



SynBioTech 2026

International Symposium on
Synthetic Biology and
Biotechnological Systems



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International Symposium on Synthetic Biology and Biotechnological Systems

Theme: “Engineering Life for a Sustainable Future”

April 2–5, 2026

Symposium Overview

SynBioTech 2026 will unite leading researchers, engineers, and innovators working at the cutting edge of synthetic biology, metabolic engineering, and systems biotechnology.

The symposium aims to explore how advances in gene circuit design, biofoundries, AI-driven modeling, and biomaterial synthesis are transforming biotechnology, healthcare, and environmental sustainability.

Participants will engage in high-level discussions bridging biology, computation, and engineering, with a focus on translating synthetic biology into real-world solutions.

Symposium Tracks

Track I – Genetic Circuits and Genome Engineering

- CRISPR/Cas-based synthetic gene networks
- Modular DNA design, editing, and assembly platforms

- Synthetic promoters, riboswitches, and logic gates
 - Evolutionary and adaptive circuit control
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◆ **Track II – Cell and Metabolic Engineering**

- Microbial chassis optimization (E. coli, yeast, cyanobacteria)
 - Synthetic metabolic pathways for bio-based production
 - Cell-free and minimal cell systems
 - Protein and enzyme design for targeted biocatalysis
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◆ **Track III – Artificial Intelligence and Computational Bio-Design**

- Machine learning in genome editing and pathway prediction
 - AI-assisted design of synthetic gene networks
 - Multi-omics data integration and digital twins of cells
 - Computational modeling of biological circuits
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◆ **Track IV – Synthetic Biomaterials and Biofabrication**

- Engineered polymers, peptides, and hybrid biomaterials
 - Bio-inks for synthetic tissues and regenerative scaffolds
 - Living materials and biosensor interfaces
 - Self-assembling nanostructures and bioelectronics
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◆ **Track V – Applications and Ethics**

- Synthetic biology for healthcare and drug discovery
- Environmental remediation and carbon-negative bioprocesses
- Biosecurity, regulation, and responsible innovation
- Industrial translation and startup ecosystems