

Special Issue

The Role of Tyrosinase in Human Health and Disease

Message from the Guest Editor

Tyrosinase (TYR) is a type 3 copper-containing enzyme widely distributed in nature (bacteria, fungi, mammals, and plants). It is involved in the mammal biosynthesis of melanin catalysing the first two steps of the synthetic process, the hydroxylation of L-tyrosine to L-DOPA and the subsequent oxidation of L-DOPA to L-dopaquinone. Therefore, TYR performs a crucial role in skin, hair, eyes pigmentation and in skin protection from UV radiations. In particular, in humans, the abnormal lack of melanin could be responsible of albinism; on the other hand, an excessive accumulation of melanin can cause disorders related to hyperpigmentation. In fact, TYRIs are considered potential skin-whitening agents, antimelanogenic substances for melanoma treatment. Furthermore, TYRIs could be innovative adjuvants in Parkinson's disease therapies related to neurodegenerative effects of neuromelanin, as well as drugs for bacterial infections. Papers related to any aspect of TYR role in human health and disease, will be considered for this Special Issue. Experimental and bioinformatics papers, up-to-date review articles, and commentaries are also welcome.

Guest Editor

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