

## Non technical abstract

Replication deficient adenovirus (Ad) vectors (i.e., Ad rendered incapable of reproducing) are being used in a number of human gene therapy strategies to transfer genes to humans for therapeutic purposes. A major hurdle to the effective use of these Ad vectors is the immune host defenses in response to their administration, with antibodies (Ab) against the Ad and immune cells directed toward cells infected with the vector. The experience in human studies with these Ad vectors has revealed different responses, with different diseases and different sites of administration.. Because it is not possible to determine from these studies whether these diverse responses are route of administration-specific and/or disease-specific, the present study has been designed to characterize the local and systemic host response in normal individuals to intradermal administration of Ad<sub>Gv</sub>CD.10, a modified adenovirus carrying a bacterial gene. The use of the Ad<sub>Gv</sub>CD.10 vector in this protocol will allow us to gain insight into normal human host responses to both the Ad vector, as well as to a heterologous (i.e., non-human) gene product [the bacterial enzyme cytosine deaminase (CD)]. Because CD is not a human gene, and humans have no analogous genes, there is no safety risk to evoking immunity against CD, i.e., the study is equivalent to a vaccination study.