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(54) Title: METHODS FOR SELECTIVELY INHIBITING JANUS TYROSINE KINASE 3 (JAK3)

(57) Abstract: Methods are disclosed for inhibiting or disrupting Janus tyrosine kinase 3 (Jak3) dependent function in cells of lymphoid or myeloid origin, especially for blocking proliferation and function of lymphocytes (*e.g.*, T-cells, B-cells). A Mannich base compound, or a derivative or modified compound, is employed which is capable of selectively inhibiting Jak3 while affecting other protein tyrosine kinase activities to a lesser extent or not at all, to provide beneficial effects such as mitigation of transplant rejection and alleviation of allergic responses with fewer side effects than with conventional immunosuppressive agents.

