Statement of research achievements, if any, on which any award has already been received by the applicant. Please also upload brief citation(s) on the research work(s) for which the applicant has already received the award(s) (not to exceed 2000 words).

Awards/Fellowships received: "Shanti Swarup Award [Medical Science 2005] and National Bioscience Award for Career Development [2006].

Citations: Dr Agrewala has significantly contributed to understanding the bi-directional regulation of Th1 and Th2 cells. He has developed a novel and unique vaccination strategy for inducing protective immunity to *Mycobacterium tuberculosis* infection.

Dr. Agrewala has made significant contributions to the field of immunology, particularly in understanding the bi-directional regulation of Th1 cellos and Th2 cells, which are crucial for orchestrating the immune response. His work has shed light on the complex relationship between these two subsets of T-helper cells, revealing how their balanced regulation is vital for effective immunity. This research has deepened our understanding of how immune responses can be fine-tuned to combat infections while avoiding excessive inflammation or immune suppression.

Dr. Agrewala has pioneered a novel and unique vaccination strategy aimed at inducing protective immunity against *Mycobacterium tuberculosis* infection. His approach provides insights into the immune system's regulatory mechanisms to design vaccines that not only stimulate a robust and targeted immune response but also ensure long-lasting protection. By focusing on the precise activation of Th1 cells, which are essential for controlling *Mycobacterium tuberculosis* infection, his strategy holds promise for overcoming the limitations of existing vaccines. This innovation represents a significant advancement in the fight against tuberculosis, offering new hope for more effective prevention and control of this global health challenge.

Research work of which awards received:-

1. **BMC Immunol**. 7:2006:17-26 [IF: 3.6]. Regulatory role of pro-Th1 and pro-Th2 cytokines in modulating the activity of Th1 and Th2 cells when B cell and macrophages are used as antigen presenting cells. Singh V, **Agrewala JN**.

2. **Biochimie** 88:2006:1391-1400 [IF: 4.1]. Role of fusogenic non-PC liposomes in elicitation of protective immune response against experimental murine salmonellosis. Ahmad N, Deeba F, Faisal SM, Khan A, **Agrewala JN**, Dwivedi V, Owais M.

3. **Eur J Pharmacol**. 536:2006:256-61 [IF: 5.2]. Curcumin attenuates thermal hyoperalgesia in a diabetic mouse model of neuropathic pain. Sharma S, Kulkarni SK, **Agrewala JN**, Chopra K.

4. **Protein Peptide Lett.** 13:2006:897-905 [IF: 1.9]. Novel antiproliferative and antifungal lectin from *Amaranthus viridis* linn seeds. Kaur N, Dhuna V, Kamboj SS, **Agrewala JN**, Singh J.

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6. **Int Immunopharmacol.** 9:2005:1470-8 [IF: 4.92]. Novel lectins from rhizomes of two Acorus species with mitogenic activity and inhibitory potential towards murine cancer cell lines. Bains JS, Dhuna V, Singh J, Kamboj SS, Nijjar KK, **Agrewala JN.**

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8. **J Infect Dis.** 190:2004:107-14 [IF: 7.8]. Potent role of the vaccines prepared from macrophages infected with live bacteria in protection against *M. tuberculosis* and *S. typhimurium* infections. Sharma N, **Agrewala JN.**

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10. **Clin Exp Immunol.** 134:2003:13-22 [IF: 5.73]. Delivery of antigen in allogeneic cells preferentially generates $CD4^+$ Th1 cells. **Agrewala JN**, Suvas S, Singh V, Vohra H.

11. **J Biol Chem.** 277:2002:7766-75 [IF: 7.6]. Distinct Role of CD80 and CD86 in the regulation of the activation of B cell and B cell Lymphoma. Suvas S, Singh, V, Sahdev, S, Vohra, H, **Agrewala, JN.**

12. **Adv Exp Med Biol.** 512:2002:113-20 [IF: 3.7]. Regulation of memory CD4 T cells: generation, localization and persistence. Swain, SL, **Agrewala JN**, Brown, D.M, Roman E.

13. **Mol Cell Biochem.** 221:2001:57-62 [IF: 3.4]. Melatonin enhances Th2 mediated immune responses: lack of sensitivity to reversal by naltrexone or benzodiazepine receptor antagonists. Raghavendra V, Singh V, Kulkarni SK, **Agrewala JN.**

14. **Clin Exp Immunol.** 124:2001:414-22 [IF: 5.73]. Melatonin provides signal 3 to unprimed $CD4^+$ T cells but failed to stimulate LPS primed B cell. Raghavendra V, Singh V, Shaji AV, Vohra H, Kulkarni SK, **Agrewala JN.**

15. **Scand J Immunol.** 54:2001:125-32 [IF: 3.5].Use of liposomes as an immunopotentiating delivery system: in perspective of vaccine development. Owais M, Masood AK, **Agrewala JN**, Bisht D, Gupta CM.

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