

# Cologne Evolution Colloquium

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## **How and why cells decouple the decisions of whether and how strongly to express a gene**

Cells in nature are often faced with conflicting signals from which they have to make a single decision. To uncover design principles/motifs of cellular decision-making, my lab uses the galactose response in *Saccharomyces cerevisiae* as a model. Carefully quantitative multidimensional dissection of the pathway has uncovered qualitative behaviors that had been missed in the many years of analysis of the pathway. These behaviors include ratiometric sensing, decoupling of the decision to induce and level of induction, and flux sensing. I will discuss these design principles/motifs, the mechanisms that underlie them, and some physiological consequences of these designs.

Wednesday, April 17, 2019, 17:00

Institute for Biological Physics, Zülpicher Str. 77a

Seminar Room 0.02, Ground Floor

Hosted by Tobias Bollenbach