

Special Issue

Copper in Biology: Maturation of Copper Proteins and Copper Homeostasis

Message from the Guest Editor

Copper is an essential transition metal ion found in many key human enzymes. Its ability to assume distinct redox states by cycling between oxidized copper(II) and reduced copper(I) makes copper an appropriate cofactor in proteins, showing a wide range of catalytic functions, such as reactive oxygen species detoxification, electron transfer and mitochondrial functions. In order to prevent the binding of the “wrong” copper ion, cells have developed very efficient homeostatic and trafficking mechanisms. Thus, copper distribution, exploitation and excretion is tightly regulated in cells. Molecular recognition by protein–protein interactions efficiently guarantees the correct delivery of copper to Cu-dependent enzymes. An overview on copper proteins will be considered, and original papers aim to unravel the precise molecular nature of copper within different cellular compartments are welcome. Contributions that show recent advances in maturation of copper proteins and copper homeostasis processes will be also considered.

Guest Editor

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