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(54) **Title**: METHODS FOR PREPARING HUMAN SKIN SUBSTITUTES FROM HUMAN PLURIPOTENT STEM CELLS

(57) **Abstract**: The present invention relates to an ex vivo method for obtaining a population of human keratinocytes derived from human pluripotent stem cells comprising a step of co-culturing human pluripotent stem cells with cells that support ectodermal differentiation in presence of an agent that stimulates epidermal induction and a agent that stimulates terminal differentiation of keratinocytes. A further object of the invention relates to a method for preparing a human skin substitute comprising a step of providing an organotypic culture of the substantially pure homogenous population of human keratinocytes derived from human pluripotent stem cells obtained according to the method of the invention.