

National Centre of Competence in Research

"Genesis"



► Brief description

How did life emerge on Earth? Is there life elsewhere in the universe? The origin of life remains a complex puzzle: while the first chemical building blocks are known, how these combine to form functioning cells is still unresolved.

At the heart of the National Centre of Competence in Research (NCCR) "Genesis" are three central questions: How do simple molecules evolve into living systems? What conditions foster biological development, and how does life shape its environment? How can we identify places that might enable life? The two host institutions together with 23 research groups aim to address these questions through novel interdisciplinary collaboration in Switzerland. In recent years, this topic has shifted from speculative debate to a concrete research field, driven by the discovery of exoplanets and advances in biochemistry and Earth sciences. New planetary discoveries invite us to reconsider Earth's role in the universe and to imagine life under a wide range of environmental conditions.

The next decade could be decisive in our understanding of

the conditions and mechanisms that enable life to emerge. This effort goes beyond scientific discovery: it aims to enhance Switzerland's position as a leading research hub, foster scientific careers and engage the public in this fundamental field of inquiry.

Developing reliable methods to detect reliable traces of life (biosignatures) – whether through remote sensing or direct onsite measurements – requires significant innovation. These challenges demand close collaboration across physics, biology, chemistry and Earth sciences.

NCCR "Genesis" does not aim to provide answers in all fields, but to drive innovative research and achieve decisive progress. It will create new infrastructures, build partnerships with industry, train young researchers, and establish a strong national network. Building on existing centres, "Genesis" will unite research institutes across Switzerland. This will ensure that Switzerland remains at the forefront of exploring the universe's greatest mysteries.

► Facts and figures

Total funding (2026–2029): CHF 37.94 million

Federal funding (2026–2029): CHF 16.99 million

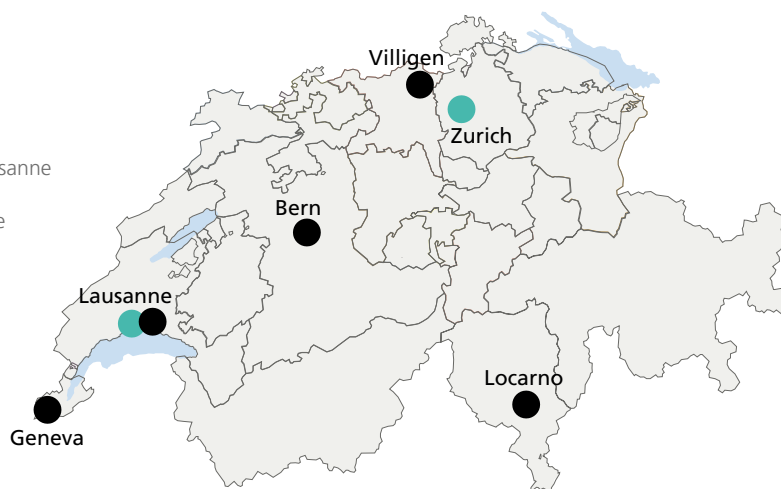
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Further information

www.sbfi.admin.ch/national-centres-of-competence-in-research

● Host institutions (number of groups)

- ETH Zurich (8)
- University of Lausanne (4)

● Network (number of groups)

- Paul Scherrer Institut (PSI) (1)
- University of Geneva (3)
- University of Bern (4)
- EPFL (2)
- Istituto Ricerche Solari Locarno (IRSOL),
Università della Svizzera italiana (1)



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Research and Innovation SERI**