



Technology to boost Erythropoietin and Darbepoetin production

TECHNOLOGY AVAILABLE FOR TRANSFER

UNMET NEED AND OPPORTUNITY

Erythropoietin (EPO) is used in many clinical settings for anaemic patients. Increasing incidence of chronic diseases such as end-stage renal diseases, cancer, and HIV is expected to accelerate demand for EPO as these diseases may cause anemia. A second-generation erythropoietin analogue, Darbepoetin alpha, was created aiming longer elimination half-life in vivo that translated into less frequent dosing, usually once weekly or once every 2 week. EPO and Darbepoetin drugs market size was valued at USD 7.4 billion in 2016 and is expected to witness CAGR of 11.5% during 2018-2025 as a result of global rising incidence of anemia.¹ Present technology provides a booster kit to enhance the production of EPO and Darbepoetin proteins.

TECHNOLOGY

The technology offers a novel formulation and kit for the enhancement of EPO and Darbepoetin protein. The formulation upon application to existing Chinese Hamster Ovarian or Human Embryonic Kidney (CHO/HEK) producer clones will result in increased final production of EPO and Darbepoetin protein by upto 300% within 2-3months. Isolated EPO and Darbepoetin proteins conformation remain unaffected till higher passages of the cloned cells. The increased amounts of both the proteins have been tested in a longitudinal study till 20 passages and were found to be stable.

INTELLECTUAL PROPERTY

- Patent application filed in India in 2017.

Reference:

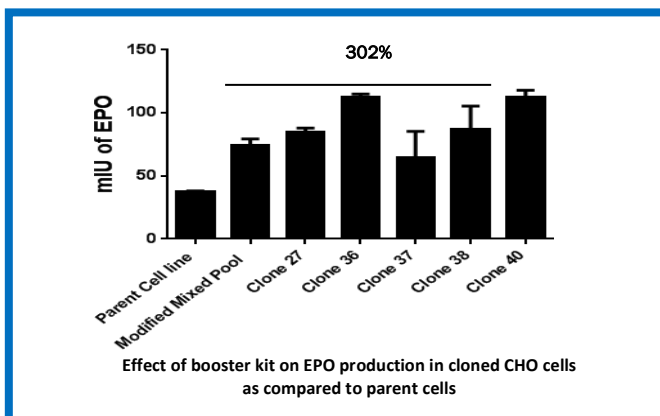
<https://www.grandviewresearch.com/industry-analysis/erythropoietin-epo-drugs-market>

UNIQUE SELLING PREPOSITION

- 250-300% enhanced production at lab scale
- Enhanced protein production effective up-to 20 passages
- Production cost is reduced by three times as compared to predicates

UNIQUE SELLING PREPOSITION

- Proof of concept is established in lab set-up
- Validated in-house



APPLICATIONS

- Enhanced production of EPO and Darbepoetin

APPLICATIONS

BCIL is looking for a suitable industrial partner for commercialization of Booster Kit.

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