

CLAIMS

1. Composition for use in the prevention and/or treatment of cancer in a subject, the composition comprising an active agent, said active agent containing
5 the amino acids leucine, isoleucine, valine, threonine, lysine and citric acid, succinic acid, malic acid.
2. Composition for use according to claim 1, wherein said cancer is selected in the group consisting of adenocarcinoma, melanoma, colorectal carcinoma and breast cancer.
- 10 3. Composition for use according to claim 1 or claim 2, wherein the weight ratio between the sum of citric acid, malic acid, succinic acid and the sum of the branched chain amino acids leucine, isoleucine, valine plus lysine and threonine is comprised between 0.05 and 0.3, preferably between 0.1 and 0.25.
4. Composition for use according to any one of the preceding claims,
15 wherein the weight ratio between the overall amount of citric acid, malic acid, succinic acid and the overall amount of the branched chain amino acids leucine, isoleucine, valine is comprised between 0.1 and 0.4, preferably between 0.15 and 0.35.
5. Composition for use according to any one of the preceding claims,
20 wherein the weight ratio between citric acid and the sum of malic acid and succinic acid is comprised between 1.0 and 4.0, preferably between 1.5 and 2.5.
6. Composition for use according to any one of the preceding claims, wherein the citric acid: malic acid: succinic acid weight ratio is comprised between 10:1:1 and 2:1.5:1.5, preferably between 7:1:1 and 1.5:1:1, more
25 preferably between 5:1:1 and 3:1:1.
7. Composition for use according to any one of the preceding claims, wherein said active agent further comprises at least one amino acid selected in the group consisting of histidine, phenylalanine, methionine, tryptophan, tyrosine, cysteine.
- 30 8. Composition for use according to any one of the preceding claims, wherein said active agent further comprises histidine, phenylalanine, methionine, tryptophan, cysteine and optionally tyrosine.
9. Composition for use according to any one of the preceding claims, wherein the ratio between the overall molar amount of citric acid, malic acid,
35 succinic acid and the overall molar amount of methionine, phenylalanine,

histidine and tryptophan is higher than 1.35.

10 **10.** Composition for use according to any one of the preceding claims,
wherein the ratio between the overall molar amount of the three acids citric acid,
succinic acid, malic acid and the overall molar amount of lysine and threonine is
5 comprised between 0.10 and 0.70, preferably between 0.15 and 0.55.

11. Composition for use according to any one of the preceding claims,
wherein the weight or molar amount of citric acid is higher than the overall weight
or molar amount of both malic acid and succinic acid.

10 **12.** Composition for use according to any one of the preceding claims,
wherein the weight ratio between leucine and citric acid is comprised between 5
and 1, preferably between 2.50 and 3.50.

13. Composition for use according to any one of the preceding claims,
wherein said composition is free of arginine.

15 **14.** Composition for use according to any one of the preceding claims,
wherein said composition is free of serine, proline, alanine.

15. Combined preparation comprising the composition according to any
one of claims 1 to 14 and at least one chemotherapeutic agent for simultaneous,
separate or sequential use in preventing and/or treating cancer in a subject.