



HEALING WOUNDS THROUGH STEM CELL THERAPY

The Geneva Foundation is committed to the development of innovative new technologies and techniques related to the treatment of U.S. service members wounded in combat. Advanced surgical treatments, timely evacuation of casualties, improved antibiotics, and the use of enhanced body armor are all factors that lead to increased survival rates of critically-injured warriors. However, many of these survivors face physical and psychological traumas that severely impact their quality of life long into their future. For service members who survive devastating combat injuries, enhancing their quality of life through restored mobility and a higher degree of comfort is the ultimate objective.

The ability to regenerate lost skin and tissue and restore the function of these injured tissues, including reducing scar formation in burn victims are two of the top priorities in combat casualty care today. Current technologies enable the use of bioengineered skin constructs or autologous skin grafts to resurface burn wounds. Unsatisfied clinical outcomes with regard to skin quality and donor morbidity are some of the shortcomings of current technologies. Noting these shortcomings, Dr. Kai Leung, a researcher at the U.S.

Army Dental and Trauma Research Detachment's Microbiology Branch at Fort Sam Houston, is conducting research to devise a biological therapy aimed at regenerating the cell types required for efficient wound healing and for the reduction of scarring. This will allow for better quality of life for wounded soldiers through restored mobility and increased level of comfort.

Dr. Leung's study is the first step toward the ideal restoration of skin, cutaneous appendages, muscle, nerves, and tendons, combining regenerative medicine, stem cell therapies, wound care, and surgical science. The research provides a comprehensive approach to wound healing within the Department of Defense in an effort to improve the quality of life and recovery of the injured warfighter. Dr. Leung's study extends the present understanding of stem cell therapy for wounds by determining the effects of stem cells in improving the quality, quantity, and function of scars as a result of injury.

Geneva anticipates that the long-term benefit of this research is the development of adult stem cell therapeutics resulting in reduced tissue scarring and more optimal restoration of tissue anatomically, functionally, and aesthetically. Geneva is proud to partner with Dr. Leung in this important scientific endeavor as we work to advance military medical technologies and the treatment of combat-wounded warriors.

The above is referencing federally funded grant, W81XWH-10-2-0054. The U.S. Army Medical Research Acquisition Activity, 820 Chandler Street, Fort Detrick MD 21702-5014 is the awarding and administering acquisition office. The content of the information does not necessarily reflect the position or the policy of the Government, and no official endorsement should be inferred.