

Manipulation of tRNA Genes to Enhance Cellular Productivity of Biologics

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Recombinant monoclonal antibodies are a powerful class of therapeutics that are used to treat a wide range of diseases, including cancers and inflammatory disorders. However, they are expensive to produce and this restricts their availability to patients; health authorities sometimes cannot afford the costs of these therapies. Lowering production costs may increase access to potentially life-saving treatments. Through synthetic cell bioengineering, we are developing novel approaches to improve production of therapeutic proteins. One of our strategies is to manipulate tRNA expression to enhance translation of recombinant products. Our progress in this regard will be described. We aim to reduce costs and thereby increase availability to patients of therapeutics that at present are prohibitively expensive.

Biography:

Bob White studied Biochemistry at University of Oxford and Molecular Biology at the National Institute for Medical Research. He then spent 5 years at University of Cambridge before establishing his own laboratory at University of Glasgow. In 2013 he became Chair of Biochemistry at University of York. His research focuses on gene expression and has been published in Nature, Science and Cell (>6400 citations, h-index 44). He has received several national and international awards and is a Fellow of The Royal Society of Edinburgh, The Academy of Medical Sciences and The European Academy of Cancer Sciences.