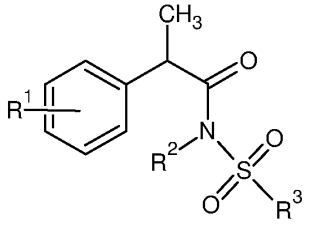
CLAIMS

1. A CXCL8 inhibitor, a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof, for use in the prevention or treatment of cancer-related fatigue.

2. The CXCL8 inhibitor for use as claimed in claim 1, wherein said CXCL8 inhibitor is a CXCR1 inhibitor or a dual CXCR1 and CXCR2 inhibitor.

3. The CXCL8 inhibitor for use as claimed in claim 1 or 2, wherein said CXCL8 inhibitor is a small molecule, antibody or peptide.

4. The CXCL8 inhibitor for use as claimed in claims 1 to 3, wherein said CXCL8 inhibitor is a small molecular weight molecule represented by the following formula (I):



(I)

wherein

R^1 is selected from a linear or branched C_1-C_6 alkyl, benzoyl, phenoxy, and trifluoromethanesulfonyloxy;

R^2 is selected from hydrogen and linear or branched C_1-C_3 alkyl; and

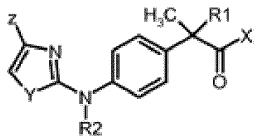
R^3 is a linear or branched C_1-C_6 alkyl or trifluoromethyl,

a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof.

5. The CXCL8 inhibitor for use as claimed in claims 1 to 4, wherein said CXCL8 inhibitor is selected from:
- 2-(4-isobutylphenyl)propionyl methansulfonamide, preferably R-(-)-2-(4-isobutylphenyl)propionyl methansulfonamide and pharmaceutically acceptable salts thereof, preferably the lysine salt thereof, and
- 2-(4-trifluoromethanesulfonyloxy)phenyl]-N-methanesulfonyl propionamide, preferably R(-)-2-(4-trifluoromethanesulfonyloxy)phenyl]-N-methanesulfonyl propionamide and pharmaceutically acceptable salts thereof, in particular the sodium salt thereof.

6. The CXCL8 inhibitor for use as claimed in claims 1 to 5, wherein said CXCL8 inhibitor is R-(-)-2-(4-isobutylphenyl)propionyl methansulfonamide or a pharmaceutically acceptable salt thereof, preferably the lysine salt thereof.

7. The CXCL8 inhibitor for use as claimed in claims 1 to 3, wherein said CXCL8 inhibitor is represented by the following formula (II):



(II)

wherein:

R1 is hydrogen;

X is OH;

R2 is hydrogen or linear C1-C4 alkyl,

Y is a heteroatom selected from S, O and N,

Z is selected from linear or branched C1-C4 alkyl, linear or branched C1-C4 alkoxy, halo C1-C3 alkyl and halo C1-C3 alkoxy

a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof.

8. The CXCL8 inhibitor for use as claimed in claim 7, wherein said CXCL8 inhibitor is 2-(4-{[4-(trifluoromethyl)-1,3-thiazol-2-yl]amino}phenyl)propanoic acid, preferably (2S)-2-(4-{[4-(trifluoromethyl)-1,3-thiazol-2-yl] amino} phenyl) propanoic acid or the sodium salt thereof.

9. The CXCL8 inhibitor for use as claimed in claims 1 to 8, wherein said patient is undergoing an antitumoral treatment and/or said cancer-related fatigue is caused or worsened by an anti-tumoral treatment.

10. The CXCL8 inhibitor for use as claimed in claims 1 to 9, wherein said anti-tumoral treatment is selected from chemotherapy, radiotherapy and biological therapy.

11. The CXCL8 inhibitor for use as claimed in claim 10, wherein said radiotherapy is selected from external radiation therapy (such as e.g., intraoperative radiotherapy and prophylactic cranial irradiation (PC), intensity-modulated radiation therapy (IMRT), stereotactic (or stereotaxic) radiosurgery, three-dimensional (3-D) conformal radiation

therapy, Volumetric modulated arc therapy (VMAT), particle therapy, Auger therapy), internal radiation therapy (such as e.g., interstitial radiation therapy, intracavitary or intraluminal radiation therapy), and systemic radiation therapy (such as e.g., Iodine-131 (^{131}I), Radium-223 (^{223}Ra), Strontium-89 (^{89}Sr), Phosphorus-32 (^{32}P), Yttrium-90 (^{90}Y) therapy).

12. The CXCL8 inhibitor for use as claimed in claim 10, wherein said chemotherapy is an antitumoral treatment with a chemotherapeutic agent selected from alkylating agents, anthracyclines, cytoskeletal disruptors (taxanes), antimetabolites, topoisomerase I and II inhibitors, kinase inhibitors, platinum-based agents, and vinca alkaloids.

13. The CXCL8 inhibitor for use as claimed in claim 12, wherein said chemotherapeutic agent is selected from (i) cyclophosphamide, mechlorethamine, chlorambucil, melphalan, (ii) doxorubicin, epirubicin, mitoxantrone, pixantrone, losoxantrone, daunorubicin, (iii) paclitaxel, docetaxel, abraxane, taxotere, (iv) azacitidine, azathioprine, capecitabine, cladribine, cytarabine, doxifluridine, hydroxyurea, methotrexate; 6-mercaptopurine, 6-thioguanine, fludarabine phosphate, pentostatin, pemetrexed, 5-fluorouracil, 5-fluorodeoxyuridine, gemcitabine, (v) irinotecan, topotecan, etoposide, teniposide, tafluposide, (vi) bortezomib, erlotinib, gefitinib, imatinib, vemurafenib, vismodegib, (vii) carboplatin, cisplatin, oxaliplatin, (viii) vinblastine, vincristine, vindesine, and vinorelbine, preferably, it is cisplatin, paclitaxel, docetaxel, abraxane, taxotere, 5-fluorouracil, more more preferably it is paclitaxel.

14. The CXCL8 inhibitor for use as claimed in claim 10, wherein said biological therapy is immunotherapy.

15. A pharmaceutical composition comprising (i) a CXCL8 inhibitor, a salt thereof with a pharmaceutically acceptable organic or inorganic acid or base, or a prodrug thereof, as defined in any one of claims 1 to 8, and (ii) at least one inert pharmaceutically acceptable excipient, for use in the prevention or treatment of cancer-related fatigue in a cancer patient.