MIT Industrial Liaison Program Faculty Knowledgebase Report

Single-Stranded DNA Production for Gene Therapeutics and Vaccines

August 5, 2020 11:00 am - 1:00 pm

11:00am - 11:30am

Introduction and DNA Origami Vaccine Delivery
Mark Bathe
Professor of Biological Engineering
Associate Member, Broad Institute of MIT & Harvard
Co-Chair of the MIT New Engineering Education Transformation

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Professor of Biological Engineering
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Professor Bathe is a Full Professor in the Department of Biological Engineering at MIT, an Associate Member of the Broad Institute of MIT & Harvard, and Co-Chair of the MIT New Engineering Education Transformation. Professor Bathe obtained his Doctoral Degree from MIT working in the Departments of Mechanical, Chemical, and Biological Engineering before moving to the University of Munich to carry out his postdoctoral research. He returned to MIT in 2009 to join the faculty in the Department of Biological Engineering, where he runs an interdisciplinary research group focused on the targeted delivery of therapeutic nucleic acids and vaccines, phenotypic profiling of neuronal circuits involved in psychiatric disease, and engineering nucleic acid materials for highly parallel molecular computing and massive data storage.

View full bio

11:30am - 11:45am

Custom Single-Stranded DNA
Floris Engelhardt
Postdoctoral Researcher, Department of Biological Engineering at MIT

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Dr. Engelhardt is Postdoctoral Researcher in the Department of Biological Engineering at MIT. She joined Professor Bathe's lab in February 2020 after obtaining her Doctoral Degree from the Technical University of Munich (TUM). She holds a Bachelor's degree in "Biochemistry and Molecular Biology" and Master´s degree in "Molecular Biotechnology". Throughout her PhD she worked with Professor Hendrik Dietz and focused on improving DNA origami design, developing application-specific DNA origami purification techniques, as well as biotechnological single-stranded DNA production in the range of 1 to 10kb. She is a mentor in the student project "Space Origami" and is part of the organizational team for the networking event "DNA Node Munich".

11:45am - 12:00pm	Moderated Q&A
12:00pm - 12:30pm	Discussion for ILP Members (ILP Members will receive an invitation after registration)