

### **37. mRNA – beyond the genetic code**

**1 unit, Christine Mayr, October 22, 2025**

1. Evolution of mRNA features
2. Traditional functions of mRNAs (templates for protein synthesis, regulation of mRNA stability, translation, mRNA localization)
3. mRNAs as non-coding RNAs
4. mRNA as scaffolds for protein synthesis
5. mRNAs as structural elements of cells
6. mRNAs as regulators of biophysical properties of translation environments
7. mRNAs as regulators of protein conformations of disordered regions

#### Reading materials:

Review: Gasparski AM et al., WIRE's RNA (2021). Regulation and outcomes of localized RNA translation.

#### Paper to discuss:

Gasparski AM et al., Mol Cell (2023). mRNA location and translation rate determine protein targeting to dual destinations.