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How to tune recombinant protein production in *E. coli* for enhanced production of biopharmaceuticals?

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Strong induction of recombinant protein production in *E. coli* can lead to agglomeration of inactive product, inclusion bodies (IBs), and also imposes a high metabolic burden which can result in cell death. We developed a feeding strategy using glucose as primary carbon source, lactose as secondary carbon source and inducer to tune recombinant protein expression which leads to higher yields of soluble and active product. We successfully applied this system for the production of several biopharmaceuticals. This new feeding approach allows expression of complex products as soluble and active protein that usually results in insoluble and inactive inclusion bodies. Cell viability and growth can be prolonged by this approach which leads to higher overall yields and thus lower production costs. Thus, our strategy might make *E. coli* a more attractive host for the production of biopharmaceuticals in the future. The audience will get to know a platform technology for the enhanced expression of biopharmaceuticals in *E. coli* to accelerate bioprocess development and yield higher product titers.

Biography

Oliver Spadiut has completed his PhD in Biotechnology from BOKU University, Austria. He has done his Post-doctoral studies from KTH Royal Institute of Technology, Stockholm, Sweden. Since 2010, he has been working as an Assistant Professor in Biochemical Engineering at TU Wien, Vienna, Austria. Currently, he is the Principal Investigator of Integrated Bioprocess Development research group. He has published more than 60 papers in reputed journals and has been serving as a reviewer for many journals.

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