Methods of Generation of Broadly Neutralizing Anti-Pathogen Antibodies

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Description

In prior art, an immunization/vaccination protocol to combat a deadly disease like AIDS is non-existent. Further, most of the biological processes involved in generating protective immunity are unknown. As a result, there has been an evident failure to develop effective vaccines against such infectious diseases and related pathogens. **This invention discloses a novel procedure for development and use of a vaccine adjunct/immunization strategy for an enhanced vaccine response, effective against infectious diseases such as AIDS and Malaria, overcoming existing unmet needs and other prior art limitations.**

Value Proposition

The procedure:

- Leads to an efficient generation of broadly neutralizing, high affinity, and high-titer antibodies
- Involves the use of a counterintuitive protocol for immunization where immunosuppressive agents (such as A2aR and A2bR agonists (or other GPCR agonists)) are used
- Targets a hypoxic adenosinergic system to generate an enhanced immune response
- Allows for a faster and larger quantity antibody production as compared to traditional approaches
- Is associated with an improved/enhanced antibody response as compared to conventional immunization approaches
- Further involves an accelerated class switching and increased B-cell activation (with induced hypermutation of variable region immune globulin gene) in vitro
- Would be commercially useful for applications such as potential vaccination/immunization against all infectious diseases, and for improvement in existing vaccines/vaccination techniques

Intellectual Property Status

Provisional Application 61/803,066

License Status

Available for license

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