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(54) **Title:** DENDRITIC CELL TUMOR INJECTION THERAPY AND RELATED VACCINE

(57) **Abstract:** The present invention provides effective, safe, comprehensive combinatorial treatment methods that are safe and effective for reducing the size of tumor cells in tumor tissue of a patient. The methods include reducing the size of tumor cells in tumor tissue of a patient by collecting monocyte cells from a patient; culturing the monocyte cells with one or a plurality of factors to form immature dendritic cells from the monocyte cells; introducing the immature dendritic cells and an adjuvant into the tumor tissue of the patient; and introducing activated T cells into the tumor tissue of the patient. The methods further comprise pretreating a patient with local chemotherapy, systemic chemotherapy, tumor irradiation or systemic chemotherapy in combination with local tumor irradiation prior to introducing the immature dendritic cells, adjuvant and activated T cells into the tumor tissue of the patient. Also provided is a cancer vaccine for reducing the size of a tumor in a patient, comprised of immature dendritic cells derived from monocytes collected from the patient, an adjuvant, tumor antigens from the patient, and activated T cells.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: AOIN 63/00(2006.01);C1 2N S/08(2006.01)

USPC: 424/93.7 1;435/372,372.3,377

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 424/93.71 ; 435/372,372.3,377

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 Medline Biosis Lifesci Biotechds Scisearch Embase Hcaplus

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO 02/087627 A1 (XCYTE THERAPIES, INC.) 07 November 2002, page 3, lines 8-10, 13-15, 34-36, page 5, lines 16-18, page 6, lines 31-36, page 26, lines 34-36, page 37, lines 14-16, claims 64, 65 and 72.	1-8, 12-20 ----- 9-11
Y	TANAKA et al. Intratumoral Injection of Dendritic Cells after Treatment of Anticancer Drugs Induces Tumor-Specific Antitumor Effect In Vivo. International Journal of Cancer. 2002, Vol. 101, pages 265-269, see page 268, second column, paragraphs 1 and 4.	1-12
Y	CHI et al. Combination of Conformal Radiotherapy and Intratumoral Injection of Adoptive Dendritic Cell Immunotherapy in Refractory Hepatoma. Journal of Immunotherapy. April 2005, Vol. 28, No. 2, pages 129-135, see abstract and page 129, first column, second paragraph.	11

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See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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