

ETERNAL CELL - Life without replication

Initiative: "Leben?" - Ein neuer Blick der Naturwissenschaften auf die grundlegenden Prinzipien des Lebens
(beendet)

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Laufzeit: 3 Jahre

Projekt-Website: kabisch-lab.de

Deciphering the physiological function of fundamental cellular processes has until recently been hindered by the lack of molecular tools to manipulate essential genes. Recent breakthroughs in the technology for genome engineering, such as CRISPR-Cas9, have allowed the characterization of these under-studied processes. In the frame of this project the research team proposes to use these new tools for the creation of a cell that will lose the ability of DNA replication during any point of the bacterial life cycle. With this approach the researchers intend to characterize the basic principle of DNA replication and to learn more about its role for life. Using modern -omics they will characterize the birth, life and death of these cells under normal and stress conditions and utilize the eternal cell population for applied biotechnological and medical hypotheses.

Projektbeteiligte

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