Special Issue

SH2 and SH3 Domains: Cellular Signalling and Diseases

Message from the Guest Editor

SH2 and SH3 domains are small noncatalytic protein modules that are conserved among a series of proteins. They couple growth factor receptors to intracellular signal transduction pathways by mediating protein–protein interactions. While SH2 domains bind tyrosine-phosphorylated polypeptides, SH3 domains interact with ligands that possess short proline-rich motifs. It has been well-established how enzymes such as the Src tyrosine kinase family, phospholipase C-gamma, or STAT proteins are regulated by the assistance of SH2 and SH3 domains. These domains are also present in proteins without any catalytic activity, including adaptor, anchor, docking, or scaffold proteins, which serve to link tyrosine kinases to specific target proteins. Although the basal mechanism of action of SH2 and SH3 domains has been well-known for some time, recent findings have suggested a role of both SH2 and SH3 domains in lipid binding. In addition, direct tyrosine phosphorylation of the SH3 domains has emerged as a novel regulatory mechanism.

In this Special Issue, we will provide an open access platform for reviews and original research papers describing all aspects of research on SH2 and SH3 domains.

Guest Editor

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Deadline for manuscript submissions

closed (28 February 2021)

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About the Journal

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).