

Expression of wound marker gene *TGF β1* in Human Embryonic Kidney (HEK) 293 Cell Lines by the effect of *Hemigraphis Alternata* Leaf Extract (HALE)

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Abstract

Despite the chemical and biochemical analysis of the therapeutic properties of herbs, the molecular evidence for detecting the mode of action of natural drugs has been a novel trend of research today. *Hemigraphis alternata*, the tropical herb of Acanthaceae family has gained sufficient therapeutic attention as a potent phytomedicine for wound healing in folklore medicines. Transforming Growth Factor Beta 1 (*TGF β1*) is one such growth factor which plays effective role in wound healing. In the present study an attempt was made to reveal the molecular mechanism of the wound healing effect of *Hemigraphis alternata* leaf extract (HALE) fractions separated by silica based column chromatography. It was obvious from the data that the fractions 8 and 9 showed higher wound closure. The absolute quantification data of *TGF β1* gene expression of HALE fraction 9 showed higher level expression in HEK 293 treated cells. Thus the molecular data clearly confirms the role of *TGF β1* gene in wound healing by the effect of HALE. To the best of our knowledge this is the first time report showing the molecular evidence on the wound healing effect of *Hemigraphis alternata* in human cell lines.

symposium conducted by 23rd Swadeshi Science Congress, November 2013. She has also won second prize in paper presentation in research category in a National conference on Molecular Tools & Disease Diagnosis organized by Department of Engineering Shardhya College of Engineering by Technology Kodakara Kerala with All India Council for Technical Education (AICTE) on 5th, October 2019. She has published one paper in reputed journals.

Speaker Publications:

“Coconut Neera—A Vital Health Beverage from Coconut Palms: Harvesting, Processing and Quality Analysis”.

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Biography:

Divyaa Sreekumar doing her PhD at the age of 32 years from Anna University Chennai at SCMS Institute Of Bioscience and Biotechnology Cochin. She is the Lecturer of SCMS Institute of Bioscience and Biotechnology Cochin at Molecular Biology department. She has gained Indira Gandhi single child scholarships. She gained second rank for the M.Sc. Molecular Biology and Genetic Engineering in MG University Kottayam, Kerala. She has also won best paper award in a National