

About AFIRM

The use of improvised explosive devices in Iraq and Afghanistan has caused a marked increase in severe blast trauma. Due to advances in body armor, quicker evacuation from the battlefield, and advanced medical care, many of the injured survive to face the challenge of overcoming severe limb, head, face, and burn injuries that can take years to treat and usually result in significant lifelong impairment.

The burgeoning field of regenerative medicine provides hope for restoring the structure and function of damaged tissues and organs and curing previously untreatable injuries and diseases. The concept of regenerative medicine—in its simplest form—is to replace or regenerate human cells, tissues, or organs to restore or establish normal function. Advanced technologies such as tissue regeneration, bone scaffolding, and stem cell-enabled treatments are needed to revolutionize the clinical rehabilitation of severely injured service members.

The DoD established AFIRM in 2008 with the mission of developing new products and therapies to treat severe injuries suffered by U.S. service members. This multi-institutional, interdisciplinary network of scientists has been designed to accelerate the delivery of regenerative medicine therapies for severely injured U.S. service members. Centered around well-established, proven research investigators, the AFIRM has been able to expand the rehabilitative medicine knowledge base, develop models of injury, and test advanced technology products.

Proud Sponsors of AFIRM



The Armed Forces Institute of Regenerative Medicine establishes national teams that are collaborating including leading scientists in the field of regenerative medicine. For more information about the AFIRM, please contact:

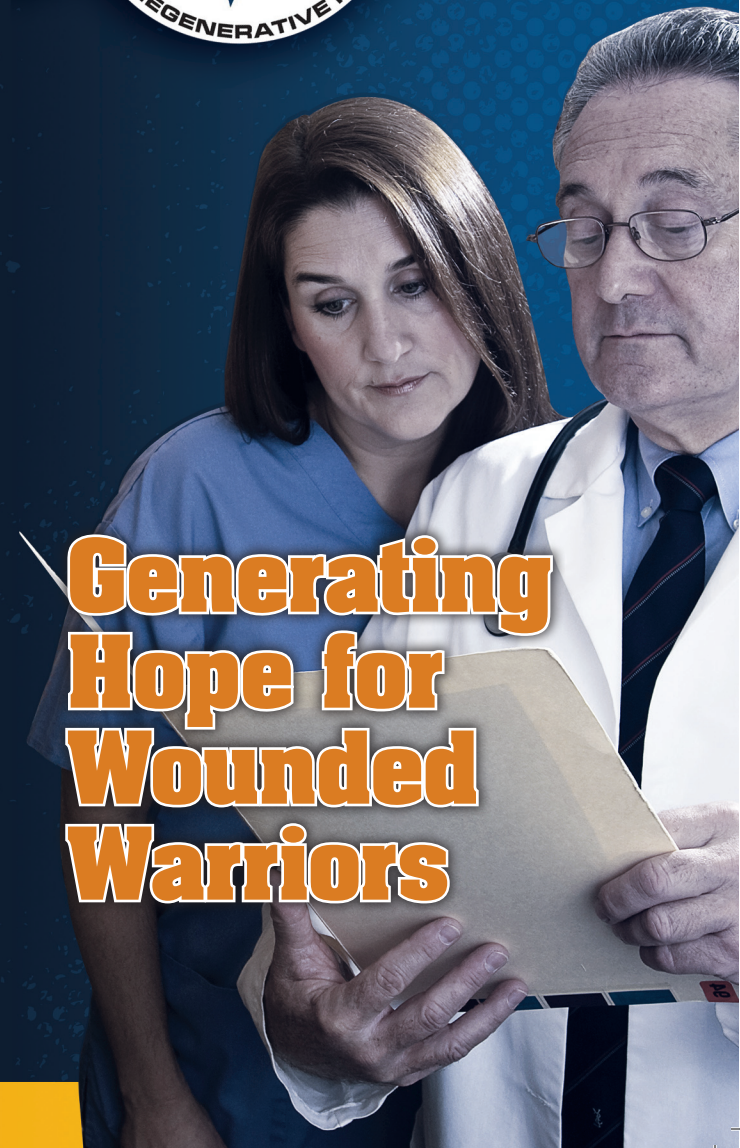
afirm@amedd.army.mil

www.afirm.mil

Health Care Provider Guide



Generating Hope for Wounded Warriors



generating hope

The Armed Forces Institute of Regenerative Medicine (AFIRM)

is a multi-institutional, interdisciplinary network working to develop advanced treatment options for our severely wounded servicemen and women. The AFIRM is managed and funded by the Department of Defense (DoD), with additional funding from the National Institutes of Health, the Veterans Health Administration, and local public and private sector. The AFIRM is made up of two civilian multi-institutional research consortia working with the U.S. Army Institute of Surgical Research at Fort Sam Houston, Texas. The AFIRM has assembled a world-class group of engineers, scientists, and clinicians to make regenerative medicine a reality for our wounded warriors.

regenerative medicine

Regenerative medicine represents great potential for treating military personnel with debilitating, disabling, and disfiguring extremity injuries and burns. Techniques are being developed to prompt the body to regrow bones, skin, and tissues, often using the patient's own cells and growth and healing factors, alone or in combination with degradable biomaterials, conduits, and antirejection modalities. Technologies for engineering tissues are developing rapidly, with the ultimate goal of delivering advanced therapies, such as whole organs and engineered skin, fingers, and limbs.

clinical trials

AFIRM scientists are currently enrolling patients in clinical trials for face and hand transplant with bone marrow-induced immune tolerance to minimize the immunosuppression regimen to reduce adverse side effects. Other clinical trials are muscle tissue regeneration via biological scaffolding composed of extracellular matrix and autologous fat injections to reduce and repair scars. Additional clinical trials will begin enrolling patients to treat deep partial thickness burns using autologous spray-on skin, autologous manufactured skin for large area burns, and skin graft stretching for coverage of larger areas without scarring, bone scaffolding for craniofacial regeneration, autologous spray-on skin, and allogenic human dermal fibroblasts for remodeling scars.

All of these trials are experimental and the outcomes are not guaranteed, but they do add many new treatment possibilities for our wounded warriors. We encourage you to read more about them on the AFIRM web site, www.afirm.mil. If you see a technology that may help one of your patients, please contact the trial manager for more information via the web site www.afirm.mil.

