10.1099/mgen.0.000686](#))

High diversity of divergent RNA viruses associated with signal crayfish and potential risk of virus transmissions as a result of this invader's dispersal. (Viruses: [10.3390/v13112259](#))

Summary of the ICTV Report on the family *Nyamiviridae*. (J Gen Virol: [10.1099/jgv.0.001681](#))

Correcting the estimation of viral taxa distributions in next-generation sequencing data after applying artificial neural networks. (Genes: [10.3390/genes12111755](#))

Reviews / Commentaries / Editorials

Current clinical evidence of the relationship between Hepatitis E Virus and Hepatocellular Carcinoma. (Cancers: [10.3390/cancers13225867](#))

Taxonomic classification of uncultivated viruses requires continuous development and testing of computational tools. (Curr Opin Virol: [10.1016/j.coviro.2021.10.011](#))

To reduce zoonotic events, it is important to control the spread of IAV within animal reservoirs. (Viruses: [10.3390/v13112250](#))

viruses *in silico* | EVBC Lectures

[Register](#)

Expect the unexpected: Lessons for virus bioinformatics from HSV-1 infection

15. December 2021 | 04–05 pm CET

online

Dr. Caroline Friedel, University of Munich, Germany

Dual RNA-seq provides unique opportunities to simultaneously study host and viral transcription. Unique pitfalls arise in dual RNA-seq analysis due to the manifold ways in which viruses modulate host transcription and RNA levels. C. Friedel will provide an overview how modulations in HSV-1 infection impact and bias RNA-seq analysis if not properly taken into account.

Tools and Resources

[Virus tools website](#)

ViroidDB: a database of viroids and viroid-like circular RNAs.

"Just because you can't see something, doesn't mean it doesn't exist."
– Charlie (The Santa Clause)

Another Christmas season, which will be marked by the pandemic, is upon us. All the more we wish you and your loved ones health, happiness and moments of peace. Many thanks to all of you for your commitment to the EVBC and for advancing the field of virus bioinformatics. We are looking forward to a new (and hopefully better) year.

EVBC Special Issues

[Special issue list](#)

New publications in Special Issue on **Virus Bioinformatics 2022: Exploring the Diversity of the Human Blood Virome**. (Viruses: [10.3390/v13112322](#))

Submit your work. Deadline:

30 April 2022

RNA in Plant-Virus/Viroid Interaction in Plants

New insights into the role of coding and non-coding RNAs during plant-virus/viroid interaction, as well as in their exploitation to obtain tolerance or resistance to viral entities. Deadline:

31 December 2022

New Members

[EVBC members website](#)

We are happy to welcome our new members:

Patricia Agudelo-Romero, Telethon Kids Institute, AU | **Nikolas Basler**, KU Leuven, BE | **Magda Bletska**, KU Leuven, BE | **Thomas Bukur**, TRON, DE | **Daniel Cadar**, Bernhard Nocht Institute for Tropical Medicine, DE | **Robert Edwards**, Flinders University, AU | **Santiago F Elena**, Institute for Integrative Systems Biology, ES | **Enrique González-Tortuero**, University of Salford, UK | **Nima Hemmat**, Tabriz University of Medical Sciences, IR | **Daan Jansen**, KU Leuven, BE | **Terry Jones**, Charité – Universitätsmedizin Berlin, DE | **Mohammadali Khan Mirzaei**, Helmholtz Zentrum München, DE | **Antoni Luque**, San Diego State University, US | **Sonalika Mahajan**, ICAR-Indian Veterinary Research Institute, IN | **Emilio Mastriani**, Harbin Medical University, CN | **Janina Rahlf**, Linnaeus University, SE | **Diego Simón**, Universidad de la República, UY | **Matthew Sullivan**, Ohio State University, US |

Please see the [back of the newsletter](#) to get to know our members!

Member Profile: Daniel Depledge



Name: Daniel Depledge

Position: Associate Professor (W2) of Systems Virology, Hannover Medical School, Germany

Research focus: Herpesviral latency & transcriptomics



What do you love about viruses?

Their diversity in form and function and their (outsized) role in shaping our societies.

On what topic could you give a 30-min talk without preparation?

Sequencing informatics or VZV latency.

What is your favourite way to spend a day off?

Cycling and/or Hiking with my family followed by good meal and a good film/concert/book.

What are you currently learning?

How to better structure, document, and partition, computational workflows.

What do people think about you that isn't true?

That I am a bioinformatician only (in reality I have extensive training in molecular biology, hence why research in my lab uses both wet- and dry-lab approaches).

What was your most surprising scientific finding?

The VZV latency transcript (VLT) (Nature Communications: [10.1038/s41467-018-03569-2](https://doi.org/10.1038/s41467-018-03569-2))

If you had the option to give advice to a younger version of yourself, what would that be?

Always remember that a career in science is a journey without any fixed destination.

Is there anything you would like to share with other EVBC members?

The following quote has always made me think of viruses:

"... the enemy was a curious organism only vaguely understood, more often the subject of cartoons than nightmares."

– Joe Haldeman, The Forever War

Member Profile: Daniel Blanco-Melo



Name: Daniel Blanco-Melo

Position: Assistant Professor at the Fred Hutchinson Cancer Research Center, Seattle, United States

Research focus: Antiviral immune defenses



What do you love about viruses?

How these minimalist entities can take over a complex system, either an individual organism or the complete society in which we live.

What is your favourite way to spend a day off?

Enjoy an art exhibition, concert or have a nice meal outdoors with friends and family.

If you could create a new invention, what would it be?

A potent universal antiviral.

What is the most interesting question or challenge in science that is still unanswered?

Big question. A huge challenge is still how to deal with the vast amount of data that is being produced and how to transform this data into knowledge and therapeutics, policies, behavioral changes. Additionally, in the case of my research area, there are still much to do regarding how to translate the vast knowledge gained on antiviral genes and restriction factors into actual antiviral therapies.

What is the coolest thing about your research?

That I could learn the history of how things came to be (evolution of viruses and antiviral strategies)

What was your most surprising scientific finding?

I believe my most surprising discovery was during my grad school, where I was able to reconstruct a 30 million year old retrovirus and found that an ancient primate was able to combat this particular virus by borrowing parts of its machinery.

Which scientific topic (outside of your field of research) do you think should have more scientific attention?

I am fascinated by physics and the possibility of time travel.

If you were completely free to choose a scientific topic to work on, which would it be?

Paleovirology and the evolution of antiviral strategies.

If you had the option to give advice to a younger version of yourself, what would that be?

Do not disregard negative data.

Is there anything else you would like to share with our members?

I am opening my research lab, and I am on the lookout for talented and motivated scientists to join us tackle questions regarding current and ancient viral infections and understanding the mechanisms and evolution of our immune system. I am currently recruiting a bioinformatic analyst (recent graduate pre-Ph.D.) and a post-doctoral fellow. If interested, please visit [our website](#).