

Special Issue

Recent Advances in the Biological Function of Tyrosinase

Message from the Guest Editor

Melanin is the primary pigment responsible for the color of human skin, hair, and eyes. Melanin biosynthesis requires three melanogenic enzymes: tyrosinase (TYR, EC 1.14.18.1) and the tyrosinase-related proteins TYRP1 and TYRP2. Tyrosinase is a metalloenzyme belonging to the type-3 copper protein family that contains two copper ions in the active site. Tyrosinase performs two sequential enzymatic reactions: hydroxylation of monophenols and oxidation of diphenols to form quinones. Overactivity or overexpression of TYR can cause pigmentation disorders and is associated with melanoma. TYR inhibitors may be useful as therapeutic agents for disorders and diseases associated with melanin accumulation, such as food preservation and vitiligo. However, many TYR inhibitors are not widely used due to a lack of efficacy or toxicities such as carcinogenicity and cytotoxicity. In this Special Issue, we will consider papers on all aspects of the recent advances in the biological functions of TYR and TYR-related proteins. Experimental and bioinformatics papers, state-of-the-art review articles, and commentaries are also welcome.

Guest Editor

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