

Æ O N

a philosophical-speculative scenario of a world where the biological clock can be reversed by genetic reprogramming



ÆON is a philosophical-speculative scenario of a world where the biological clock can be reversed by genetic reprogramming. The work consists of three parts: a proof-of-concept- experiment in a stem cell laboratory, a semi-speculative device and a story-scenario realised as a triptych of photographs. Today, scientists claim to be able to eliminate some of the hallmarks of cellular aging by partially reprogramming specific genes in human genome called the Yamanaka Factors. Drawing from research recently published in the journal Cell, Emilia Tikka created – in close collaboration with scientists from Max Delbrück Centre for Molecular Medicine (MDC) – an artistic concept engaging with the question of human longevity and cellular time. She conducted experiments on “reversing” cellular time, where she reactivated some of the Yamanaka Factors in human cells using the novel dCAS9 gene activation system, a form of CRISPR, i.e. a recently discovered gene-editing technology. The experiments resulted a set of reprogrammed human fibroblasts in wells and a semi-speculative inhaler – a breathable “rejuvenation treatment” including three glass vials of dCAS9, gRNA and CRISPR-Gold particles. The story of ÆON illustrates a couple who, in the past as young adults, have made opposite choices in using the rejuvenation technology. Now, 60 years later, they have to face the consequences of their decision. The story contrasts the opposite worldviews of the characters: a transhumanist wishing to live eternally and a spiritual person perceiving death as part of life. Through mundane settings, ÆON addresses societal dimensions of the idea of a prolonged lifespan that touches upon significant philosophical questions about human life, death and potential afterlife. The artwork was produced during an artist residency at the Max-Delbrück-Centre for Molecular Medicine in Berlin, organised by the STATE Studio as the first European artistic residency on the gene-editing technology CRISPR. During the residency, Emilia Tikka worked with scientists from the MDC Stem Cell Platform and Genome engineering laboratories.

Project by: Emilia Tikka





Collaboration partners: Photographer: Zuzanna Kaluzna
 MDC scientists: Jürgen Stumm, Norman Krueger (Stem Cell platform),
 Dubravka Vucicevic (Computational Regulatory Genomics)
 Actor: Nico Ehrentait
 Actress: Helena Norowitz
 Make-up & hair: Caterina Veronesi
 3D rendering: Pauli Hyvönen

Emilia Tikka is a transdisciplinary designer and researcher. She is currently a PhD candidate at Aalto University in Helsinki and an artist in residence at art4med consortium at the Finnish Bioart Society. Her work explores philosophical dimensions and cultural implications of novel genome-editing technology CRISPR, engaging with questions of human biomedical enhancement.