

Coupling of Ribosomal L1 Stalk and tRNA Dynamics During Translation Elongation

the Physical Chemistry Student Seminar Series

Who?

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Gonzalez Group

When?

Tuesday, March 24, 2009, 5:30 PM

Where?

Miller Seminar Room, 328 Havemeyer

Abstract

Translation elongation necessarily requires large-scale movements of transfer RNAs (tRNAs) through the ribosome in order to synthesize polypeptides from individual amino acids based on the genetic codes on the message RNA (mRNA). While it is likely that these highly-coordinated tRNA movements are directed by conformational changes of the translating ribosome, data directly correlating ribosome and tRNA conformational dynamics are lacking. Using single-molecule ribosome-ribosome and ribosome-tRNA Forster resonance energy transfer (sm-FRET) signals, we have characterized the intrinsic conformational dynamics of the ribosomal L1 stalk as well as the coupling of L1 stalk and tRNA dynamics during translation elongation.

On The Web

<http://www.columbia.edu/cu/chemistry/> → “Graduate Program” → “PChem Seminar Series”

Why Else?

Refreshments will be served.