# Special Issue

## Carbonic Anhydrases: A Superfamily of Ubiquitous Enzymes 2.0

### Message from the Guest Editor

The CA superfamily can bind molecules known as “activators” (CAA) through the middle-exit part of the active site. CAA are biogenic amines (histamine, serotonin, and catecholamines), amino acids, oligopeptides, or small proteins. CAAs enhance the catalytic constant (kcat) of the enzyme, with no effect on the KM. CAAs may have pharmacologic applications in the therapy of memory-related disorders, neurodegenerative diseases (Alzheimer’s disease), and genetic CA-deficiency syndromes. Moreover, since most bacteria are incredibly abundant in environments that are hostile to all other forms of life, CAs from extremophiles are exciting candidates for industrial and medical applications, such as the post-combustion carbon-capture process and the realization of artificial lungs and biosensors. This Special Issue is dedicated to all the important advances in the field of carbonic anhydrases, their inhibitors and activators, and their potential use in medical and biotechnological applications, since the CA superfamily represents a very promising target for the scientific community for its ubiquity and crucial role in many physiologic and pathologic processes.

### Guest Editor

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### Deadline for manuscript submissions

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