

About Center SynGen

The Center for Synthetic Genomics (**Center SynGen**) is a trans-regional Center at Heidelberg University, Karlsruhe Institute of Technology (KIT), and Johannes Gutenberg University Mainz (JGU), generously funded by the Carl-Zeiss-Stiftung and the participating universities.

Center SynGen bridges disciplines across **engineering, life sciences, medicine**, and the **humanities** to drive innovation in synthetic DNA, train future scientists in **molecular systems engineering** and **biomedical research**, and advance genomics research by focusing on the **design, programming, and synthesis** of large, complex DNA sequences

To realize these goals, Center SynGen fosters collaboration and provides dedicated infrastructure to support cutting-edge research through two specialized platforms:

- **Synthetic DNA Accelerator Laboratory (SynDNA Lab)** | Located in Heidelberg
- **DNA Unit of Virtual Materials Design Platform (DNA VirtMat Unit)** | Located in Karlsruhe

These platforms provide advanced technologies and infrastructure to overcome two bottlenecks in synthetic genomics research: the synthesis/assembly of long DNA strands, and the simulation and prediction of synthetic DNA building blocks. Together, they enable and accelerate cutting-edge research projects in synthetic genomics.

Research Themes

Center SynGen offers **Seed Funding** to support new projects and initiatives in synthetic genomics. Areas of interest include:

- Artificial Intelligence
- DNA Synthesis (synthetic genes and genetic landscapes)
- Genome Engineering
- Life Science Technologies
- Synthetic Epigenomics
- DNA Simulations (AI/ML/LLMs)
- Ethics and Philosophy related to synthetic genomics

Scope of Funding

The program aims to stimulate new ideas from students and scientists exploring new concepts and cross-site collaborations in Synthetic Genomics by providing financial support for:

- Consumables
- Training for doctoral or postdoctoral research
- iGEM and other international competition projects
- Lab visits (to be clearly justified in the proposal)
- Not funded: PhD/Postdoc salaries, conference participation, hardware (e.g. computers)

Eligibility criteria

- Researchers must be affiliated with KIT, Heidelberg/Mainz Universities, EMBL, DKFZ

- All applicants - except independent group leaders - are required to provide approval from their group leader or academic mentor, including iGEM teams.

Application Format

- Maximum 2 pages (A4)
- Font: Arial 11 pt | line spacing 1.15 | margins 2 cm

Evaluation Criteria

Applications will be assessed based on:

- Scientific quality (including the **novelty** and **feasibility** of the proposed project)
- Clear contribution and relevance to synthetic genomics

Interdisciplinary projects and projects with scientists from different partner institutions are prioritized.

Important Notes

- Existing projects will not be funded unless they present a **new focus and research question**
- **Proof-of-concept experiments, cross-location collaborations and interdisciplinary projects** are highly encouraged, particularly those led by PhD and postdoctoral researchers.
- Funding amounts range from **three-digit to low five-digit figures** and must be justified, including a clear breakdown between personnel (student assistant) and consumable costs. For collaborative projects, a financial plan outlining partner allocations and the designated fund recipient is required.

After acceptance of the project

Upon the award of Seed Funding, the **group leader** becomes **an official member of Center SynGen** and will be introduced on the [Center SynGen website](#) as a new member. **The research group** will gain access to Center SynGen research platforms, internal training opportunities, and will be invited to participate in the Center's scientific and social events. After completion of the project – within a maximum of one year following the approval of the Seed Funding – a short report needs to be provided that details the work conducted and the results obtained. Successful projects will be given the opportunity to present their work in the Center SynGen Seminar Series.

Call Timeline

Submission Deadline: September 30, 2026 (*iGEM projects may contact us at any time*)

Evaluation Period: October–November 2026

Decision Announcement: December 2026

Project Duration: 2027

Final Report Submission (Scientific and Financial): 31.01.2028

Submission | Contact

Proposal submission (subject line: “Seed Funding 2027”):

- Heidelberg: office-syngen@zmbh.uni-heidelberg.de
- Karlsruhe: office-syngen@zoo.kit.edu
- Mainz: Lemke-office@uni-mainz.de