

Translational Research for Construction of Microbial Cell Factory – Translational Core

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Abstract

The development of sustainable lifestyles requires efficient bio-manufacturing methods for chemical compounds and protein-based products. To lead the transformation of chemical production from a petrochemical industry to a more sustainable bio-based industry and to become an international hub and Center of Excellence for interdisciplinary research leading to the design of microbial and mammalian cell factories are two visions of Novo Nordisk Foundation Center for Biosustainability (CFB). Bio-manufacturing plays a significant role in Danish industries and its economy by representing about 40% of the manufacturing output of the country. Thus, adding bioprocess development capabilities to the CFB will notably enhance its translational potential and socio-economic impact. The Translational Core (iCore) section is one of the sections at the CFB, which is focusing on the translational research for commercialization of research projects. The goal of the iCore is to take academic research projects and accelerate them to reach early commercial-level cell factory performance in a short time frame covering from a business modelling to downstream process. The Translational Core enables biotechnologists situated around the world to develop bio-processes with socio-economic impact through scalable prototype manufacturing and products.

Keywords: *Metabolic engineering, Microbial cell factory, Commercialization*

Biography

I'm Se Hyeuk Kim, I have finished my Doctoral Course in Biotechnology, especially in Metabolic engineering at Ajou University in South Korea. I had been working as a Postdoc at the Novo Nordisk Foundation Center for biosustainability (CFB) in Technical University of Denmark since 2014 to 2018. Since 2018, I'm a researcher in Translational Core section at CFB, working in a genome engineering team to develop microbial strains for commercialization.