



Seminar
series

Tuesday
13 November 2018
1.00 pm



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IGBMC
Illkirch, France

Structural and biochemical studies on transcription elongation

During the first step of gene expression, a universally conserved enzyme called RNA Polymerase (RNAP) transcribes RNA from a DNA template in every living cell. However, transcription is not a smooth process because RNAP frequently pauses. Transcriptional pausing is a key mechanism to regulate gene expression in all kingdoms of life and is a prerequisite for transcription termination. The essential bacterial transcription factor NusA stimulates both pausing and termination of transcription, thus playing a central role. We report single particle electron cryo-microscopy reconstructions of NusA bound to paused *E. coli* RNAP elongation complexes that reveal how NusA interacts with RNAP, how NusA may stimulate RNA folding, as well as pausing and termination. Results on the role of another transcription elongation factor involved in modulating RNAP transcription will also be reported.

Host: Prof. Dr. Patrick Cramer

Place: Max Planck Institute for Biophysical Chemistry
Department of Molecular Biology
T4, 2nd floor Seminar Room