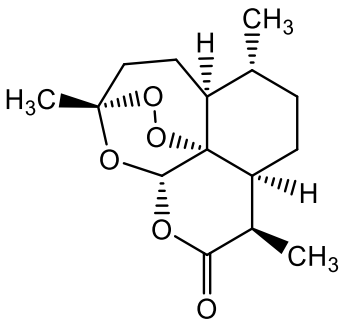
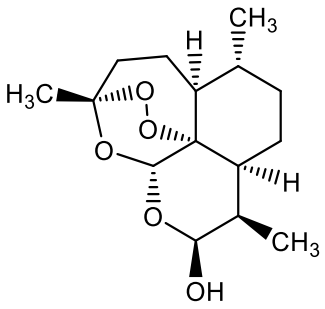
Amended Claims

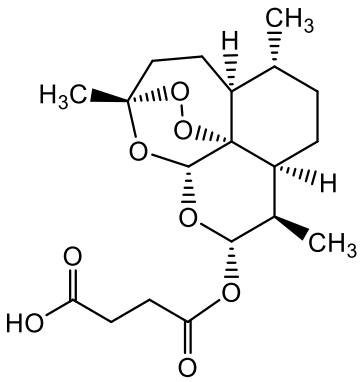
1. A pharmaceutical composition comprising
   a) an artemisinin compound (**1**) selected from



artemisinin (**1a**)



dihydroartemisinin (**1b**)



artesunate (**1e**)

   or a pharmaceutically acceptable salt, cocrystal, or solvate thereof;
   b) 5-aminolevulinic acid (**2**), methyl-5-aminolevulinic acid (**2b**), or a pharmaceutically acceptable salt or solvate thereof; and
   c) at least one chemotherapeutic agent selected from the group consisting of temozolomide, lomustine, cisplatin, and 5-fluorouracil.

2. The pharmaceutical composition according toclaim 1, wherein a molar ratio of the artemisinin compound (**1**) and the 5-aminolevulinic acid (**2**) or the methyl-5-aminolevulinic acid (**2b**) is in a range of 1:5 to 1:5000.

3. The pharmaceutical composition according to claim 1 or 2, wherein the pharmaceutical composition further comprises a pharmaceutically acceptable carrier, excipient and/or diluent.

4. Use of a pharmaceutical composition according to any one of the claims 1 – 3 in the manufacture of a medicament for the prophylaxis and/or treatment of hematopoietic cancers, brain cancer, pancreatic cancer, liver cancer, breast cancer, and lung cancer and preferably brain cancer.

5. The use according to claim 4, wherein the pharmaceutical composition is in a form of a tablet, capsule, syrup, solution, suspension, emulsion, or gel.

6. The use according to claim 4 or 5, wherein the pharmaceutical composition is administered by oral, intrathecal, intravenous, subcutaneous, parenteral application

or by inhalation.

7. The use according to any one of the claims 4 - 6, wherein the artemisinin compound (**1**) is administered in a range of 0.01 to 100 mg/kg per body weight per day and the 5-aminolevulinic acid or the methyl-5-aminolevulinic acid is administered in a range of 0.01 to 200 mg/kg per body weight per day.

8. The use according to any one of the claims 4 - 7, wherein the at least one anti-glioblastoma drug is administered in a range of 0.01 to 100 mg/kg per body weight per day.

9. The use according to any one of the claims 4 - 8, wherein the brain cancer is selected from subtypes proneural (PN), mesenchymal (MES), and classical (CL) glioblastoma.

10. The use according to any one of the claims 4 - 9, wherein the prophylaxis and/or treatment of hematopoietic cancers, brain cancer, pancreatic cancer, liver cancer, breast cancer, and lung cancer and preferably brain cancer is performed in combination with a radiotherapy, immunotherapy, electromagnetic field therapy, hyperthermia therapy, chemotherapy, cancer immunotherapy and/or any other small molecule based therapy.