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## **Military to Use Regenerative Medicine to Treat Injured Soldiers**

*BY MAUREEN O'LEARY*

**April 28** - The Department of Defense has established the Armed Forces Institute of Regenerative Medicine (AFIRM), a collaborative effort to develop new treatments for wounded soldiers. Using stem cell research, tissue and biomaterial engineering, and other methods, AFIRM scientists hope to repair battlefield injuries and restore lost function in the hundreds of injured who return from Iraq and Afghanistan.

With a five-year budget of about \$250 million -- \$80 million in defense funding, and \$180 million from academic institutions, industry, and state and federal agencies -- AFIRM will use the latest techniques in regenerative medicine to develop clinical therapies for burn repair; wound healing without scarring; craniofacial reconstruction; limb reconstruction (fingers, ears, and noses); regeneration or transplantation; and compartment syndrome, a condition related to inflammation after surgery or injury that can lead to increased pressure, impaired blood flow, nerve damage and muscle death.

The National Academies have published several reports and hosted meetings on regenerative medicine. The report *Stem Cells and the Future of Regenerative Medicine* clarifies what is known about the scientific potential of stem cells and how it can best be realized, as well as calls for public funding of research on human stem cells derived from both adults and embryos.

*Guidelines for Human Embryonic Stem Cell Research* encourages responsible research practices by offering a common set of ethical standards for the field of human embryonic stem cell research. To keep the guidelines up to date, given the rapid pace of scientific developments in the field of stem cell research, they were amended in 2007.

The Academies also developed a free educational resource for the public called *Understanding Stem Cells*. And, regenerative medicine was a session during the 2006 Institute of Medicine annual meeting, as well as the topic of an Arthur M. Sacker Colloquium.