MODULATED IMMUNODOMINANCE THERAPY

Abstract

The invention involves generating a T cell response to subdominant antigens and using the cells to therapeutically change the cellular homeostasis and nature of the immune response. In a preferred embodiment, the cells are generated outside of the patient avoiding the influence of the patient's immunologic milieu. By stimulating and growing the T cells from a patient in a tissue culture to one or more subdominant antigens and the transplanting them into the patient, if enough cells are expanded and transplanted, the transplanted cells overwhelm the endogenous dominant T cells in the response to either break or induce immune tolerance or otherwise modify the immune response to the cells or organism expressing that antigen. When the memory cells are established they are then reflective of this new immunodominance hierarchy so that the desired therapeutic effect is long lasting. In effect, the transplantation exogenously generated T cells reactive to the subdominant antigens is recapitulating priming and rebalancing the patient's immune response to target previously subdominant antigens in the cells or organism to produce a therapeutic benefit.

[Figure 1A – 1C]