allied
academics

Joint Event

International Conference on
WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE
&
8th World Congress on
BREAST CANCER MANAGEMENT AND THERAPY June 14-15, 2018 | London, UK

Enhancing wound healing by copper oxide impregnated wound dressings

Gadi Borkow

MedCu Technologies Ltd, Israel

Copper plays a key role in angiogenesis and formation of extracellular skin proteins. By introducing copper oxide into wound dressings we allow slow release of copper ions in situ. We demonstrated that application of wound dressings containing copper oxide to wounds inflicted in genetically engineered diabetic mice resulted in increased gene and in-situ upregulation of pro-angiogenic factors (e.g., PLGF, HIF-1a and VEGF), increased blood vessel formation ($p<0.05$) and enhanced wound closure ($p<0.01$) as compared to control dressings (without copper) or commercial wound dressings containing silver. The wound dressing were tested for biocompatibility showing no skin irritation, skin sensitization, pyrogenicity, acute or chronic toxicity in several animal models. In addition, the wound dressing have potent biocidal properties against a wide spectrum of pathogens. The paper will discuss the molecular mechanism by which copper oxide impregnated dressings stimulate wound healing.

Speaker Biography

Gadi Borkow obtained his Ph.D. in the Tel Aviv University, Israel on 1994. His post-doctoral studies were conducted at McGill University during which he specialized on HIV-1. In 1998, Dr. Borkow joined the Hebrew University AIDS Center, where he studied virological and immunological aspects of HIV-1 infection. Since 2004, Dr. Borkow is the Chief Medical Scientist of Cupron Inc. and since 2017 is also the Chief Scientist and co-founder of MedCu Technologies Ltd. Dr. Borkow has published over 130 peer reviewed manuscripts that have more than 5000 citations. Dr. Borkow serves as a reviewer of more than 50 scientific journals and is in the Editorial Board of six scientific journals.

e: gadib@medcu.com

Notes: