

CRISPR complex IP landscape: how it affects research and innovation

The discovery of the CRISPR system and its use as a precision editing tool opened a new era in bioengineering. The precise molecular scissors allowed the bioengineering of cells and organisms previously inaccessible by synthetic biologists and introduced in our everyday vocabulary terms such as “precision editing” and “multiplex bioengineering”.

Using CRISPR in the lab is simple; however, using it in industrial and other commercial applications is far from straightforward. CRISPR patent rights fueled a years-long dispute between UC Berkeley and MIT, while other inventors around the world have their own patents and stakes on the technology.

This online panel discussion brings together a research scientist, an industry representative, and a patent attorney who will give us an overview of how one can navigate the CRISPR IP landscape and use its potential in real world applications.



Chew Wei Leong, PhD

Associate Director (Genome Design)
Senior Research Scientist (Laboratory
of Synthetic Biology and Genome
Editing Therapeutics)
Genome Institute of Singapore



Eric Van Der Helm

VP of Synthetic Biology &
Bioinformatics at SNIPR BIOM



Sarah Holland

Patent Attorney
Phd in engineering artificial
yeast chromosomes

Dr Chew Wei Leong is Senior Research Scientist at the Genome Institute of Singapore. His team develops technologies that make pinpoint changes to genes. His work provided the first demonstrations of multi-organ gene editing, disease gene correction with CRISPR-Cas9, and insights into the safety profile of these new nucleic acid therapeutics. He holds >10 patents and technology disclosures in the areas of gene editing, gene therapy, and nucleic acid technologies. Dr Chew Wei Leong is the recipient of the President's Science and Technology Awards – Young Scientist Award 2020. He graduated with a Bachelor of Science (Magna Cum Laude; Phi Beta Kappa) from Duke University and obtained his Doctor of Philosophy from Harvard University with Prof. George Church. While pursuing his doctoral studies, he conducted research on therapeutic genome-editing. More information can be found on the lab website: <http://chewlab.github.io>

Eric van der Helm is currently heading the synthetic biology and bioinformatics efforts at SNIPR BIOME. He previously worked at the University of Washington (UW) in the USA on the computational design of protein-protein interactions involved in cancer immunotherapy in the group of David Baker. Previously, Eric was part of the Sommer lab at the Novo Nordisk Foundation Center for Biosustainability at the Technical University of Denmark (DTU) where he focused on the development of a novel platform for drug discovery using genetically engineered bacteria and CRISPR systems. Since the inception of SNIPR BIOME his work revolves around managing the synthetic biology, data analytics and automation efforts geared towards human microbiome modulation using CRISPR technologies.

Sara Holland is a European and UK patent attorney based in Nottingham, UK, with an academic background in molecular biology. Her PhD involved engineering artificial yeast chromosomes, and in 7 years of postdoc research, Sara looked at the molecular mechanisms of metal toxicity in yeast and identified phenotypic heterogeneity in wild populations of yeast.

Sara helps biotechnology companies protect their intellectual property in a way that aligns with their business plan. Her particular focus is in the field of synthetic biology, and she works to help companies realise their potential in the field of synthetic biology. Sara also aims to try and raise awareness of synthetic biology amongst companies and sectors that traditionally wouldn't consider themselves to be “biotech”.

Wednesday, 30th June, 2021
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Via Zoom

