

Johns Hopkins University

Department of Biology Seminar Series

Thursdays, 4:00pm

For more information go to:

<https://bio.jhu.edu/events>

Mudd Room 100 - April 24, 2025



Michelle Kim

Managing Director

RNA Innovation Center

Johns Hopkins University

Host: Tatjana Trcek

The Johns Hopkins RNA Innovation Center: Helping researchers harness the power of mRNA as the new therapeutic modality.

"mRNA therapeutics comprise a novel drug modality that is the newest pillar in the development of pharmacological interventions. Key advantages of this pillar are facile design and development, as well as cost-effective manufacturing. However, the path to identification of a safe and efficacious mRNA therapeutic can be expensive and convoluted by unoptimized mRNA design and production. When developing drug candidate studies, one must consider how the sequence structure of an mRNA might impact stability, protein expression, dosing, and immunogenicity. In addition, the workflow for production must be carefully considered to ensure batch-to-batch consistency and proper quality metrics and assessments. The Johns Hopkins RNA Innovation Center was created to simplify and facilitate the path of mRNA drug candidate studies and provides solutions for all of these factors. The Center is also exploring novel molecular attributes that enhance protein expression, and thus possibly decrease the dose required for drug potency.