CLAIMS

1. A natural killer cell, comprising isolated exogenous mitochondria.

2. The natural killer cell of claim 1, wherein the isolated exogenous mitochondria are obtained from muscle cells, hepatocytes, fibroblasts, epithelial cells, neurons, adipocytes, osteocytes, leukocytes, lymphocytes, or mucosal cells.

3. The natural killer cell of claim 1 or claim 2, wherein the isolated exogenous mitochondria are contained in an amount of 1 to 10^3 per natural killer cell.

4. The natural killer cell of any preceding claim, wherein the isolated exogenous mitochondria are delivered into the natural killer cell by centrifuging a composition where the exogenous mitochondria and the natural killer cell are mixed.

5. A pharmaceutical composition for use in treating cancer or an infectious disease, comprising a natural killer cell as defined in any of claims 1 to 4 as an active ingredient.

6. The pharmaceutical composition for use according to claim 5, wherein the cancer is selected from the group consisting of gastric cancer, liver cancer, lung cancer, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, pancreatic cancer, cervical cancer, thyroid cancer, laryngeal cancer, acute myelogenous leukemia, brain tumor, neuroblastoma, retinoblastoma, head and neck cancer, salivary gland cancer, and lymphoma.

7. The pharmaceutical composition for use according to claim 5, wherein the infectious disease is selected from the group consisting of hepatitis B, hepatitis C, human papilloma virus (HPV) infection, cytomegalovirus infection, viral respiratory disease, and influenza.

8. The pharmaceutical composition for use according to claim 5, wherein the composition is in a liquid or frozen form.

9. A pharmaceutical composition comprising a natural killer cell as defined in any of claims 1 to 4 as an active ingredient for use in the prevention or treatment of a disease.

10. The pharmaceutical composition for use according to claim 9, wherein the use in the treatment or prevention of a disease is via a route selected from the group consisting of intravenous, subcutaneous, ophthalmic, intraperitoneal, and intramuscular routes.

11. The pharmaceutical composition for use according to claim 9 or claim 10, wherein the composition comprises another drug or physiologically active substance having an effect of preventing or treating the disease in combination with the cell.

12. The pharmaceutical composition for use according to any of claims 9 to 11, wherein the disease is cancer or an infectious disease.

13. The pharmaceutical composition for use according to claim 12, wherein the disease is cancer selected from the group consisting of gastric cancer, liver cancer, lung cancer, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, pancreatic cancer, cervical cancer, thyroid cancer, laryngeal cancer, acute myelogenous leukemia, brain tumor, neuroblastoma, retinoblastoma, head and neck cancer, salivary gland cancer, and lymphoma.

14. The pharmaceutical composition for use according to claim 12, wherein the disease is an infectious disease selected from the group consisting of hepatitis B, hepatitis C, human papilloma virus (HPV) infection, cytomegalovirus infection, viral respiratory disease, and influenza.

15. Use of a composition comprising a peripheral blood mononuclear cell, the peripheral blood mononuclear cell comprising isolated exogenous mitochondria, in the manufacture of a pharmaceutical composition for the treatment of cancer or an infectious disease.

16. The use of claim 15, wherein the exogenous mitochondria are obtained from muscle cells, hepatocytes, fibroblasts, epithelial cells, neurons, adipocytes, osteocytes, leukocytes, lymphocytes, or mucosal cells.

17. The use of claim 15 or claim 16, wherein the exogenous mitochondria are contained in an amount of 1 to 10^3 per peripheral blood mononuclear cell.

18. The use of claim 15, wherein the cancer is selected from the group consisting of gastric cancer, liver cancer, lung cancer, colorectal cancer, breast cancer, prostate cancer, ovarian cancer, pancreatic cancer, cervical cancer, thyroid cancer, laryngeal cancer, acute myelogenous leukemia, brain tumor, neuroblastoma, retinoblastoma, head and neck cancer, salivary gland cancer, and lymphoma.

19. The use of claim 15, wherein the infectious disease is selected from the group consisting of hepatitis B, hepatitis C, human papilloma virus (HPV) infection, cytomegalovirus infection, viral respiratory disease, and influenza.