

## Special Issue

# Magnesium Homeostasis and Magnesium Transporters in Human Health

### Message from the Guest Editors

Magnesium (Mg) is essential for cell functions, such as ATP production, protein/DNA synthesis, protein activity, and mitochondrial function. Mg plays critical roles in heart rhythm, muscle contraction, and blood pressure. A significant decline in Mg intake has been reported in developed countries because of the increased consumption of processed food and filtered/deionized water, which can lead to hypomagnesemia (HypoMg). HypoMg is a predictor for cardiovascular and all-cause mortality and is commonly observed in cardiovascular diseases (CVD, such as heart failure, hypertension, arrhythmias, and diabetic cardiomyopathy). On the other hand, Mg supplementation has shown significant therapeutic effects in these conditions. Nevertheless, compared to Ca<sup>2+</sup>, Mg homeostasis and transporters are much less investigated. HypoMg has been associated with inflammation and oxidative stress for decades, both of which contribute to CVD. Understanding how Mg and its transporters are regulated in CVD can help develop easily translated therapy with Mg supplementation and new therapeutic strategies targeting Mg transporters.

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### Deadline for manuscript submissions

closed (5 November 2024)



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