

USAMMDA INFORMATION PAPER

PRODUCT: ADENOVIRUS VACCINE, TYPES 4 AND 7

DESCRIPTION: Adenovirus vaccine is an orally administered enteric-coated tablet containing live adenovirus serotypes 4 or 7 that has been used exclusively by the military. Prior to the use of vaccines, adenovirus types 4 and 7 accounted for 60 percent of all acute respiratory diseases in military recruits who were hospitalized. Adenoviruses are associated with pharyngitis, conjunctivitis, atypical pneumonia, and rhinitis. The U.S. Army and the National Institute of Allergy and Infectious Diseases co-sponsored clinical studies that led to the U.S. Food and Drug Administration (FDA) approving the adenovirus vaccine in 1980. From 1971 to 1996, a single manufacturer produced adenovirus vaccine types 4 and 7; prior to FDA approval, the vaccine was provided under an Investigational New Drug (IND) application. In 1984, the manufacturer notified the military that the FDA required a new facility to manufacture adenovirus vaccine. Since funds were unavailable at that time, the manufacturer was forced to end production in 1996. The last stocks of vaccines were depleted or expired by 1999. Today, nearly 90 percent of military recruits are susceptible to either adenovirus type 4 or 7; and since 1999, there have been several adenovirus-related outbreaks. There were two deaths of Navy recruits in July and September 2000 from suspected adenovirus infections. A contract to develop and manufacture the type 4 and 7 adenovirus vaccines was awarded in 2001 to Barr Laboratories, Inc. The first phase of the contract requires an IND application and successful completion of phase I clinical trials. The second phase requires completion of all clinical trials and full FDA licensure of the product. The vaccines are expected to be available early in 2008.

PROGRAM RELEVANCE to the ARMY: This product supports both the core mission of the Army and the Army Transformation. Of the Army's core competencies, this product supports: "Shape the Security Environment," "Forcible Entry Operations," "Sustained Land Dominance" and "Support Civil Authorities" by protecting U.S. Forces against infection with adenovirus. Adenovirus vaccine will enhance the survivability, sustainability and preserve the fighting strength of U.S. Forces in regions of the world where the disease occurs. In addition, this product supports Future Operational Capability MD 97-007 (Preventive Medicine).

ISSUES/ACTIONS:

- Within the past six months, four military recruits died from suspected adenovirus infection. This accentuates the urgent need to quickly develop the adenovirus vaccines.
- The production contract with Barr Laboratories was modified in January 2004 to allow Barr to sponsor and file the IND(s). The modification allows the Department of Defense to file its own IND against the Barr Laboratories IND at any time.
- A letter requesting a pre-IND meeting with the FDA in May 2004 is being prepared and will be submitted shortly. Topics to be discussed at the meeting include manufacturing plans to produce comparable adenovirus vaccines and the proposed clinical trial plan. The current development plan is based on the premise that the FDA will accept that these vaccines will be nearly identical to the FDA-approved Wyeth vaccine.
- A contract modification is currently underway to exercise the contract option that will allow Barr Laboratories to develop the vaccine to FDA licensure. Under the base contract, Barr has completed construction and equipment installation of the tablet production facility, produced pilot non-GMP vaccine tablets, and began GMP tablet production. A phase 1 clinical trial is scheduled to start in July 2004.

BPL #: 395**DA PROJECT/TASK:** Infectious Diseases**PE/PROJ:****MAMP RANK:****ARMY ORD:****SCHEDULE:**

MS A TBD

MS B TBD

MS FRP TBD

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