

LA COMPAGNIE DES TAXI-BROUSSE & FACT+FILM
PRESENT

BIOLOGY 2.0

A 3X52' DOCUMENTARY SERIES

WHEN BIOLOGY BECOMES SYNTHETIC

HD - 4K - DIRECTED BY CHARLES-ANTOINE DE ROUVRE AND JÉRÔME SCEMLA

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WITH THE PARTICIPATION OF TELEVIZIJA SLOVENIJA - ČESKA TELEVIZE - ESTONIAN PUBLIC BROADCASTING - PBS

A new genesis is under way. After the dramatic advances in genomics, 21st century biology is also heading for a revolution: moving into the era of synthesis.

Its ways and means: making evolution evolve, synthesizing genes, building genomes... decrypting, encrypting and re-encrypting the very building blocks of life, DNA, and manipulating them like simple Lego bricks, programming them, like mechanical parts...

Its objectives: transforming cells into a computational system, conceiving and constructing living factories to produce chemical molecules, inventing new forms of life, to transform the world and to provide responses to health, energy and data issues...

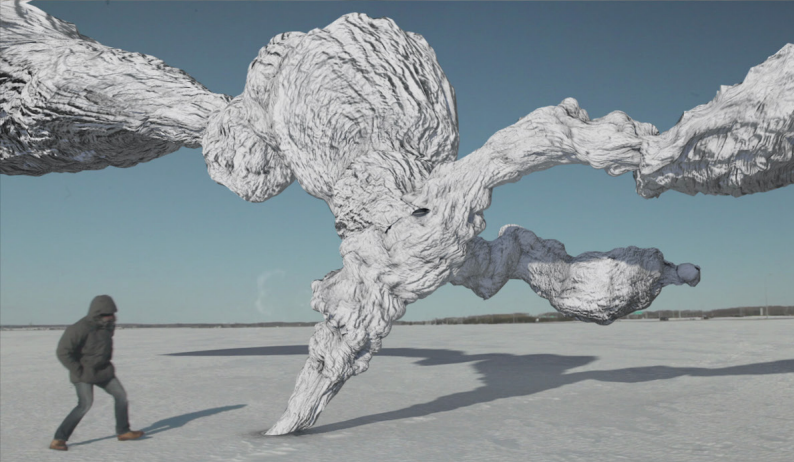
The revolution concerning our knowledge of a living-being's most intimate workings, the revolution in computer power, the revolution in working on a

nanoscopic scale...

All these converge towards this new revolution ; that of synthetic biology.

The consequences are huge, and the potential applications are promising. From the production of energy to new bio-materials, via the environment and medicine, synthetic biology could usher in an era of greater efficiency, cheaper costs and lower pollution.

Biology 2.0 is a series to discover what nature would never have made and what man is in the process of creating. A journey beyond the new frontier of 'life', a fantastic revolution for some, a deeply worrying Pandora's box for others...



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EPISODE 1: RE-GENESIS – evolving evolution: All living organisms are born, die and evolve, from one generation to the next. This is the way it has always been. But today, a new scientific discipline is revolutionising the story of life: Biology 2.0. with « Synthetic Biology », it is now evolution itself that is evolving! How? And why? By accelerating it, or making it turn back in time, by combining, synthesising or re-inventing DNA, scientists can obtain hybrid creatures with whole new possibilities, and sometimes even imagine bringing long-dead organisms back to life.

EPISODE 2: THE ENGINEERS OF LIFE: Scientists in the field of synthetic biology have a whole new approach to 'life' and to living beings. They see genetic code as simple information, a programme like a computer programme. A gene can be written, modified and programmed at will. And they are actually doing this. These new 'life engineers', thanks to new technological tools and unprecedented processes, have already managed to programme living beings and to design new cells 'in silico', with the next step being to create them 'in vivo'.

EPISODE 3: WHAT NATURE WOULD NEVER HAVE DONE: transform the world: Ultimately, the aims of Synthetic Biology are not limited to laboratory experiments on a microscopic scale. This new science intends to transform the whole world. For this 'evolved evolution', and these 'life engineers' are capable of inventing new production methods to respond to humanity's energy, health and food problems. The era of living factories using cells as machines is already upon us. New vaccines, new fuels... these living systems will be able to produce more, better, at a lower cost, and in a sustainable and ecological manner. But this miracle is also a source of fear...

TRAILER

<http://vimeo.com/taxibrousse/bio20>



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