



# Oxidative Medicine and Cellular Longevity

Special Issue on

## Hydrogen Sulfide Signaling in Oxidative Stress and Aging Development

# CALL FOR PAPERS

Hydrogen sulfide ( $H_2S$ ) has emerged to be one important member of the family of gasotransmitters, together with nitric oxide and carbon monoxide. The ubiquitous distribution of  $H_2S$ -producing enzymes and the potent chemical reactivities of  $H_2S$  in biological system make this molecule unique in regulating cellular and organ functions in both health and diseases.  $H_2S$ -induced *S*-sulfhydration of its targeted proteins is a novel and important signaling mechanism involving the posttranslational modification of proteins. Pathophysiological abnormalities, related to altered  $H_2S$  metabolism and function, have been demonstrated in many diseases.  $H_2S$  also possesses a great therapeutic potential in age-associated diseases by modulation of oxidative stress. The correlation of  $H_2S$  metabolism with physiological and pathophysiological changes that contribute to redox homeostasis and aging has been largely unknown.

We invite investigators to submit original research articles as well as review articles highlighting the novel discoveries and recent progress in relation to  $H_2S$  signaling in redox homeostasis, inflammation, cellular energetics, cell growth and apoptosis, interaction with other gasotransmitters, protein and DNA modification, age-related disorders, and so on. The articles that dissect the multitude of  $H_2S$  effects at the molecular, cellular, and system levels in humans and various animal disease models are especially welcomed.

Potential topics include, but are not limited to:

- ▶  $H_2S$  signaling in oxidative stress
- ▶  $H_2S$  signaling in cellular senescence and aging development
- ▶ *S*-sulfhydration regulation of proteins
- ▶ Recent advance on the analytical methods for detection of endogenous  $H_2S$
- ▶ Current strategies to regulate  $H_2S$ -producing enzyme and alter  $H_2S$  production
- ▶ Development of new  $H_2S$  donors and  $H_2S$  probes
- ▶ Roles of  $H_2S$  in mitochondrial functions
- ▶ Pathological implication of  $H_2S$  in humans and animal disease models

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/omcl/hssso/>.

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