

work in progress

Examples of regenerative medicine research projects under way include:

- Engineered nerve, vascular, muscle, connective and bone tissues
- Reconstruction and regeneration of the complex facial architecture and features
- Skin substitutes and burn injury inhibitors
- Hand and face transplant procedures, immunomodulation and tolerance induction technologies
- Engineered pelvic, anal, and genital tissues



funding opportunities

Researchers are needed to investigate new ideas and develop new products to help diagnose and treat our wounded Warfighters and improve treatment outcomes and quality of life. Funding opportunities and program announcements can be found through the federal government's single-entry portal www.grants.gov. Full proposals requesting funding from the CRMRP should be submitted via this site.

Registration: www.grants.gov
Questions: support@grants.gov

contact info

For more information about the CRMRP, or for questions related to program announcements, proposal format, or required documentation, please send inquiries to crmrv@amedd.army.mil, or contact the CRMRP office at 301-619-8932.

Please mail inquires to:
U.S. Army Medical Research and Materiel Command
Clinical and Rehabilitative Medicine Research Program
ATTN: MCMR-RTR
504 Scott Street
Fort Detrick, MD 21702-5012

FOCUS ON:

regenerative medicine



U.S. Army Medical
Research and
Materiel Command

<https://crmrv.amedd.army.mil>

CRMVRP



background

The injuries of Operations Enduring and Iraqi Freedom (OEF/OIF) are shaped by the widespread use of improvised explosive devices (IEDs). IEDs increase the likelihood that active-duty Service members will be exposed to incidents such as blasts that can cause traumatic brain injuries and other debilitating injuries. Current war casualties are driving changes in health care needs and, therefore, changes in research and development.

The U.S. Army Medical Research and Materiel Command's establishment of the Clinical and Rehabilitative Medicine Research Program (CRMRP) will enable active planning and coordination of an area of military research that has grown in importance during the current conflicts. The CRMRP focuses on definitive and rehabilitative care innovations required to reset our wounded warriors in terms of duty, performance, and quality of life.

The CRMRP has 4 primary focus areas:

- **Regenerative Medicine**
- Neuromusculoskeletal Injury Rehabilitation
- Sensory System Traumatic Injury Restoration and Rehabilitation
- Pain Management

what&why

Steady advancements in medical, engineering, materials and biological sciences have resulted in technologies and knowledge, driving a medical treatment paradigm shift from removal or replacement to repair and regeneration. Regenerative medicine is the process of replacing or regenerating human cells, tissues or organs to restore or establish normal tissue function. Recognizing the significant promise and capabilities that regenerative technologies offer, the U.S. Army has maintained an active research program in regenerative medicine since 2009.

The regenerative medicine research program drivers are characterized by the following:

- Increasing rates of casualty survivability following severe traumatic injury
- Medical research funding largely focuses on disease conditions, while Army research is focused on the treatment of trauma
- Relatively younger, healthy population with expectations of high function for many years to come
- A need for alternatives to autologous (coming from oneself) tissue harvest
- Unacceptable loss of form and function from current treatment outcomes

top priorities

Scientific steering committees regularly meet to identify and prioritize the current and future research needs of the regenerative medicine portfolio. Results of these discussions have led to the identification of a number of research focus areas.

Regenerative medicine research has been focused in the following areas:

- Restoration of form and function to lost or damaged hard and soft tissues of the extremities
- Restoration of form and function to lost or damaged hard and soft tissues of the craniomaxillofacial region
- Repair or regeneration of the skin after thermal injury with the aim of healing with subjectively and relatively less scar tissue
- The transfer of vascularized composite tissue that may include skin, muscle, bone, and nerve as a "replacement part"
- Restoration of form and function to lost or damaged soft tissues of the pelvic and urogenital region



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