



## Matrix Metalloproteinases in Health and Disease in the Times of COVID-19

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### Message from the Guest Editors

Dear Colleagues,

The pandemic triggered by SARS-CoV-2 (the virus causative of COVID-19) highlights the urgent need to advance our understanding of the interactions between emerging pathogens and their host, as a way to catalyze the design of biomedical and social interventions to mitigate and treat infections. Pathogen–host interactions involve target tissues as well as the immune system and proteinases, enzymes that catalyze the cleavage of specific protein substrates. The role that proteinases play in these interactions is unclear. Matrix metalloproteinases (MMPs) catalyze the cleavage of extracellular matrix components, growth factors, cytokines, and receptors thereof to govern immune responses; cardiovascular function; and the development of cardiovascular diseases, diabetes, cancer, and rheumatoid arthritis (a chronic autoimmune disorder). Individuals with these comorbidities have an increased susceptibility to developing severe COVID-19 illnesses. The roles played by proteinases (MMPs in particular) in the regulation of SARS-CoV-2–host interactions and in increasing the susceptibility to COVID-19 illnesses are largely unknown. [...]





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