



MEDICAL UNIVERSITY
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Master Thesis Position in Small RNA Biology

Transfer RNAs (tRNAs) are indispensable components of the protein translation machinery. Rather recently, stress-induced and nuclease-mediated tRNA fragmentation has been discovered as an evolutionarily conserved phenomenon resulting in tRNA-derived small RNAs (tsRNAs) with various functions. It is currently unclear how exactly these small RNAs are produced from parental tRNAs. Since tRNAs are highly structured molecules, it is likely that dedicated enzymes unwind, stabilize and degrade particular tsRNAs.

This M.Sc. thesis project aims at identifying cellular activities, which act on tRNAs containing a nuclease-mediated “break” in their backbone. The approach will employ systematic RNA interference (RNAi) in tissue culture cells and biochemical *in vitro* experimentation.

The successful applicant is required to have basic molecular biology skills (preferably experience with tissue culture). The position will be paid (440 €/month) for the duration of up to one year.

Starting date: **September 2022**