

Special Issue

Hydrogen Sulfide (H₂S)-Donor Molecules: Chemical, Biological, and Therapeutical Tools

Message from the Guest Editors

Hydrogen sulfide (H₂S) has been recognized as the third endogenous pleiotropic gasotransmitter, along with nitric oxide and carbon monoxide, playing a significant role in many biological processes. Since endogenous concentrations of this gaseous signaling molecule are generally low, to better define its physio-pathological functions, exogenous sources of H₂S are needed. On this basis, the challenge for many research groups is the development of H₂S-donor molecules that are able to release H₂S in a tightly controlled way, mimicking the physiological production of this gas. Thus, the identification of novel chemical tools could be useful to further investigate the involvement of H₂S both in health and disease states. The aim of this Special Issue is to collect novel research regarding H₂S-releasing compounds as innovative pharmacological tools and to provide further evidence of the crucial role of H₂S in physiological and pathological processes. **Keywords:** hydrogen sulfide (H₂S); H₂S-donors; hybrids; pharmacological tools; cell signaling

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