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(54) T-CELL THERAPY FORMULATION

(75) Inventor: Michael Har-Noy, Modi'in (IL)

(73) Assignee: Immunovative Therapies, Ltd.,

Shoham (IL)

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Primary Examiner—Michail A Belyavskyi (74) Attorney, Agent, or Firm—Z. Peter Sawicki; Westman, Champlin & Kelly, P.A.

(57) ABSTRACT

Ex-vivo prepared T-cells are harvested from cell culture conditions and formulated in medium suitable for infusion. The formulation is made by labeling the cells with one or more agents which have reactivity for T-cell surface moieties capable of delivery activation signals upon cross-linking and mixing the labeled cells with biodegradable nanospheres or microspheres coated with a material capable of cross-linking the agents attached to the T-cell surface moieties. Alternatively, the formulation may be made by mixing a population of T-cells with biodegradable nanospheres or microspheres coated with a first material and one or more second materials. The first material binds the second material and the second material has reactivity for surface moieties on the T-cells and the interaction of the second materials with the T-cells causes the activation of the T-cells. In either method, the mixture of T-cells and biodegradable spheres are suspended in a medium suitable for infusion, and the mixture is packaged in a con-



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