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| **PROmiGlykAN** |

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| Process chain for the production of therapeutic glycoproteins using miRNA regulation and glycan analytics |

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| Institute for Applied Biotechnology (IAB) |

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| **Project leader** | Prof. Dr. Kerstin Otte |
| **Researcher** | Florian Klingler |
| **Financing** | BMBF |
| **Program** | IngenieurNachwuchs |
| **Partners** | Rentschler Biotechnology I Hochschule Albstadt-Sigmaringen |
| **Duration** | 2018 – 2022 |
| **Project description** | Modern biopharmaceuticals as monoclonal antibodies for the treatment of cancer, are highly complex protein drugs. The biological effect is ususally dependent on so called post translational modifications, including specific glycan structures on protein molecules. For the industrial production of biopharmaceuticals, chinese hamster ovary cells (CHO) are the main production hosts, although they don´t produce proteins carrying human glycan structure. Since this may lead to immunological side effects and lowered efficacy of the drugs, this cooperation project between academia and industry aims at modulating glycan structures using the highly innovative miRNA technology to modify glycan patterns on protein drugs. Synthetic biology will lead to production cell lines generating pre-defined glycan patterns to facilitate reliable production of high quality biopharmaceuticals  \\fserv02.fh-biberach.de\hbchomes$\otte\Eigene Dateien\Forschung\Projekt Sven Mathias\schweine im Weltall.tif  PROmiGlykAN: Synthetic biology to generate designer cell lines (Picture by Sven Mathias) |