

Johns Hopkins University

Department of Biology Seminar Series

Thursdays, 4:00pm

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

Mudd Room 100 - April 17, 2025



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Host: Tatjana Trcek

Imaging translation of single mRNAs in live cells

The translation of pre-existing mRNAs enables rapid synthesis of encoded proteins at the right time and space, allowing cells to swiftly respond to environmental cues. Dysregulation of translation is a hallmark of cancer and various other diseases. We previously pioneered single-molecule imaging of nascent peptides (SINAPS) technique to visualize the translation of single mRNAs in live cells. In this talk, I will discuss our recent endeavors to further develop SINAPS to study bursting translation phenomenon and ribosome-associated quality control. We visualize single protein factors on translating RNAs simultaneously to correlate the regulatory effects.