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Selenocysteine: Synthesis, Function, and Evolution of the 21st Amino Acid

Guest Editor

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Deadline for manuscript submissions:

closed (31 October 2023)

Message from the Guest Editor

Dear Colleagues,

Selenocysteine (Sec), the 21st amino acid, is found in enzymes known as selenoproteins, typically located in their active site. Sec is inserted by an expansion of the genetic code, wherein the UGA codon (normally a stop) is recoded for Sec insertion, through a highly regulated process involving various *cis*-signals and *trans*-factors. Some 46 years after the discovery of Sec, our understanding of this intriguing amino acid has greatly advanced, but many aspects remain obscure.

In this Special Issue, we seek manuscripts from the diverse branches of molecular biology that take on the study of Sec. Submissions may cover the processes of its biosynthesis and peculiar insertion, the function and regulation of specific selenoproteins, their role in human health and disease, the evolution and phylogenetic distribution of Sec, and the biochemical nature of its catalytic benefit. We welcome both original research articles and reviews, and encourage you to contact us for preliminary inquiries.













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