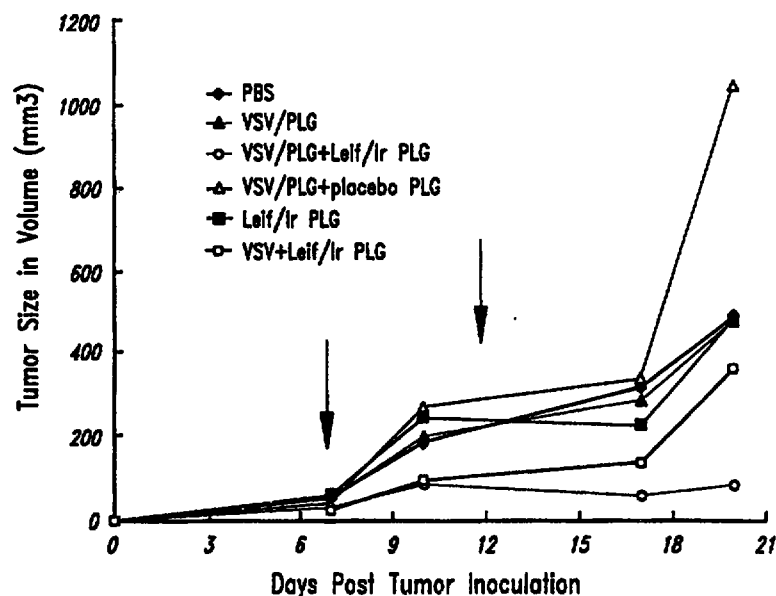




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: METHODS FOR ENHANCEMENT OF PROTECTIVE IMMUNE RESPONSES



## (57) Abstract

Methods for eliciting or enhancing immune responses to antigens, including tumor antigens, and/or DNA vaccines are provided. The methods employ polypeptides or nucleic acid compositions that contain at least a biologically active portion of a *Leishmania braziliensis* or *Leishmania major* homologue of the eukaryotic initiation factor 4A, or a variant thereof. Such polypeptides and compositions are useful for enhancing or eliciting a patient's cellular and/or humoral immune response, for instance within methods for treating tumors.