

In-class writing assignment 10-23-2018

Prompt:

The paper by Blount et al. discusses an area of biology called “synthetic biology”. From what you have read in this paper, what would you describe as the goal of synthetic biology? What specific synthetic biology goals did the authors of this paper have and what general results were they able to achieve? (No specific experimental details required!)

Answer:

Synthetic biology has as its purpose to use the techniques and discoveries of molecular biology to build previously unknown mechanisms into living cells that will allow the engineered cell to perform new functions of interest to biotechnology researchers. The paper discusses creation of genetic “circuits” consisting of orthogonal promoters that allow the constitutive transcription of target genes, which in a synthetic biology application would produce proteins capable of facilitating some desired process. They also show that through the use of two types of repressor proteins (TetR and TALER proteins) the expression of these genes can be repressed when desired.