TLR-7 based HIV Therapeutic

OCR Number: OCR 6098

Description:

Treatment of HIV infection by inhibiting Toll-like receptor 7 signaling

- Existing anti-viral drugs focus on suppressing viral activity rather than awakening the host’s immune system.
- Activation of the Toll-like receptor 7 (TLR7) on CD4+ T cells results in down-regulation of immune response known as T-cell anergy.
- Inhibitors of TLR7 reverse T-cell anergy caused by HIV infection, as well as reduce HIV activity in both in vitro and ex vivo systems made of cells from HIV patients.
- In vivo study using a humanized mouse model confirms the efficacy of TLR7 blockade in treating HIV infection.
- This mechanism may open a new avenue in the fight against HIV.

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