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Lithium Carbonate

National Cancer Institute

Source

National Cancer Institute. *Lithium Carbonate*. NCI Thesaurus. Code C1318.

The carbonate salt of lithium, a soft alkali metal, with antimanic and hematopoietic activities. Lithium interferes with transmembrane sodium exchange in nerve cells by affecting sodium, potassium-stimulated adenosine triphosphatase (Na⁺, K⁺-ATPase); alters the release of neurotransmitters; affects cyclic adenosine monophosphate (cAMP) concentrations; and blocks inositol metabolism resulting in depletion of cellular inositol and inhibition of phospholipase C-mediated signal transduction. The exact mechanism through which lithium exerts its mood-stabilizing effect has not been established. In addition, lithium stimulates granulocytopoiesis and appears to increase the level of pluripotent hematopoietic stem cells by stimulating the release of hematopoietic cytokines and/or directly acting on hematopoietic stem cells.