Gene Expression Control System Using Synthetic Small Regulatory RNAs in *Escherichia coli*

노민호, 유승민, 나도균, 이상엽*
KAIST
(leesy@kaist.ac.kr*)

Metabolic engineering is a technology for the construction of microorganism which produces desired chemicals from natural resources and gene expression control is the essential process in metabolic engineering. Therefore many kinds of genetic engineering tools were established. However, conventional genetic engineering tools are based on chromosome sequence editing. Such methods cost much time and effort. For these reasons, small regulatory RNAs (sRNAs) system is developed for easy gene-knockdown. Target binding sequence provides target specificity and mRNA affinity for sRNA. The binding energy of target binding sequence was correlated with repression capability. [This work was supported by the Technology Development Program to Solve Climate Changes on Systems Metabolic Engineering for Biorefineries (NRF-2012M1A2A2026556); the Intelligent Synthetic Biology Center through the Global Frontier Project (2011-0031963) of the Ministry of Education, Science and Technology (MEST) through the National Research Foundation of Korea]