Special Issue

Advances in Aging-Related Hyperphosphatemia

Message from the Guest Editors

Phosphate is essential in cellular physiology. Accumulating evidence suggests that dysregulated phosphate homeostasis—particularly elevations in systemic phosphate levels or hyperphosphatemia—may act as an underrecognized driver of aging-related pathology. Age-associated alterations to the bone–kidney endocrine axis, including fibroblast growth factor 23 (FGF23), Klotho, parathyroid hormone, and vitamin D, contribute to this systemic phosphate imbalance. Hyperphosphatemia directly affects cellular function by promoting oxidative stress, mitochondrial dysfunction, inflammation, and cellular senescence and has been associated with cardiovascular injury, muscle dysfunction, and bone fragility, among other issues. Despite growing interest in this field, the key molecular mechanisms linking phosphate toxicity to cellular dysfunction remain incompletely understood.
This Special Issue will highlight recent advances in the cellular and molecular basis of age-related hyperphosphatemia, its contribution to age-related diseases, the underlying mechanisms of action involved, the regulation of miRNAs, and their potential use as disease biomarkers.

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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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