

## Poster Presentation

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### *The many faces of SRP RNA*

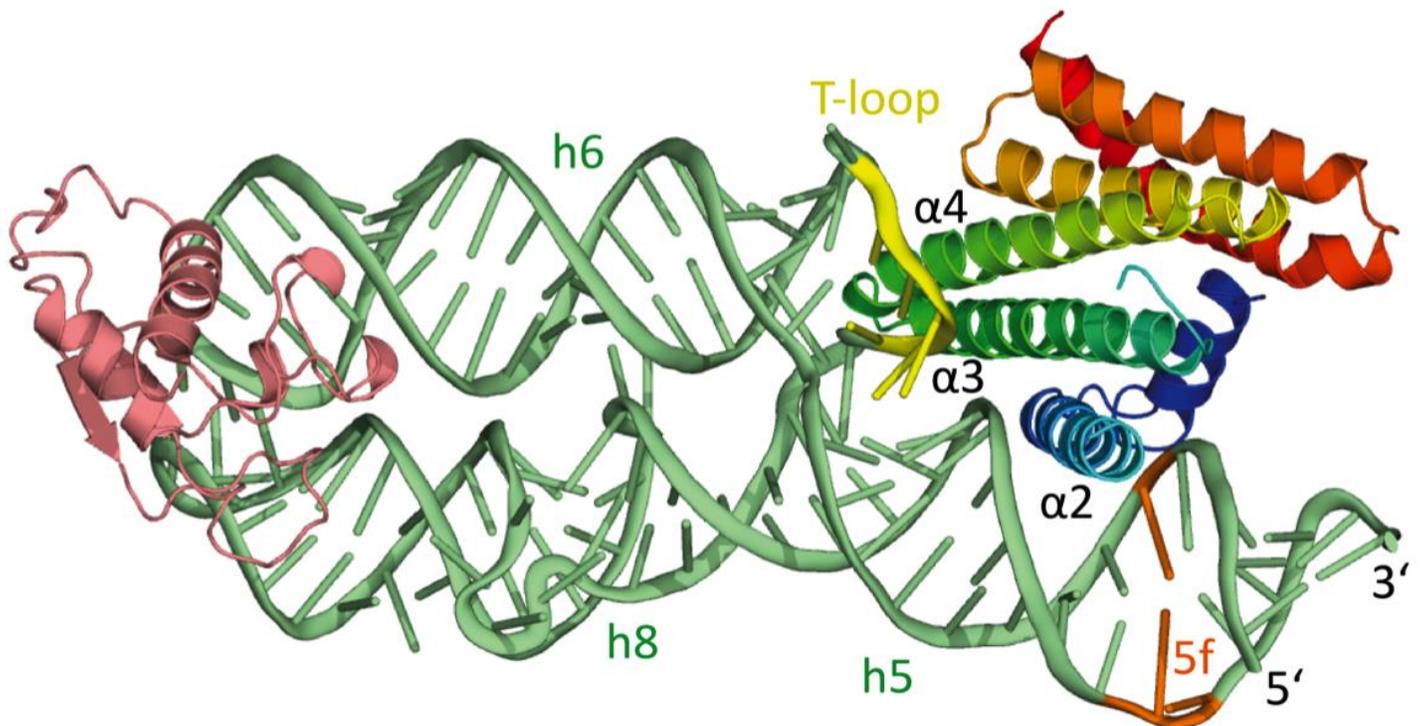
K. Wild<sup>1</sup>, G. Kempf<sup>1</sup>, J. Grotwinkel<sup>1</sup>, I. Sinning<sup>1</sup>

<sup>1</sup>Heidelberg University Biochemistry Center (BZH), Heidelberg, Germany

The signal recognition particle (SRP) is a ribonucleoprotein complex that plays an essential role in co-translational targeting of membrane proteins. It is found in all three domains of life and exhibits a high diversity regarding composition and structure. In most organisms, SRP can be divided into two functional domains. The S domain mediates recognition and transport of ribosome-nascent chain complexes to the translocation channel, while the Alu domain stalls elongation of the ribosome until the complex has been faithfully delivered.

Here we present the crystal structures of the complete bacterial SRP Alu domain and the ternary complex of human SRP S domain RNA, SRP19, and the SRP68-RBD. Together with previous structures, our data underline the taxon-specific evolutionary adaptation of SRP RNA that has important implications in SRP-mediated targeting.

[1] Grotwinkel JT, Wild K, Segnitz B, Sinning I. SRP RNA remodeling by SRP68 explains its role in protein translocation. *Science*. 2014; 344:101-4.



**Keywords:** Signal Recognition Particle (SRP), co-translational protein targeting, protein-RNA complexes