

Special Issue

Advances in Glyco-Based Anticancer Agents

Message from the Guest Editor

In the 1930s, Otto Warburg discovered that cancer cells exhibit high glucose uptake and lactic acid secretion, even in the presence of oxygen, a phenomenon known as the Warburg effect or aerobic glycolysis. Due to increased metabolic activity, enzymes and transporters such as carbonic anhydrases, glucose transporters, and kinases are often overexpressed in tumor cells.

Inhibiting these glycolysis-related targets has shown promise as a cancer treatment strategy. A successful approach for designing enzyme and transporter inhibitors involves attaching carbohydrate moieties to pharmacophores, resulting in novel glycoinhibitors and modulators. These carbohydrates alter the physicochemical properties of the agents, and their stereochemical diversity allows for nuanced interactions with targets.

Authors are invited to submit original research and reviews on the design of glycol-inhibitors and modulators targeting the Warburg effect in cancer. Topics include natural and synthetic glycosides targeting energy metabolism, studies on glycosides as antitumor agents (both in vitro and in vivo), and docking simulations of glycosides interacting with Warburg effect-related targets.

Guest Editor

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