

 Immune Disease Institute	Office of Technology Development 3 Blackfan Circle, 3 rd Floor Boston, Massachusetts 02115 www.idi.harvard.edu
IDI 96-001	ISOLATION AND ENRICHMENT OF DENDRITIC CELLS USEFUL FOR VACCINES

Key Words: Dendritic cell purification, immune therapies, infectious disease, dendritic cell based cancer vaccines, antigen-presenting cells.

Application: The technology provides the proprietary basis to develop dendritic cell-based vaccines for cancer and infectious diseases. The technology utilizes the effectiveness of dendritic cells to induce a primary antigen-specific response.

Inventors: Keith D. Crawford, M.D., Ph.D. & Chester A. Alper, M.D.

Invention Summary:

Dendritic cells present antigens for T lymphocytes, i.e., they process and present antigens and stimulate responses from T cells. Previously developed methods of dendritic cell purification result in a mixture of monocytes and true dendritic cells. The use of contaminated mixtures of myeloid cells, termed cytokine generated monocyte derived dendritic cells (MDDC) in immunotherapy has not produced the desired results. The use of pure dendritic cell populations, as defined in this seminal discovery, will likely be effective mediators of a potent and specific immune response to the chosen antigen of interest.

The patent claims granted to the Center for Blood Research for this technology encompass purification and use of true dendritic cells, as redefined by the invention, purification and use of monocytes, as redefined by the invention, and the use of magnetic beads and antibodies directed against the definitive cellular determinants, CD2, CD5 and CD14 for such purifications.

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Contact: Ryan Dietz
Director, Office of Technology Development
617.919.3048
dietz@idi.harvard.edu