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Oxidative Stress in Wound Healing

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Message from the Guest Editor

Wound healing is a rather complex biological process that consists of overlapping stages, including hemostasis, inflammation, cell proliferation, and tissue remodeling. Growing evidence indicates that oxidative stress can modulate wound healing phases. During wound healing, reactive oxygen species (ROS) exhibit a two-faced appearance of Janus, as low concentrations of generated ROS are required for antibacterial defense and cell survival signaling, whereas high ROS accumulation or impaired detoxification induce oxidative damage to the cell membrane, degradation of the extracellular matrix, and prolonged inflammation and, in turn, wounds are not healed, as demonstrated in diabetes. Additionally, elevated ROS levels can be accompanied by the production of reactive nitrogen species (RNS) such as nitric oxide (NO), a known modulator of wound healing.

This Special Issue will explore the surprising double-sided behavior of oxidative stress in wound healing through publications of original first-line research on both its basic and clinical aspects.









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Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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