

November 30, 2011

Codex BioSolutions, Inc. announces today the receipt of a Phase I SBIR award for \$99,440 from the US Army to fund the development of a drug to promote the healing of soft tissue wounds. The SBIR award is titled “Topical Application of Hsp90 alpha Bio-modulator to Promote Healing of Soft Tissue” and Phase I will take place between November 30, 2011 and June 30, 2012.

The broad goal of the SBIR project is to determine a smaller peptide derived from 236-629 amino acids of the heat shock protein HSP90 α as a drug candidate to substitute the 732-amino acid, 80.5-kDa HSP90 α for further drug development. The drug will be used by both the military to treat battlefield wound-in-action casualties and by civilians to acute and chronic wounds.

Heat shock proteins (HSPs), including HSP90, HSP70, and calreticulin, have been shown to accelerate wound healing in porcine and mouse models through topical application or subcutaneous injection, providing a novel avenue to developing protein drugs for wound healing. A smaller peptide is expected to overcome a significant challenge facing human recombinant HSPs purification for drug development. HSP90 proteins are evolutionarily conserved from bacteria to eukaryotes with similar size and at least 40% identity. Additionally, HSP90 is highly expressed in both eukaryotes and prokaryotes under normal physiological conditions and are further increased by stress factors. Therefore, recombinant HSP90 α may not be purified from a production host without contamination from the endogenous HSP90 protein. Codex, through the proposed study, will study smaller peptides derived from the region of 236 to 629 of human HSP90 α , including a 393-amino acid peptide from 236 to 629 (F393), a 115 peptide from 236 to 350 (F115), and a 54-amino acid peptide from 236 to 289 (F54) for the purposes of identifying a smaller peptide as a leading drug candidate for further development.

Phase I of the projects lays a solid foundation for commercialization. Afterwards, we will develop of chromatography-based protein purification process that will be transferred to a cGMP facility to manufacture protein drug substance for all preclinical studies as well as future clinical studies.

Dr. Wenshan Hao will serve as the principal investigator of the project.