In the last three decades the incorporation of biological material, like cells, bacteria, tissue cultures, and scientific technologies, into the arts went hand in hand with debates about the aesthetic value and ethical and ontological consequences of introducing cutting edge science into the arts. With the emergence of BioArt, biotechnology became part of the art world, raising questions about the aesthetic and ethical status of manipulating the genetic make-up of living organisms. This encounter with living materials has opened up new avenues of artistic expression, and by bringing biotechnology and genetic engineering closer to the public sphere art has provoked wider reflection about the ethics of turning biology into technology.

Lately artists and designers turned their attention to the emerging field of synthetic biology, a new approach to engineering biology that will soon turn into an important agent of the transformation of our economy into a bioscience-based economy. While passing through the gates of academic institutions to go ‘hands-on’ in a laboratory was a challenging encounter in the early days of BioArt, the field of synthetic biology virtually seems to welcome artists and designers. Only five years after the first iGEM competition did take place at MIT in 2004 a new category was added: art and design. By applying engineering principles to life - to build in the long run new complex living systems, scientists and engineers are making biology also a new material for design. This shift makes it necessary for artists and designers to get acquainted with the new epistemologies of synthetic biology and the logic of the technoscientific regime, which governs the re-framing of life within this new setting: a setting that is ruled by patents, the flow of global capital and government based strategic plans for a new bioscience-based economy: In February 2016 the UK-Minister for Life Sciences announced the UK Synthetic Biology Strategic Plan 2016 with a most promising title Biodesign for the Bioeconomy.

I will examine a number of case studies of art’s encounter with synthetic biology to develop a critical understanding of the role of art in the twenty-first century.