

Special Issue

Oxidative Stress in Cancers of the Female Reproductive Tract: Bridging Current Knowledge with New Technologies

Message from the Guest Editors

Oxidative stress plays a pivotal role in the initiation, progression, and therapeutic response of many cancers, including those affecting the female reproductive tract. Gynecologic malignancies such as cervical, endometrial, ovarian, and uterine sarcomas are influenced by a complex interplay between hormonal, metabolic and inflammatory factors that converge on oxidative and antioxidant pathways. Excessive production of reactive oxygen species (ROS), mitochondrial dysfunction and impaired antioxidant defenses contribute to DNA damage, genomic instability and dysregulation of key signaling pathways driving carcinogenesis. Despite increasing recognition of oxidative stress as a central mechanism in female reproductive cancers, its specific molecular signatures, diagnostic biomarkers and potential as a therapeutic target remain incompletely explored. This Special Issue aims to gather original research and comprehensive reviews addressing the role of oxidative stress and antioxidant mechanisms in the pathogenesis, progression and treatment of female cancers, with the goal of advancing redox-based prevention and therapeutic strategies in women's health.

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About the Journal

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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