WHAT IS CLAIMED IS:

1. Use of a pharmaceutical composition comprising an arginase inhibitor in the preparation of a medicament for the treatment of cancer, wherein the pharmaceutical composition is to be administered conjointly with an adoptive immunotherapy.

2. The use according to claim 1, wherein the cancer is selected from acute myeloid leukemia (AML), bladder cancer, breast cancer, colorectal cancer, chronic myelogenous leukemia (CML), esophageal cancer, gastric cancer, lung cancer, melanoma, mesothelioma, non-small cell lung carcinoma (NSCLC), ovarian cancer, pancreatic cancer, prostate cancer, renal cancer, skin cancer, bile duct cancer, multiple myeloma, adrenocortical carcinoma, head and neck cancer, and endometrial cancer.

3. The use according to claim 1, wherein the cancer is selected from bladder cancer, colorectal cancer, esophageal cancer, gastric cancer, lung cancer, melanoma, mesothelioma, non-small cell lung carcinoma (NSCLC), ovarian cancer, renal cancer, bile duct cancer, multiple myeloma, adrenocortical carcinoma, head and neck cancer, and endometrial cancer.

4. The use according to any one of claims 1-3, wherein the adoptive cell transfer includes T cells.

5. The use according to claim 4, wherein the adoptive T-cell transfer involves transfer of cytotoxic T cells.

6. The use according to claim 5, wherein the cytotoxic T cells are CD8+ T cells.

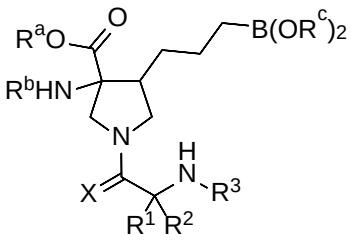
7. The use according to claim 5, wherein the cytotoxic T cells are CD4+ T cells.

8. The use according to claim 5, wherein the cytotoxic T cells comprise both CD8+ T cells and CD4+ T cells.

9. The use according to any one of claims 1-3, wherein the adoptive cell transfer includes Natural Killer (NK) cells.

10. The use according to any one of claims 1-9, wherein the medicament further comprises a PD-1 inhibitor or a PD-L1 inhibitor to be administered.

11. The use according to any one of claims 1 to 10, wherein the arginase inhibitor is a compound having the structure of Formula (VI):



(VI);

or a pharmaceutically acceptable salt thereof;

wherein:

R^a is H or is selected from optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, heterocycloalkyl, (cycloalkyl)alkyl, (heterocycloalkyl)alkyl, aryl, heteroaryl, aralkyl, and heteroaralkyl;

R^b is H or is selected from optionally substituted alkyl, alkenyl, alkynyl, acyl, -C(O)O(alkyl), and -C(O)O(aryl);

each R^c is independently selected from H or alkyl, or two occurrences of R^c are taken together with the intervening –O-B-O- atoms to form an optionally substituted boron-containing ring;

X is O or S;

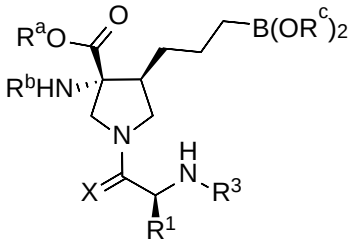
R^1 and R^2 are each independently selected from H and optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, (cycloalkyl)alkyl, heterocycloalkyl, (heterocycloalkyl)alkyl, aryl, heteroaryl, aralkyl, and heteroaralkyl;

R^1 and R^2 are taken together with the intervening atoms to form an optionally substituted 5- to 7-membered ring; and

R^3 is H or optionally substituted alkyl;

or R^1 and R^3 are taken together with the intervening atoms to form an optionally substituted 5- to 7-membered ring.

12. The use according to claim 11 wherein the arginase inhibitor is a compound having the structure of Formula (VIe):



(VIe).

13. The use according to claim 11 or claim 12, wherein R^a is H and R^b is H.

14. The use according to any one of claims 11-13, wherein R^c is H.

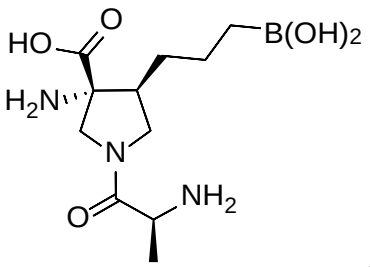
15. The use according to any one of claims 11-14, wherein R^3 is H.

16. The use according to any one of claims 11-15, wherein R^1 is H.

17. The use according to any one of claims 11-15, wherein R^1 is alkyl, optionally substituted by one or more substituents independently selected from hydroxy, halo, haloalkyl, alkoxy, -SH, -S-(alkyl), -SeH, -Se-(alkyl), aryl, heteroaryl, cycloalkyl, heterocycloalkyl, amino, carboxylic acid, ester, guanidino, and amido.

18. The use according to any one of claims 11-15, wherein R^1 is an amino acid side chain of Arg, His, Lys, Asp, Glu, Ser, Thr, Asn, Gln, Cys, Sec, Gly, Ala, Val, Ile, Leu, Met, Phe, Tyr, or Trp.

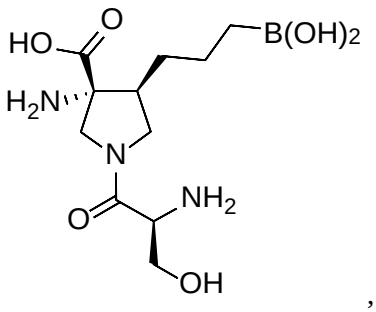
19. The use according to any one of claims 1 to 10, wherein the arginase inhibitor is a compound having the structure,



,

or a pharmaceutically acceptable salt thereof.

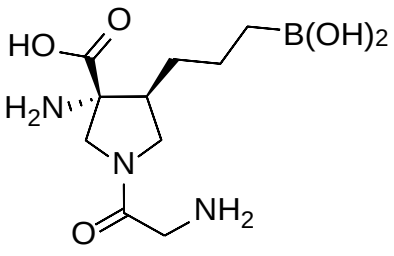
20. The use according to any one of claims 1 to 10, wherein the arginase inhibitor is a compound having the structure,



,

or a pharmaceutically acceptable salt thereof.

21. The use according to any one of claims 1 to 10, wherein the arginase inhibitor is a compound having the structure,



,

or a pharmaceutically acceptable salt thereof.