



## Contact

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## [PRESS RELEASE]

### OMIC Webinars: Plant Genomics and Bioinformatics – The power of long read sequencing

*OMIC-Engine, the National Hellenic Research Infrastructure on Synthetic Biology, coordinated by the University of Thessaly, dives into the world of Plant Genomics and Bioinformatics.*

In our third Webinar, titled “Plant Genomics and Bioinformatics – The power of long read sequencing”, held on Tuesday 18<sup>th</sup> of May 2021, OMIC-Engine welcomes Boas Pucker, Post-doctoral researcher at the Department of Plant Sciences of the University of Cambridge (UK).

High quality plant genome sequences are the key to unravel the biochemical potential of plants and to understand evolutionary processes in plants. The resulting insights are the basis to improve traits in crops. Long read sequencing has become the method of choice for genome analysis. Genome sequencing projects ranging from the model organism *Arabidopsis thaliana* to crop species like sugar beet, grapevine, and yam will be presented. An investigation of the complex pigment biosynthesis in the Caryophyllales will be highlighted as one example for comparative genomics. The included bioinformatic tools are MGSE for the estimation of genome sizes, NAVIP for the functional annotation of sequence variants, KIPes for the annotation of biosynthetic pathways, and loreta for the analysis of T-DNA insertion lines. This talk aims to provide an overview of various long read sequencing applications in plant genomics.

Boas Pucker background is in plant genomics and applied bioinformatics. During his time at the Center for Biotechnology (CeBiTec) at Bielefeld University, Boas Pucker worked on several plant genome sequencing projects. He was also involved in iGEM by supervising the ‘Bielefeld-CeBiTec’ teams from

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2016 to 2019 and as a judge since 2016. Additionally, Boas supported teams around the globe through the mentoring program. Currently, he is working as a postdoc at the Department of Plant Sciences (University of Cambridge, UK). His research is focused on the complex evolution of the pigment biosynthesis in the Caryophyllales. Two different pigments, anthocyanins and betalains, appear to be mutually exclusive in families of the Caryophyllales. Boas Pucker is also investigating genes involved in the betalain biosynthesis across different species by comparing their genome sequences.

OMIC-Engine was established in 2018 and belongs to the 20 Research Infrastructures financially supported by the Operational program "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020). The University of Thessaly is the main coordinator and has joined forces with research groups from the Universities of Patras, Thrace, Athens, Thessaloniki, Ioannina, Agricultural of Athens, the National Technical University, and the National Research Foundation. OMIC-Engine aims to promote interdisciplinary research, exploiting Synthetic Biology methods, in order to develop useful applications for the society, the environment and the agrifood sector.

Tuesday 18<sup>th</sup> of May at 16:00 PM EEST we will have the opportunity to meet the world of Plant Genomics & Bioinformatics.

You can register here: <https://forms.gle/itDjKGkXmyHSsXny5>

Re-watch the OMIC Webinars at OMIC-Engine's YouTube channel by clicking [here](#).

Learn more about Boas Pucker research by visiting the following websites:

<https://www.plantsci.cam.ac.uk/directory/pucker-boas>

<https://www.cebitec.uni-bielefeld.de/~bpucker>

You can contact the OMIC-Engine Research Infrastructure at [info@omicengine.com](mailto:info@omicengine.com) or via [Twitter](#), [Facebook](#) και [LinkedIn](#).

