

On the trail of evolution

by Janine Braun

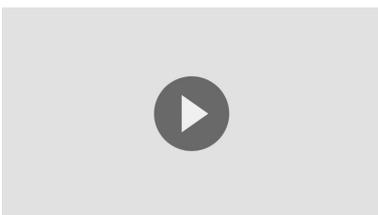


From distant exoplanets to the evolution of DNA and proteins – early-career researchers Taylor Priest, Sean Jordan, and David Schnettler (from left to right) explore various aspects of life's origins.

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The NOMIS Foundation and the Centre for Origin and Prevalence of Life (COPL) at ETH Zurich share a vision: to support exceptional researchers in answering questions about the origins of life. Taylor Priest, one of the three new NOMIS-ETH Fellows, provides insights into his research in the video.

Video



Engines of evolution

At the heart of Taylor Priest's research at [COPL](#) are so-called "mobile genetic elements" – specialised DNA fragments capable of transferring genetic information between different organisms. "These elements play a key role in the diversification and spread of life on Earth," explains Taylor Priest.

His research highlights how these elements act as "engines" of evolution, playing a significant role in shaping the biodiversity we see on Earth today. Together with the team at Professor Shinichi Sunagawa's Microbiome Lab in the [Institute of Microbiology](#) at ETH, the young researcher investigates a wide range of ecosystems – from glaciers and deep-sea sediments to hot springs. "Deciphering the origin of life is incredibly challenging, as only a few traces from the early stages of life on Earth remain," Taylor Priest states. However, studying the DNA of modern organisms offers valuable insights into how life has adapted and evolved over time.

Igniting the spark

This visionary research is made possible by the [NOMIS Foundation](#), which established the NOMIS-ETH Fellowship programme at COPL. Based in Zurich, the foundation is a long-standing partner of ETH, supporting not only fellowships at COPL but also the professorship of [Jacob Corn](#), who is working with cutting-edge genome-editing technologies to develop therapies for genetic diseases, and that of Professor [Martin Pilhofer](#), who studies the interactions of living organisms at a molecular level using cryo-electron microscopy.

"Our goal is to ignite a 'spark' that not only opens up new fields of research but also deepens our understanding of the intricate interconnections of life," explains Markus Reinhard, Managing Director of the NOMIS Foundation.

Centre for Origin and Prevalence of Life

At ETH Zurich's COPL, scientists from diverse disciplines ranging from astrophysics and biochemistry to biology come together to investigate fundamental questions about the origins of life. Together, they are developing new approaches to understanding how life could have emerged and evolved. The NOMIS Foundation supports this interdisciplinary work by providing ambitious researchers with the freedom and resources for visionary research through the NOMIS-ETH Fellowships.

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[NOMIS-ETH Fellows 2024](#)

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[more on Taylor Priest's research](#)

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