UNIWERSYTET MARII CURIE-SKŁODOWSKIEJ W LUBLINIE

Seminarium

Charging the Code - Insights into tRNA Modification Enzymes

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Miejsce:
Sala seminaryjna, ECOTECH-COMPLEX
Ul. Głęboka 39, 20-612 Lublin

Piątek, 28.06.2019, godzina 14:00

Abstrakt: All types of cellular RNAs are post-transcriptionally modified, constituting the so called “epitranscriptome”. In particular, tRNAs and their anticodon stem loops represent major modification hotspots. The attachment of small chemical groups at the heart of the ribosomal decoding machinery can directly affect translational rates, reading frame maintenance, co-translational folding dynamics and overall proteome stability. The variety of tRNA modification patterns is driven by the activity of specialized tRNA modifiers and large modification complexes. Notably, the absence or dysfunction of these cellular machines is correlated with several human pathophysiologies, like cancer and neurodegenerative diseases. I will present our newest structural and biochemical analyses comparing the highly conserved Elongator complex in eukaryotes, bacteria and archaea. In addition, I will present data on Elongator’s unfortunate role in human diseases and our latest data on the regulatory network surrounding this large macromolecular machine in eukaryotic cells.

My talk will also summarize the latest developments in the field of single particle Cryo-EM analyses and show our progress to establish the “Krajowe Centrum Kriomikroskopii Elektronowej” at the Solaris synchrotron in Krakow.

Host: Dr hab. Agata Starosta, agata.starosta@umcs.pl
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