

पेटेंट कार्यालय  
शासकीय जर्नल

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पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

(54) Title of the invention : A SYSTEM AND METHOD FOR REVERSING PESTICIDE-INDUCED APLASTIC ANEMIA USING RECOMBINANT SONIC HEDGEHOG

(57) Abstract :

The invention presents a novel system and method for treating pesticide-induced aplastic anemia using recombinant Sonic Hedgehog (rSHH). Aplastic anemia, a serious condition characterized by bone marrow failure and insufficient blood cell production, is often caused by prolonged pesticide exposure in agricultural settings. This invention leverages rSHH, a signaling molecule from the hedgehog signaling pathway, to stimulate hematopoiesis by enhancing the generation of stromal colony-forming unit fibroblasts (CFU-F), CFU-granulocyte erythroid monocyte macrophage (CFU-GEMM), and CFU-granulocyte macrophage (CFU-GM). Our studies demonstrate that rSHH effectively promotes bone marrow regeneration and restores the hematopoietic system in individuals with pesticide-induced aplastic anemia. This method offers a promising therapeutic approach to a condition with limited treatment options, aiming to improve patient outcomes by facilitating blood cell production and addressing the underlying causes of anemia. Accompanied Drawing [FIGS. 1-2]

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