Gentiopicroside is a secoiridoid glycoside compound originally found in several species of *Gentiana* and *Cephalaria* plants. This compound exhibits anti-inflammatory, antioxidative, and analgesic properties. Gentiopicroside inhibits expression of NMDA receptors in the anterior cingulate cortex, which may be responsible for its ability to inhibit morphine conditioned place preference in animal models. Gentiopicroside also suppresses arachidonic acid and PMA-induced superoxide generation and, separately, caspase-mediated apoptosis, displaying hepatoprotective benefits in an animal model of liver failure.