MAKE DO AND MEND, ANNA DUMITRIU

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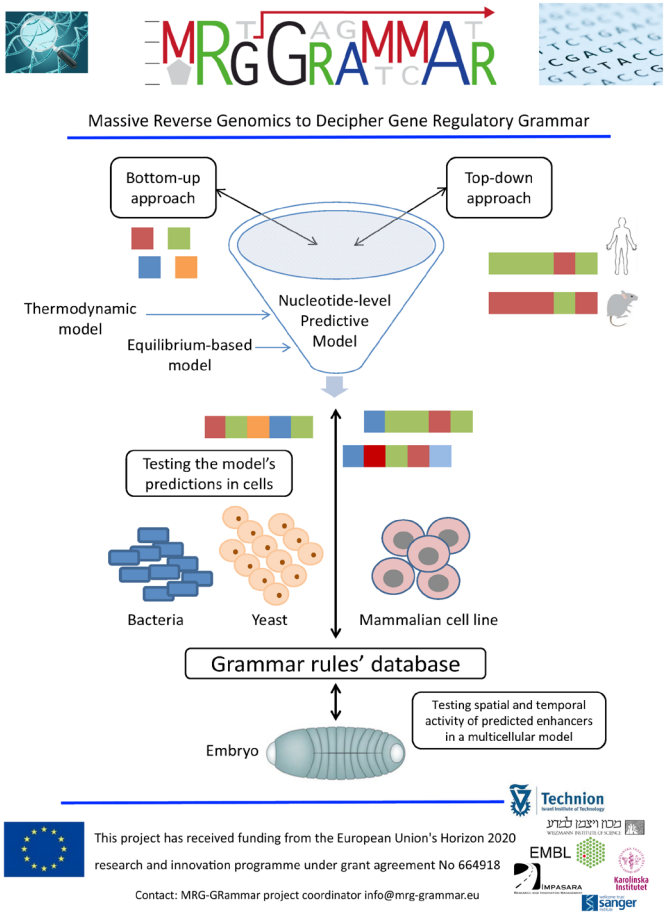

1/ MGR-GRAMMAR, A SYNTHETIC BIOLOGY FET OPEN PROJECT

MRG-Grammar: Massive Reverse Genomics to Decipher Gene Regulatory Grammar

Make Do and Mend is an artwork that has been created as part of the artist residency in the MRG-Grammar consortium, one of the European Union Horizon 2020 FET/Open Future and Emerging Technologies projects.
FET Open supports the early-stages of the science and technology research and innovation around new ideas towards radically new future technologies.

The MRG-Grammar project is developing a new strategy for deciphering the regulatory rules of gene regulation using Synthetic Biology, DNA synthesis technologies and high-throughput analysis to generate new types of biological datasets that systematically explore all possible regulatory landscapes. It aims to lead to a profoundly deeper understanding of the origins of many diseases. The project aims to produce models that will serve as a reference in designing and implementing accurate and more controllable synthetic biology devices, with applications in fuel production, healthcare and other industrial fields.

Resource :
https://www.mrg-grammar.eu/

2/ THE RESEARCH GOAL AS SEEN BY THE SCIENTIST

The goal of the research of MRG-Grammar explained by the scientist Sharon Alon

https://www.youtube.com/watch?v=FJE4YzoXug0

3/ THE RESEARCH GOAL AS SEEN BY THE ARTIST

The goal of the research of MRG-Grammar explained by the artist Anna Dumitriu

https://www.youtube.com/watch?v=-UY9nMDH08w

4/ GENOME EDITING & CRISPR/CAS9

Genome editing are technics of genetic engineering in which DNA is inserted, deleted or replaced in the genome of a living organism using engineered nucleases also called «molecular scissors.»

A nuclease is an enzyme that can break or cut the DNA double-strand at specific location.

Beyond the text editing metaphor that makes it look as easy to do as a «cut and paste» on a computer, it remains a whole long complex process.

Resource:
https://en.wikipedia.org/wiki/Genome_editing

CRISPR/Cas9 is a new technique of « molecular scissors » that have been discovered in 2012 and that Anna Dumitriu used to create the artwork *Make Do and Mend.*

Resource:
https://en.wikipedia.org/wiki/CRISPR
https://en.wikipedia.org/wiki/Cas9

CREDITS

« Make Do and Mend » has been created by Anna Dumitriu in collaboration with
Dr Sarah Goldberg and Dr Roee Amit, The Synthetic Biology Laboratory for the Decipherment of Genetic Codes, Technion, Israel,
http://roee-amit.technion.ac.il
MRG-Grammar https://www.mrg-grammar.eu
With additional help and advice from Dr Heather Macklyne, University of Sussex, UK
http://www.sussex.ac.uk/lifesci/people/biochemistry/person/231366
Dr John Paul, Kevin Cole, and Dr Nicola Fawcett, Modernising Medical Microbiology, UK http://modmedmicro.nsms.ox.ac.uk

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