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News Release

Healing the Wounds of War

Novel Phytochemical Agent Enhances, Improves Process of Wound Healing

BETHESDA, Md. — Researchers at the Uniformed Services University of the Health Sciences (USU) have identified a novel phytochemical agent that enhances and improves the process of wound healing in normal and immune compromised people.

In an article published in the March 2007 edition of the *Journal Planta Medica*, Dr. Radha Maheshwari, professor of Pathology at USU, along with Anuj Sharma, graduate student and other colleagues, reported a novel compound Picroliv obtained from the roots of a plant *Picrorhiza kurrooa* enhances the rate of wound healing by principally enhancing the restoration of the blood supply to the damaged tissue.

Previous work from Dr. Maheshwari's laboratory has shown that Picroliv also protects from the injuries induced by hypoxia and reoxygenation and upregulates the expression of vascular endothelial growth factor in human umbilical vein endothelial cells and of insulin-like growth factor in rats during hypoxia. These findings suggest that Picroliv could be developed as a therapeutic angiogenic agent for the restoration of the blood supply in diseases involving inadequate blood supply such as limb ischemia, ischemic myocardium and wound healing.

This work supported by funding from National Institutes of Health has important implications in understanding the underlying process important for wound healing and developing agents that can enhance these processes. Wounds and their treatment remain a major area of research for military combat causality and civilian traumatic injuries and this research identifies a potential therapeutic compound that may be developed for treatment of wounds.

Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health in Bethesda, Md, USU is the nation's federal school of medicine and graduate school of nursing. Students are active-duty uniformed officers in the Air Force, Army, Navy, and Public Health Service, who are being educated to deal with wartime casualties, national disasters, emerging infectious diseases, and other public health emergencies. The university conducts sponsored research in the combined sciences, including military-relevant research in parasitology, infectious diseases, treatment of traumatic injury, and other issues related to health, war, and national disaster.

For more information or to receive a copy of Dr. Maheshwari's complete article contact the Office of External Affairs at (301) 296-3981