

Title: Aloesin accelerates Skin Wound Healing via MAPK/Rho and Smad signaling pathways

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Cutaneous wound healing is a multifactorial phenomenon involving several regulatory factors affecting the process at molecular level. Aloe vera is widely used wound healing and skin moisturizing agent. Our aim was to examine the effects of Aloesin from Aloe vera on cutaneous wound healing and different mechanisms involved therein. Both invitro and invivo tests were done to demonstrate the wound healing effects of Aloesin. Smad signaling molecules, MAP Kinases and migration-related proteins levels were assessed after Aloesin treatment in cultured cells (in-vitro) and mouse skin (in-vivo). Along with this, macrophage recruitment, secretion of cytokines, growth factors, tissue development, and angiogenesis was also monitored using IHC analysis and ELISAs. Aloesin was found involved in increased cell migration, release of cytokines and growth factors and angiogenesis in endothelial cells. Aloesin treatment accelerated wound closure by upregulating Smad and MAPK signaling proteins i.e. responsible for cell migration, angiogenesis and tissue development. In conclusion, aloesin ameliorates wound healing through MAPK/Rho and Smad signaling pathways and it has the therapeutic potential for treating cutaneous wounds.

Biography

Dr. Hussain Wahedi has completed his PhD at the age of 29 years from Gachon University, South Korea. He is the serving as Assistant Professor in Quaid-i-Azam university, Pakistan. He has published more than 7 research papers in reputed journals and has been serving in various prestigious institutions.

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