Vaccine development for protection against both Tularemia and Ebola:

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The Ebola Virus (EBOV) and *Francisella tularensis* (the causative agent of tularemia) are classified by the Centers for Disease Control and Prevention as Category A select agents because of their potential for use in bioterrorism. The development of a vaccine against both pathogens could therefore substantially increase our preparedness against bioterror. The overall goal of this research is to develop a vaccine that could combat both EBOV and *F. tularensis*. We are in the process of generating a fusion protein consisting of GP (the glycoprotein of EBOV) and Tul4 (an immunodominant outer-membrane lipoprotein of *F. tularensis*). This newly generated chimeric protein (Tul4-GP) will ultimately be expressed in *F. tularensis* LVS (Live Vaccine Strain). Patients previously immunized with this strain show an immunological memory of over 30 years after being vaccinated. Following transfer into *F. tularensis* LVS, expression of Tul4-GP will be confirmed and the efficacy of this strain as a vaccine against both pathogens will be determined.