

Hand Transplantation:

The Armed Forces Institute of Regenerative Medicine supports the clinical trial on hand transplantation, an innovative surgical technology that helps restore the function of upper extremity amputees by transplanting donated hands or arms. The investigator team sponsored by AFIRM has performed the most number (8) of hand/arm transplants in the U.S., consisting of 3 double hand transplants and 2 single hand transplants in 5 patients. The recipients have been able to regain partial sensation, significant movement and strength, and ability to perform activities of daily living after the hand/arm transplant.

The majority of organ, face, and hand transplant recipients in the world have required life-long "triple immunosuppression"-3 potent anti-rejection drugs that may lead to side effects such as organ damage or opportunistic infections. The Principal Investigator of the AFIRM-sponsored hand transplant study, W. P. Andrew Lee, MD (Chairman of Johns Hopkins University Department of Plastic and Reconstructive Surgery), has worked with transplant surgeons and immunologists in the laboratory to develop a unique immune modulatory protocol that allows transplantation with a single anti-rejection medication. In their clinical experience so far, up to 28 months after hand transplant, the protocol has been successful in maintaining graft survival thus minimizing the potential for side effects from medications.

The AFIRM-sponsored hand transplant study has two sites: Johns Hopkins Medical Institutions and University of Pittsburgh Medical Center. The surgeons, scientists, medical specialists, and occupational therapists collaborate closely under AFIRM to enhance the safety and functional outcome of hand transplant recipients. Candidates or families interested in hand/arm transplantation should contact Dr. Lee at WPAL@jhmi.edu or 443-287-2001.