CLAIMS

1) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament for the treatment of solid tumors such as cancer, wherein the medicament is to be co-administrated with 5-fluorouracil (5-FU) according to the following regimen :

a) On Day 1, administering an IV bolus containing 10-1000 mg/m2 (of BSA) 5-FU (or an analog or prodrug thereof), followed, either simultaneously or after a period of 10 min - 4 hours, by

b) administering one or more IV boluses, each containing 5 - 1000 mg/m2 [6R]-5,10-methylenetetrahydrofolate, followed by

c) optionally administering one IV bolus containing 5 - 1000 mg/m2 (of BSA) [6R]-5,10-methylene-tetrahydrofolate before the end of Day 1, followed by

d) On Day 2, administering an IV bolus containing 10-1000 mg/m2 (of BSA) 5-FU (or an analog or prodrug thereof), followed, either simultaneously or after a period of 10 min - 4 hours, by

e) optionally administering one or more IV boluses each containing 5 - 1000 mg/m2 (of BSA) [6R]-5,10-methylene-tetrahydrofolate,

wherein step b) is optionally repeated up to 4 times on Day 1 with an interval of 10 min –60 min between each bolus being administered, and wherein step e) is optionally repeated up to 4 times on Day 2 with an interval of between 10 min – 60 min between each bolus being administered, and wherein all steps a) – e) are optionally repeated every 2 weeks for up to eight (8) cycles, i.e. up to sixteen (16) weeks.

2) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 1, wherein the solid tumor is a cancer form selected from colon cancer, stomach cancer, breast cancer, bowel cancer, gallbladder cancer, lung cancer (specifically adenocarcinoma), colorectal cancer (CRC) including metastatic CRC, head and neck cancer, liver cancer, osteosarcoma and pancreatic cancer.

3) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 1 or 2 wherein the solid tumor is a colorectal cancer (CRC) including metastatic CRC.

4) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of claim 1-3, wherein step a) is preceded by administering one or more anticancer drugs on Day 1, either as an IV bolus or as an infusion over a period of 1-4 hours.

5) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 3 or 4 wherein the anticancer drug is selected from oxaliplatin, irinotecan (CPT11) and bevacizumab (Avastin).

6) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of the preceding claims wherein at least two boluses [6R]-5,10-methylenetetrahydrofolate are administered on Day 1 under step b).

7) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of the preceding claims wherein at least two boluses [6R]-5,10- methylenetetrahydrofolate are administered on Day 2 under step e).

8) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 6 wherein up to four boluses [6R]-5,10-methylenetetrahydrofolate are administered with an interval of 20-30 min between each bolus.

9) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 7 wherein up to four boluses [6R]-5,10-methylenetetrahydrofolate are administered with an interval of 20-30 min between each bolus.

10) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of the preceding claims wherein the [6R]-5,10-methylenetetrahydrofolate is employed as a solid form which is soluble in water, such as a lyophilisate or a salt, optionally stabilized by one or more suitable excipients and/or antioxidants such as citric acid or ascorbic acid or salt forms thereof.

11) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of the preceding claims wherein the [6R]-5,10-methylenetetrahydrofolate
has a diastereomeric purity of >98% d.e.

12) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to any one of the preceding claims wherein the 5-FU analog or prodrug is selected from fluorinated pyrimidine bases such as capecitabine (Xeloda), ie. N4-pentyloxycarbonyl-5'-deoxy-5-fluorocytidine, tegafur, 5-fluoro-pyrimidinone, UFT, doxifluridine, 2'-deoxy-5 fluorouridine, 5'-deoxy-5-fluorouridine, 1-(2′-oxopropyl)-5-FU, and alkyl-carbonyl-5-FU, BOF-A2, ftorafur(TS-1), and S-1.

13) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament for use in the prevention or retarding of the progression in a human of solid tumors, including cancer, which comprises performing and repeating steps a) to e) according to any one of claims 1-12 over a total treatment period of at least 8 weeks.

14) Use of [6R]-5,10-methylene-tetrahydrofolate in the manufacture of a medicament according to claim 13, whereby steps a) to e) according to any one of claims 1-12 are performed and repeated over a total treatment period of at least 16 weeks, and whereby no statistically significant progression of said solid tumors is observed between 8 and 16 weeks after initializing treatment.