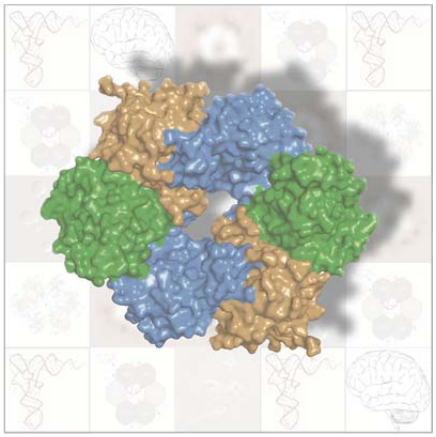
SFB 960-/BZR – Kolloquium

21. Oktober 2013, 16.00 Uhr
BIO 5.2.38



Dr. Sebastian Glatt

Structural and Computational Biology Unit
European Molecular Biology Laboratory

Structural Insights into Elongator Function

The eukaryotic Elongator complex consists of six highly-conserved subunits and was initially described as a transcription elongation factor for RNA polymerase II. This large molecular machine (~900 kDa) has been associated with a broad range of different cellular activities (e.g. protein acetylation, RNAi-mediated transposon suppression and genome de-methylation) and mutations in Elongator can result in neurodegenerative diseases. Today there is accumulating evidence that its genuine cellular function is the modification of uridines at the wobble base position of tRNAs.
In his talk Sebastian will describe the crystal structure of the *Saccharomyces cerevisiae* Elp456 subcomplex, a hetero-hexameric ring-like structure that unexpectedly resembles hexameric RecA-like ATPases. Furthermore, he will present novel insights into the architecture of fully assembled holoElongator and discuss the resulting implications for the proposed multi-functionality of the complex. His results support a role of Elongator in translation regulation, explain the importance of each of the Elp4, Elp5 and Elp6 subunits for complex integrity and suggest a model for the overall architecture of the holoElongator complex.

Sebastian Glatt is a staff scientist at the European Molecular Biology Laboratory (EMBL) in Heidelberg and head of the High-Throughput Crystallization Facility.

Host: Jan Medenbach
Biochemistry I
Jan.Medenbach@vkl.uni-regensburg.de

Universität Regensburg
Biochemie-Zentrum Regensburg