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(54) **Title:** METHODS AND COMPOSITIONS FOR FREEZING AND THAWING MAMMALIAN CELLS

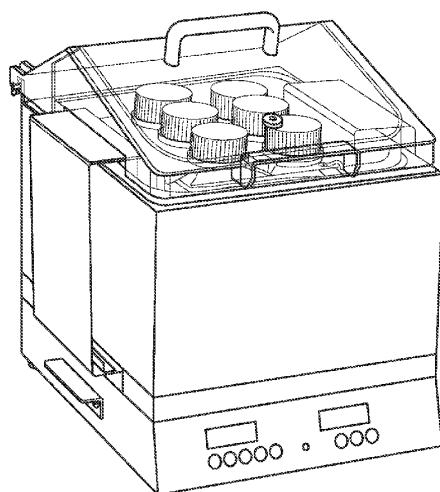


FIG. 1A

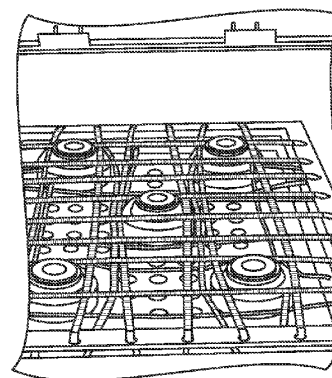


FIG. 1B

(57) **Abstract:** The present disclosure provides, among other things, a method of cryopreserving and thawing cells that results in the thawed cells having high cellular viability and functionality post-thawing. In some embodiments, a large-scale method of cryopreserving cells is provided, the method comprising: (a) contacting the cells with a cryopreservation medium; (b) cooling the cells to -80°C at a controlled rate to minimize latent heat of fusion; and (c) storing the cells in liquid nitrogen vapor phase, thereby cryopreserving the immune cells.

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