

P035 Structural studies of 3'UTR and 3'UTR-binding proteins
**Emilie Malaurie¹, Helois Radford¹, Cornelia de Moor¹
and Jonas Emsley¹**

*¹Centre for Biomolecular Science, School of Pharmacy,
University of Nottingham, United Kingdom NG7 2RD*

Translation control of specific mRNAs plays a key role in gene expression regulation during the cell cycle and early development. Different proteins and protein complexes interact at different stages during oocyte development with the 3' UTR of specific mRNA in order to regulate the translation of this mRNA.

Here we investigate the interaction of mRNA with the Cytoplasmic Polyadenylation Element (CPEB), the Embryonic Deadenylation Element Binding Protein (EDEN-BP) and Musashi.

The aim of this project is to study the interaction between these proteins and the mRNA through RNA-protein binding assay and structure determination of these proteins or domain of these proteins by X-ray crystallography.

CPEB, Musashi and EDEN-BP coding sequenced have been cloned into the expression vector pET28a and the proteins were expressed in *E.coli*. Soluble full length CPEB protein was expressed and in the case EDEN-BP, three isoforms and a truncated form were expressed and purified as His-EDEN-BP and UV crosslinking assay showed interaction with maskin 3' UTR.