

Tentative Outline

Special Thematic Issue for Current Topics in Medicinal Chemistry

Antioxidants as a fight against parasitic diseases

Guest Editors: *Mohamed Dkhil, Ahmed Abdel Moneim*

Aims & Scope:

Oxidative stress due to parasitic diseases induce metabolic disturbances in the host causing considerable health hazards and lead to great economic losses and may be responsible for a high degree of morbidity and mortality particularly in developing countries. Most antiparasitic drugs currently available were discovered by screening vast numbers of compounds for their effectiveness against parasites in animal models. e.g. quinine, praziquantel, suramin, albendazole etc... Nevertheless, the need for novel medications is crucial for preventing or combating major parasitic infections globally. For example, various plants, such as pomegranate, garlic, ginger or clove, possess bioactive compounds, alkaloids and flavonoids, which have been widely used for the treatment of several parasitic diseases, such as malaria, trypanosomiasis, leishmaniasis, schistosomiasis, etc.... Host metabolic disturbances and neural degeneration are associated with many parasites that release ROS and change the oxidative status. The excessive release of free radicals is associated with infection of the animal or human body with internal or external parasites, which may be related to a reduction in the nutrients, used by the body to synthesize antioxidants and may be due to the destruction of cells produced by parasite activity.

Through this special issue, we aim to provide significant insight into the antioxidant activities of herbal extracts against parasites. This includes novel therapies, drug resistance, new biomarkers and the factors affecting human and animals. In addition, manuscripts dealing with nanotechnology as a possible treatment against parasites are welcome.

Keywords: Antioxidants, Parasites, Control, Medicinal chemistry.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Role of parasite metabolites in oxidative stress levels
- Oxidative status during neural parasitic disorders.
- Characterizing molecular pathways to control oxidative stress and antioxidant reactions to monitor parasitic infection.
- Antioxidant role of dietary agents to control metabolic dysfunction induced by parasites.
- Cellular and/or molecular mechanisms of oxidative stress in neurodegenerative parasitic diseases.
- Use of nanoparticles as antioxidants to control parasites.
- Host-parasite relationship during treatment by antioxidants.
- Role of ROS during infection with blood and intestinal parasites.
- Protein regulation and pathways due to redox imbalance induced by parasitic infection

Schedule:

- ✧ Manuscript submission deadline: August 1, 2021
- ✧ Peer Review Due: 31 August, 2021?
- ✧ Revision Due: 15 September, 2021
- ✧ Announcement of acceptance by the Guest Editors: 1 October, 2021
- ✧ Final manuscripts due: 15 October, 2021

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