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Three-dimensional insights into dermal tissue as a cue for cellular behavior

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Scar formation after injury is a big problem, which influences the skin function and esthetic appearances. Recent researchers have hinted many directions, one of which has shown that scar formation is related to the loss of integrity in dermal tissues. The structure of dermal tissue, which contains mostly collagen, is not only crucial for the mechanical stability of skin, but also acts as a dermal template, providing contact guidance for regulating cell behavior and restoring normal structure and function to skin that has been damaged by injury. These findings suggest a series of questions. How does contact guidance regulate cell behavior? What is the three-dimensional (3D) architecture of the dermal tissue? How does the native 3D architecture influence cell behavior *in vivo*? In this paper, combining our recent researches, we will review the recent advances in this field, that is, the phenomenon of contact guidance and explore the possible mechanism behind it.

Biography

Jiang has completed his Ph.D. at the age of 36 years from the Second Military Medical University and Postdoctoral studies from Shanghai Jiaotong University School of Medicine. He is the Director of Department of Trauma Repair, Ruijin Hospital. He focuses his work on scar formation and tissue engineering. He has published more than 25 papers in journals.

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