

[Open Peer Review on Qeios](#)

Reparixin

National Cancer Institute

Source

National Cancer Institute. *Reparixin*. NCI Thesaurus. Code C66515.

An orally available inhibitor of CXC chemokine receptor types 1 (CXCR1) and 2 (CXCR2), with potential antineoplastic activity. Upon administration, reparixin allosterically binds to CXCR1 and prevents CXCR1 activation by its ligand interleukin 8 (IL-8 or CXCL8). This may cause cancer stem cell (CSC) apoptosis and may inhibit tumor cell progression and metastasis. CXCR1, overexpressed on CSCs, plays a key role in CSC survival and the ability of CSC to self-renew; it is also linked to tumor resistance to chemotherapy. Inhibition of the IL-8/CXCR1 interaction also potentiates the cytotoxic effect of chemotherapeutic agents. In addition, reparixin inhibits CXCR2 activation and may reduce both neutrophil recruitment and vascular permeability during inflammation or injury.