



Contact

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[PRESS RELEASE]

OMIC Webinars: Tailoring *Pseudomonas putida* for optimal functioning in industrial biocatalysis

OMIC-Engine, the National Research Infrastructure on Synthetic Biology, coordinated by the University of Thessaly, dives into the world of Metabolic Engineering.

In our second Webinar, titled “Tailoring *Pseudomonas putida* for optimal functioning in industrial biocatalysis”, held on Thursday 28th of November 2020, OMIC-Engine welcomes Christos Batianis, PhD candidate at the [Laboratory of Systems and Synthetic Biology](#) of the Wageningen University.

Metabolic engineering is the science of rewiring the metabolism of cells to enhance production of target metabolites. The potential applications of such efforts are wide ranging, including the production of biofuels, foods/feeds, and pharmaceuticals. However, transforming cells into efficient factories is a challenging and costly process, requiring advanced tools such *in silico* metabolic models, gene editing methodologies as well as robotics. Here, we will discuss the principles and current challenges of metabolic engineering, focusing on how organisms can be engineered for industrial level production of specific chemicals. The examples to be discussed are related to the bacterium, *Pseudomonas putida*.

Christos Batianis received his BSc degree in Biochemistry and Biotechnology from the University of Thessaly, Larissa, while in 2014 moved to the Netherlands to work in the Research and Development (R&D) department of the multinational company, Danone. At that time, his research was focused on the analytical characterization of the human milk composition, where he had the opportunity to explore the field of analytical chemistry. In 2015, he returned to Thessaloniki for postgraduate studies at the Department Biology of the Aristotle University, attending the MSc in Applied Biotechnology. For his MSc thesis, Christos returned to the Netherlands to join the lab of Systems and Synthetic Biology (SSB) at the Wageningen University. Through his 8-month project, he came across the field of metabolic engineering and synthetic biology, focusing on the model-driven metabolic design of ‘industrially-friendly’

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Pseudomonas putida strains. After graduating, he was hired by the SSB lab as a PhD candidate under the supervision of Prof. Vitor Martin dos Santos. His PhD is focused on the *à la Carte* metabolic design of *P. putida* strains with desired characteristics for industry, while his main specializations are related to genetic engineering, DNA design and pathway engineering.

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.

Thursday 28th of January at 16:00 PM EEST we will have the opportunity to meet the world of Metabolic Engineering.

You can register here: <https://forms.gle/2FJ3mTVx3PqGT1S67>

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



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