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(54) **Title**: METHOD FOR THE CRYOPRESERVATION OF CELLS, ARTIFICIAL CELL CONSTRUCTS OR THREE-DIMENSIONAL COMPLEX TISSUES ASSEMBLIES

(57) **Abstract**: The present invention belongs to the field of cryopreservation of cells and tissue cultures, more specifically it refers to a method for the cryopreservation and long term storage of cells, cell constructs or three-dimensional complex tissues assemblies. The methods are based on the use of a collagen cell carrier having a specific composition as well as to a very specific thickness and appropriate mechanical properties which are maintained after thawing. The use of such collagen cell carrier (CCC) provides a very suitable support for the cryopreservation resulting in very high survival rates after thawing and providing cells and tissue assemblies already adhered to a mechanically stable and biocompatible support. The invention also refers to the frozen collagen carrier-cells assembly and to the frozen artificial cell constructs or three-dimensional complex tissue assemblies obtainable by the method of the invention and to the use thereof after thawing.