WHAT IS CLAIMED IS:

1. A lysine demethylase (LSD) inhibitor and a protein kinase C theta (PKC-θ) inhibitor for use in treating or preventing a cancer or for use in inhibiting or preventing recurrence of a cancer that comprises a *LSD*- and *PKC-θ*-overexpressing cancer stem cell (CSC).

2. A LSD inhibitor and PKC-θ inhibitor for use according to claim 1, wherein the cancer is a non-metastatic cancer.

3. A LSD inhibitor and PKC-θ inhibitor for use according to claim 1, wherein the cancer is a metastatic cancer.

4. A lysine demethylase (LSD) inhibitor and a protein kinase C theta (PKC-θ) inhibitor and a cancer therapy agent for use in treating or preventing a cancer that comprises a *LSD*- and *PKC-θ*-overexpressing cancer stem cell (CSC), wherein the cancer therapy agent inhibits proliferation, survival or viability of a non-CSC tumor cell, and wherein the LSD inhibitor, PKC-θ inhibitor and cancer therapeutic agent are formulated for concurrent administration.

5. A LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to claim 4, wherein the cancer therapy agent is selected from a chemotherapy agent, a hormone ablation therapy agent, a pro-apoptosis therapy agent and an immunotherapy agent.

6. A LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to claim 4 or claim 5, wherein the cancer therapy agent targets rapidly dividing cells or disrupts the cell cycle or cell division.

7. A LSD inhibitor and PKC-θ inhibitor for use according to any one of claim 1 to 3, or a LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to any one of claims 4 to 6, wherein the cancer is selected from breast, prostate, lung, bladder, pancreatic, colon, melanoma, liver or glioma cancer.

8. A LSD inhibitor and PKC-θ inhibitor for use according to any one of claim 1 to 3, or a LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to any one of claims 4 to 6, wherein the cancer is breast cancer.

9. A LSD inhibitor and PKC-θ inhibitor for use according to any one of claim 1 to 3, or a LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to any one of claims 4 to 6, wherein the cancer comprises a cancer stem cell (CSC).

10. A LSD inhibitor and PKC-θ inhibitor for use according to any one of claim 1 to 3, or a LSD inhibitor, PKC-θ inhibitor and cancer therapy agent for use according to any one of claims 4 to 6, wherein the CSC has abrogated expression of Sox2.

11. Use of a lysine demethylase (LSD) inhibitor and a protein kinase C theta (PKC-θ) inhibitor in the manufacture of a medicament for treating or preventing a cancer

or for inhibiting or preventing recurrence of a cancer that comprises a *LSD*- and *PKC-θ*-overexpressing cancer stem cell (CSC).

12. The use according to claim 11, wherein the cancer is a non-metastatic cancer.

13. The use according to claim 11, wherein the cancer is a metastatic cancer.

14. Use of a lysine demethylase (LSD) inhibitor and a protein kinase C theta (PKC-θ) inhibitor and a cancer therapy agent that inhibits the proliferation, survival or viability of the non-CSC tumor cell, in the manufacture of a medicament for treating or preventing a cancer that comprises a *LSD*- and *PKC-θ*-overexpressing cancer stem cell (CSC), wherein the LSD inhibitor, PKC-θ inhibitor and cancer therapeutic agent are formulated for concurrent administration.

15. The use according to claim 14, wherein the cancer therapy agent is selected from a chemotherapy agent, a hormone ablation therapy agent, a pro-apoptosis therapy agent and an immunotherapy agent.

16. The use according to claim 14 or claim 15, wherein the cancer therapy agent targets rapidly dividing cells or disrupts the cell cycle or cell division.

17. The use according to any one of claim 11 to 13, or the use according to any one of claims 14 to 16, wherein the cancer is selected from breast, prostate, lung, bladder, pancreatic, colon, melanoma, liver or glioma cancer.

18. The use according to any one of claim 11 to 13, or the use according to any one of claims 14 to 16, wherein the cancer is breast cancer.

19. The use according to any one of claim 11 to 13, or the use according to any one of claims 14 to 16, wherein the CSC has abrogated expression of Sox2.