



ΠΕΡΙΦΕΡΕΙΑ ΚΕΝΤΡΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ
ΑΝΤΙΠΕΡΙΦΕΡΕΙΑ ΨΗΦΙΑΚΗΣ ΔΙΑΚΥΒΕΡΝΗΣΗΣ



ARISTOTLE
UNIVERSITY
OF THESSALONIKI

Synthetic Biology and Bioengineering: Bridging Science and Innovation

Program



Program

9:30-9:50

Opening and Welcome Address

9:50-10:20

**Bridging Systems Biology with Synthetic Biology:
the Work of iGEM Thessaloniki**

Dr. Michalis Aivaliotis

Professor of Biochemistry, School of Medicine, Scientific Supervisor of iGEM Thessaloniki, Aristotle University of Thessaloniki

10:20-10:50

**Hacking Biology: from Student Projects to the
Bioeconomy of Tomorrow**

Dr. Konstantinos Matthiopoulos

Professor of Molecular Biology, Department of Biochemistry and Biotechnology, University of Thessaly

10:50-11:20

**The Edinburgh Genome Foundry: Automation Precision
Meets Academic Expertise**

Dr. Rennos Fragkoudis

Edinburgh Genome Foundry, Centre for Engineering Biology, School of Biological Sciences, University of Edinburgh, United Kingdom.

11:20-11:50

**Engineering a PINK1 Fragment Sensor for Mitochondrial
Stress in Pluripotent Stem Cells**

Dr. Professor Tilo Kunath

CRM Co-Director, Group Leader and Chair of Regenerative Neurobiology

30' Break

Synthetic Biology and Bioengineering: Bridging Science and Innovation



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12:20-12:50

**Precision and Plasticity in the Early Embryo:
the Dynamics of Gene Expression through Real-Time
Imaging and Multi-Omics Analyses**

Dr. Theodora Koromila

Assistant Professor, Department of Biology,
Aristotle University of Thessaloniki

12:50-13:20

**Reconstructing the Tumor Microenvironment: Investigating
Intercellular Communication and Epigenetic Plasticity
in 3D Culture Models**

Dr. Zoi Piperigkou

Assistant Professor of Biochemistry – Extracellular Matrix,
Department of Chemistry, University of Patras

13:20-13:50

**Metabolic Modelling in Bioprocessing: How to Use Genome Scale
Metabolic Models to Gain Process Understanding**

Dr. Dimitrios Alexandros Kyparissidis

Assistant Professor, Department of Chemical Engineering,
Aristotle University of Thessaloniki

30' Break

Synthetic Biology and Bioengineering: Bridging Science and Innovation



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14:20-14:50

Synthetic Biology Approaches in Microbial Biotechnology

Dr. Dimitrios Chatzinikolaou

Professor of Microbial Biotechnology, Department of Biology,
National and Kapodistrian University of Athens

14:50-15:20

Artificial Intelligence in Education and Research: New Perspectives through AlphaFold

Dr. Katerina Tzouvara

AI & Data Engineer, Public Sector, Google Cloud

15:20-17:50

AI in Synthetic Biology: Protein Engineering with AlphaFold

ALPHA FOLD WORKSHOP by iGEM Thessaloniki

Guest Presenter Alpha Fold 3 agent : **Konstantinos Kechagias**

Google Developer Expert AI & Cloud

17:50-18:00

Closing Remarks and Acknowledgements

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