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(54) Title: EXPANSION OF STEM CELLS IN HOLLOW FIBER BIOREACTORS

(57) Abstract: The invention is directed to producing large numbers of cells using hollow fiber bioreactor technology. The cells are non-embryonic stem, non-germ cells that can be characterized by one or more of the following: extended replication in culture and markers of extended replication, such as telomerase, markers of pluripotentiality, and broad differentiation potential, without being transformed.

