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(54) Title: NOVEL TUMOR ANTIGENS ELICIT ANTI-TUMOR HUMORAL IMMUNE REACTIONS IN A SUBSET OF PATIENTS WITH POLYCYTHEMIA VERA

(57) Abstract: The invention provides novel antigens, MPD5, PV13, and PV65, which belongs to the group of cryptic antigens without conventional genomic structure and is encoded by a cryptic open reading frame located in the 3'untranslated region (3'UTR) of myotrophin mRNA. The antigens elicit IgG antibody responses in a subset of PV patients, as well as patients with chronic myelogenous leukemia and prostate cancer. The translation of MPD5, PV13 and PV65 was mediated by a novel internal ribosome entry site (IRES) upstream of the open reading frame. Eliciting anti-tumor immune response against MPD5, PV13 and/or PV65 antigen in patients with myeloproliferative diseases is a novel immunotherapy.

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