

SUMMARY / ABSTRACT

Keloids are pathological scars that arise from abnormal wound healing. The development of keloids are caused by the over-proliferative behavior of dermal fibroblasts and the suppression of its apoptosis. Botulinum toxin (BTX), produced by *Clostridium botulinum*, is able to suppress scar formation and regulate fibroblastic activity - therefore being a highly preferred choice for treatment of keloids. Plant-based compounds are getting more recognized in the keloid treatment setting as they are naturally-produced without the requirement of man-made interference. Numerous research have also proven that plant-based compounds have a promising impact towards therapeutic use. While the molecular mechanism of keloid is still not fully understood, several components of it have been extensively investigated such as TGF- β 1, α -SMA, type I collagen and type III collagen. Botulinum toxin type A and plant-based compounds have been found to directly interfere with these in the signaling cascades of the wound healing process.