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Xinmailong

National Cancer Institute

Source

National Cancer Institute. *Xinmailong*. NCI Thesaurus. Code C157492.

A Chinese medicine composed of bioactive composite extracted from *Periplaneta americana* consisting of adenosine, inosine, protocatechuic acid, and pyroglutamate dipeptides, with potential cardioprotective activity. Upon administration, xinmailong may inhibit the phosphorylation of mitogen-activated protein kinase 3/extracellular signal-regulated kinase 1 (MAPK3/ERK1), mitogen-activated protein kinase 1 (MAPK1)/ERK2, AKT, and glycogen synthase kinase-3 beta (GSK3-beta), thereby decreasing the expression of transcription factor GATA-4. GATA-4 is a key regulator of cardiac hypertrophy, mediating gene expressions in response to heart failure (HF) stimuli by activating a variety of HF-associated genes, such as atrial natriuretic factor (ANF), B-type natriuretic peptide (BNP), and beta-myosin heavy chain (beta-MHC). Decreased expression of GATA-4 may limit the transcription of these genes and offer protection against certain types of HF.