



Universität
Basel

Research Project

Exploration of mRNA degradation at the single molecule level

Third-party funded project

Project title Exploration of mRNA degradation at the single molecule level

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Organisation / Research unit

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Department

Project start 01.03.2012

Probable end 28.02.2013

Status Completed

Regulation of mRNA degradation is an important part of regulation of gene expression. Many of the underlying molecular and kinetic mechanisms remain to be resolved. In this project, we will devise combinatorial approaches to study the stochastic aspects of mRNA degradation through synthetic biology and computational modeling in yeast and mammalian cells. We will combine a genetic approach with *single molecule Fluorescence In Situ Hybridization* to study the decay of single mRNA molecules and fit the data computationally to generate a model for mRNA degradation at the molecular level. Our results will reveal how stochasticity in mRNA degradation drives complex cellular processes.

Financed by

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