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(54) **Title**: METHOD FOR A RATIONAL CELL CULTURING PROCESS

(57) **Abstract**: Biopharmaceutical process development with recombinant protein producing mammalian cells has realized a tremendous increase in both productivity and product yields in the past years. These achievements can be mainly attributed to the advancements in cell line development, media, and process optimization. Only recently, genome-scale technologies enable a system-level analysis to elucidate the complex biomolecular basis of protein production in mammalian cells promising an increased process understanding and the deduction of knowledge-based approaches for further process optimization. The present invention describes a method for a rational cell culturing process using such a knowledge-based approach.