

2nd International Conference on**ADVANCES IN SKIN,****WOUND CARE AND TISSUE SCIENCE**

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STEM CELL DYNAMICS AND CELL PLASTICITY IN THE WOUND BED**Ander Izeta^a**^aBiodonostia Health Research Institute, Spain^aTecnun-Universidad de Navarra, Spain

While researchers' attention has focused mostly on the most urgent matter of epidermal wound closure, remodeling of the underlying wound bed may have a longer lasting functional impact on the healed skin. The traditional view of fibroblast to myofibroblast conversion to promote wound contraction is now evolving, with novel evidence pointing towards the involvement of stem/precursor cells in dermal remodeling, most clearly arising from adjacent hair follicles but possibly also from other epidermal adnexae, nerves and blood vessels. In this novel paradigm, interesting parallels with regenerating organs are being drawn. Conversely, the pro-fibrotic mechanisms being explored in other organs may also illuminate aspects of dermal repair. Further, cell plasticity phenomena such as dedifferentiation and transdifferentiation are also part of the wound healing picture, as well as the biophysical aspects of signal transduction associated to mechanic tension. In all, these novel angles have generated hypotheses currently being tested by several labs. Disentanglement of how the balance of dermal regeneration/repair is controlled in acute/chronic injury may lead the way to the discovery of biomarkers that help us understand differences in disease progression and druggable targets with a future impact in the clinical management of chronic ulcers and other skin wounds.

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