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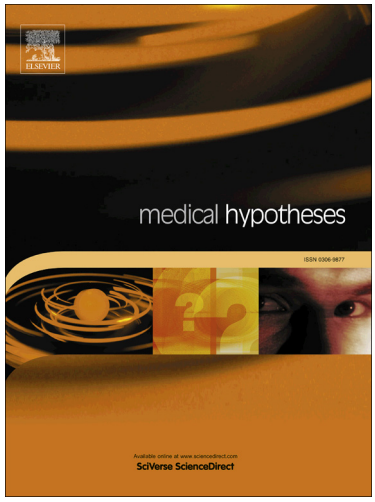

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Evaluation of Isoprinosine to be Repurposed as an Adjunct Anti-tuberculosis Chemotherapy

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ABSTRACT

Isoprinosine (Inos) or immunovir is a synthetic purine derivative with immune-modulatory and antiviral properties. The drug shows apparent *in vivo* enhancement of host immune responses by inducing pro-inflammatory cytokines and rapid proliferation of T-cell subsets. Strikingly, the cytokines induced by Inos also play crucial roles in providing immune resistance against *mycobacterium tuberculosis (Mtb)*. Inos has been licensed for several antiviral diseases; however, its efficacy against *Mtb* has not been tested yet. Since *Mtb* subverts the host immune system to survive within the host. Therefore, we hypothesized that the immune-stimulatory properties of Inos can be explored as an adjunct therapy for the management of tuberculosis. We have also outlined a systematic direction of study to evaluate if Inos could be repurposed for tuberculosis. The *in vivo* studies for therapeutic evaluation of Inos alone or in combination with the first line anti-TB drugs in a suitable TB disease model would provide a clearer picture of its utility as a host-directed anti-TB drug and may endow us with a new application of an existing drug to combat tuberculosis.