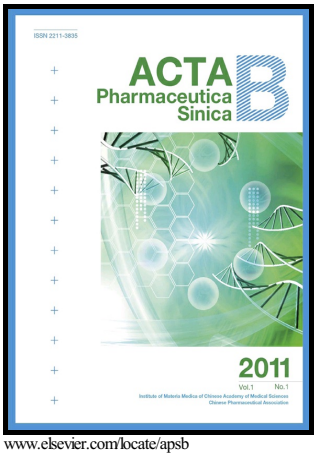

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Ganglioside GD3 Synthase (GD3S), a novel cancer drug target

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Abstract Gangliosides are a class of important glycosphingolipids containing sialic acid that are widely distributed on the outer surface of cells and are abundantly distributed in brain tissue. Disialoganglioside with three glycosyl groups (GD3) and disialoganglioside with two glycosyl groups (GD2) are markedly increased in pathological conditions such as cancers and neurodegenerative diseases. GD3 and GD2 were found to play important roles in cancers by mediating cell proliferation, migration, invasion, adhesion, angiogenesis and in preventing immunosuppression of tumors. GD3 synthase (GD3S) is the regulatory enzyme of GD3 and GD2 synthesis,