



Nano Formulated Proanthocyanidins as an Effective Wound Healing Component

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Abstract:

Proanthocyanidins (PCs), a component of grape seed extract (GSE), has recently being used for the treatment of wounds. Proanthocyanidins, the principal component of GSE, has recently been identified as a main mediator of GSE medicinal properties. We present here an approach for manufacturing PCs/soluplus (SOLU) blended nanodispersion prepared by freeze drying technique to adequately enhance the stability and bioavailability of the PCs for wound repair. The PCs/SOLU nanodispersion (0.5, and 1.5 g) was incorporated into 10 g of a simple ointment base by melting and trituration to give two batches of the ointment formulation which could be easily applied topically to wounds. Excision wound measuring about 3 cm in depth was created on the Wistar rats placed in groups (n = 6) and the ointment applied topically on the wounded area which was measured daily until epithelialization and complete wound closure. Grape seed extract ointment and Povidone-iodine ointment (1 %) served as the control and standard treatments, respectively. PCs heals the wound by mobilising the fibroblasts in the wound site and inhibits the inflammatory response through decreased expression of monocyte. Immunological, macroscopical and histological evaluations have shown that the use of ointment containing PCs/SOLU nanodispersion enhances the cell adhesion and migration.

Biography:

Mrs. R. Rajakumari did her research in “Dietary Supplements and Nutraceutical Formulations” under the guidance of Dr. Nandakumar Kalarikkal, Honourable Director, International and Inter University Centre for Nanoscience and Nanotechnology & Director, School of Pure and Applied Physics, Mahatma Gandhi University, Kottayam, Kerala and co-guided by Prof. Sabu Thomas, Vice Chancellor, Mahatma Gandhi University.



Publication of speakers:

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Webinar on Nano-Engineering and Its Applications

Citation: R. Rajakumari; Nano Formulated Proanthocyanidins as an Effective Wound Healing Component; Nanotech 2020; July 22, 2020; London, UK