



The Impact of Antioxidant Deficiency in Newborns

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Deadline for manuscript
submissions:

closed (20 December 2022)

Message from the Guest Editor

Neonatal oxidative stress has been linked to several diseases affecting different organs (lung, liver, intestine, brain, eye, etc.), compromising their development. In the long term, these infants are susceptible to developing cardiovascular disease, type II diabetes, asthma, chronic obstructive pulmonary disease, etc. The long-term impact of the imbalance between oxidants and antioxidants in early life may be caused by a neonatal change in organ development and/or permanent epigenetic modifications. Recently, the level of DNA methylation was strongly correlated with the redox value measured in the liver of a newborn animal model.

Exposure to a high level of oxidants is toxic, while a low level of oxidants is necessary to induce endogenous antioxidant defenses; too much exposure to oxidants can induce oxidative stress, while too high an intake of antioxidants could induce reductive stress. This Special Issue of Antioxidants seeks to publish works exploring the impacts of a neonatal deficit in molecules supporting the antioxidant defenses of the newborn, as well as the impacts of antioxidant therapy in this population.





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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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