

Institution

IPMB, Abteilung Chemie, AG Jäschke, Universität Heidelberg

Datum

3.11.2017

Internship

Post-transcriptional modification of NAD-capped RNA

We recently identified that RNA can be modified at its 5'-end with the ubiquitous redoxfactor NAD. In this internship, NAD-RNA and its post-transcriptional modification machinery will be analysed. The project requires a background in molecular biology and biochemistry. Following techniques will be used to study the protein-modification *in vitro* and *in vivo*: Protein purification, radioactive labelling of RNA, *in vitro* transcription, LC-MS, enzyme kinetics.

Kontakt

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Interesting literature for the project:

Jäschke A, Höfer K, Nübel G, Frindert J: Cap-like structures in bacterial RNA and epitranscriptomic modification. *Curr Opin Microbiol.* 2016, 30:44-9.

Cahová H*, Winz M-L*, Höfer K*, Nübel G, Jäschke A: NAD captureSeq indicates NAD as a bacterial cap for a subset of regulatory RNAs. *Nature.* 2015, 519(7543):374-7.

Höfer K*, Li S*, Abele F, Frindert J, Schlotthauer J, Grawenhoff J, Du J, Patel DJ, Jäschke A: Structure and function of the bacterial decapping enzyme NudC. *Nature Chemical Biology.* 2016, 12(9):730-4.