

Research Progress on the Prevention and Treatment of AIDS with Traditional Chinese Medicine

Li Yue*

*Institute of Problem Solving, The First People's Hospital of Wuhu, Anhui, 241000, China
ly18226528448@163.com*

**Corresponding author*

Abstract: *AIDS is an immunodeficiency disease caused by HIV infection. Currently, there is no cure. As the disease progresses, serious infections and malignant tumors may occur, which eventually lead to the death of patients. The clinical treatment of AIDS can maximize and lastingly inhibit virus replication, control disease progression, and prolong survival by taking drugs. Western medicine programs are widely used in the treatment of AIDS, including 6 categories, a total of more than 30 kinds of drugs, which have a certain therapeutic effect. In recent years, with the increase in the clinical application of traditional Chinese medicine, the use of traditional Chinese medicine compound preparations in the clinical treatment of AIDS has gradually increased, and clinical research has increased, showing good results in improving the immune function of patients and relieving disease symptoms. Based on this, this study reviewed the research progress of traditional Chinese medicine in the prevention and treatment of AIDS.*

Keywords: *AIDS, Traditional Chinese Medicine, Traditional Chinese Medicine Compound Preparation*

As an incurable disease worldwide, AIDS is extremely contagious, affecting both men and women, and has a wide range of social influence. The clinical treatment of AIDS is the focus and difficulty of clinical research in various countries. There is still a lack of effective therapeutic drugs in the world. The treatment is based on limiting the replication of HIV virus in patients, so that patients can obtain immune function reconstruction, maintain relatively normal immune function, reduce HIV infection in patients, while preventing the occurrence of non-AIDS-related diseases, prolonging the survival period and improving the quality of life.

1. The Causes and Symptoms of AIDS

HIV infection is the only cause of AIDS. It invades the body's immune system, resulting in defective cellular immune function, which increases the risk of tumors and opportunistic infections in patients, and ultimately leads to death [1]. After the human body is infected with the HIV virus, the CD4+ T lymphocytes of human immune cells are destroyed, the anti-infection ability is reduced, and the defense ability against malignant tumors is also reduced [2-3]. The average incubation period of the disease is 6-8 years, and it needs to go through multiple stages from the beginning to the end of HIV infection. The disease development process is long and complex, and the clinical symptoms are diverse [4]. The early (acute) symptoms of the disease are typically fever, which can be accompanied by nausea, vomiting, diarrhea, rash, and joint pain [5]. After entering the asymptomatic period from the early stage, lymphadenopathy mainly occurs [6]. Symptoms of AIDS include neuropsychiatric symptoms, various opportunistic infections, and malignant tumors [7].

2. TCM Cognition of AIDS

Traditional Chinese medicine understands AIDS as a "disease", and believes that long-term consumptive internal damage is the main cause, leading to the loss of human body's righteous qi and the deficiency of spleen, qi, yin and kidney, which is the internal cause of the disease [8]. Moxa poison, damp heat invasion is the vulva. The treatment of AIDS in traditional Chinese medicine is mainly based on stages, and the method of cooling blood and detoxification is adopted to treat early AIDS patients. Asymptomatic patients are treated with detoxification, eliminating evil, and nourishing Qi. When treating AIDS patients with traditional Chinese medicine, it is necessary to carry out syndrome

differentiation treatment according to whether the patient belongs to the right needs and the evil reality [9]. In the case of deficiency of yin and kidney meridian deficiency, the treatment method of replenishing yin and filling essence can be adopted. The pathogenic factors are mainly the accumulation of heat in the heart and spleen or the internal accumulation of turbidity, which can be treated by removing corruption and turbidity [10].

3. Modern Chinese Medicine Compounds for Prevention and Treatment of AIDS

In recent years, my country's clinical research on AIDS prevention and treatment has gradually increased and deepened. While vigorously developing antiviral drugs, in-depth research has been carried out on the efficacy and mechanism of traditional Chinese medicine compound preparations in the treatment of AIDS, and rich experience has been obtained through a large number of clinical practices. important role in HIV treatment. The use of traditional Chinese medicine compound preparations provides more drugs for the clinical treatment of AIDS, and also achieves ideal results in terms of efficacy, bringing patients more opportunities for treatment, prolonging the survival period, and improving the quality of life. Generally speaking, there are many types of traditional Chinese medicine compound preparations for the treatment of AIDS that can be used at present, and there are certain similarities in terms of efficacy. The main purpose is to improve the body's own antiviral ability and regulate immune function, so as to improve the body's resistance to HIV virus and prevent the occurrence of diseases. , delay the progression of the disease.

3.1 Tang Grass Slices

Tangcao Pian is a commonly used traditional Chinese medicine compound preparation for the treatment of HIV-infected patients and AIDS patients. Improvement [11]. Jia Haipan [12] studied and analyzed the pharmacological effects of Tangcao Tablets in the prevention and treatment of AIDS, and concluded that the drug can increase the CD⁴⁺ cell count and repair immune damage, thereby regulating the immune function of HIV-infected or AIDS patients. Tangcao Tablets are composed of honeysuckle, Bupleurum, Astragalus, Glycyrrhiza, Solanum nigrum, Hedyotis diffusa, Licorice and other traditional Chinese medicine ingredients[13]. Honeysuckle is sweet and cold in nature, and belongs to the lung and stomach meridians, and has the effect of clearing away heat and detoxifying. Chaihu is acrid and bitter in taste, slightly cold in nature, and returns to the liver, gallbladder, and lung meridians. Astragalus is sweet in taste, slightly warm in nature, and returns to the spleen and lung meridians. Chixueteng is bitter, sweet, warm, returns to the liver and kidney meridians, activates blood and replenishes blood, regulates menstruation and relieves pain. Solanum nigrum is flat in nature, acrid in taste, bitter, and has the functions of clearing away heat, detoxifying and promoting blood circulation. Hedyotis diffusa is slightly bitter in taste, cold in nature, and returns to the stomach, large intestine, and small intestine meridians. Licorice is sweet in taste, calm in nature, returns to the heart, lung, spleen and stomach meridians, clears heat and detoxifies, and reconciles various medicines. The combination of drugs has the effects of clearing away heat and detoxifying, promoting blood circulation and nourishing qi.

3.2 Zhongyan No. 1 Formula

Zhongyan No. 1 formula has a certain curative effect in the treatment of AIDS. It belongs to the formula for strengthening the body and eliminating pathogenic factors. Modern pharmacological mechanisms show that Radix Radix et Rhizoma can inhibit HIV, and Astragalus can enhance the immune function of patients[14]. Clinical studies have shown that the use of Zhongyan No. 1 formula for the treatment of AIDS patients can effectively reduce the virus titer of the patient's Wanzhou blood mononuclear cells, and effectively inhibit the activity of HIV and reverse transcriptase. At the same time, the use of Zhongyan No. 1 formula can increase the number of CD4 cells and CD4/CD8 values in the body, promote the proliferation of T and B lymphocytes, induce the formation of interferon, and improve the immune regulation function of the body. In addition, Zhongyan No. 1 formula can promote the repair of lymphocyte nucleus in patients, and the concentration of inhibiting HIV reverse transcriptase is 0.35mg/mL. Guan Chongfen[15] conducted an experimental study on the therapeutic effect of Zhongyan No. 1 formula in monkey AIDS animal models. Male rhesus monkeys weighing 5-7 kg were selected and treated with Zhongyan No. 1 formula. Azothymidine treatment, 3 rats in the normal saline control group, 2 rats in the normal control group, 2 months of treatment as a course of treatment, a total of 2 courses of treatment. The research results show that the treatment of monkey

AIDS animal model with Zhongyan I can significantly improve the pathological, etiological and immunological indicators, reduce HIV virus titer, and inhibit HIV virus and reverse transcriptase activity well. Weng Xinyu[16] researched that Zhongyan No. 1 formula has a prominent inhibitory effect on HIV-RT. HIV-RT is an important target molecule for drug treatment of AIDS. After treatment by Zhongyan No. 1 formula, it can interfere with virus replication by inhibiting the mechanism of reverse transcriptase. The therapeutic effect is ideal.

3.3 Keite Capsules

Keite Capsule is an anti-HIV traditional Chinese medicine compound preparation approved by the National Drug Evaluation Center and approved by the State Food and Drug Administration. Its efficacy includes anti-virus, anti-tumor, analgesia, etc. There is a certain curative effect. Kate Capsules can improve the immune indicators of AIDS patients, reduce the viral load of patients, help patients recover their ability to work, and improve their quality of life. Miao Zhihua[17] pointed out in the research that Keite capsules take "rectification of blood medicine" as the theory, select a variety of marine organisms and natural plant medicinal materials as raw materials, extract effective active ingredients from the medicinal materials through special processes, and make them into pure natural products. Anti-AIDS traditional Chinese medicine compound preparation. The use of Keite capsules can effectively restore the immune function of AIDS patients, and at the same time, it can correct the immune deficiency, and has a prominent anti-HIV effect. Through the practice of clinical drug use nationwide, a relatively ideal therapeutic effect has been obtained, making the drug a new drug for the treatment of AIDS, and providing a new idea for the treatment of AIDS patients. Mo Yixian[18] selected 14 AIDS patients as the research objects, and treated the patients with Keite capsules. Adult AIDS patients took the drug 3-4 times a day, 5 capsules each time. Pediatric patients take the drug 3-4 times a day, 3-4 capsules each time. Infant patients take 1 capsule 3-4 times a day. Continuous medication for 2 months. Compared with before the treatment, the patients' CD⁴⁺ and CD⁸⁺ T cell counts increased, and the HIV load decreased significantly. The total treatment effective rate was over 90%.

3.4 Kangai righting film

Kangai Fuzheng Tablets are indicated for thrombocytopenia, fatigue, vomiting, etc. It is widely used in patients with thrombocytopenia, leukopenia and decreased immune function caused by tumor radiotherapy, and the effect is ideal. The medicine is a Chinese patent medicine, and the main ingredients include Ganoderma lucidum, Rehmannia glutinosa, Ligustrum lucidum, Astragalus, Pinellia, prickly pear, and Epimedium. Ganoderma lucidum is sweet in taste and calm in nature; it returns to the heart, lung, liver, and kidney meridians, can tonify qi and soothe the nerves, relieve cough and relieve asthma. Rehmannia glutinosa is sweet in taste, slightly warm in nature, enters the three yin meridians of the foot, and has the effect of nourishing yin and nourishing blood. Ligustrum lucidum is mild in nature, sweet and bitter in taste, and belongs to the two meridians of liver and kidney. Its main functions are nourishing yin and nourishing liver and kidney. Astragalus is sweet in taste, slightly warm in nature; it returns to the spleen and lung meridians, and has the effect of invigorating the spleen and invigorating the middle, raising yang and raising depression. Pinellia is pungent in taste, warm in nature, and returns to the spleen, stomach, and lung meridians. Prickly pear is sweet, sour, stomach, digestion and bloating, and nourishing and strong. Epimedium is pungent, sweet and warm in nature. Returning to the liver and kidney meridians, the effect is to invigorate kidney yang, strengthen muscles and bones, and enhance immune function. Ma Quanlong[19] studied the preparation and clinical application of Kang'ai Fuzheng Tablets, which proved that the drug can play an immunoregulatory role in tumor patients receiving chemotherapy. The main component of the drug, Ganoderma lucidum, is an immunoregulatory and activator, which plays an important role in improving the immune function of tumor patients and enhances the patient's own anti-tumor ability. The drug can improve the phagocytic function of macrophages, enhance the hematopoietic function of the human body, increase the level of white blood cells, and promote the proliferation of lymphocytes. In Zhang Guiju's study[20], patients with malignant tumors after radiotherapy and chemotherapy were treated with Kangai Fuzheng Tablets and conventional radiotherapy and chemotherapy regimens respectively. The clinical efficacy showed that 64.29% of the experimental group was higher than 50% of the control group. The use of Kang'ai Fuzheng Tablets in patients can support the righteousness, reduce the sudden increase of poisonous evils caused by radiotherapy and chemotherapy, and further damage the righteousness. The prescription of Ganoderma lucidum and astragalus can enhance the immune function of patients and enhance their anti-cancer ability. Rehmannia glutinosa can activate a variety of hematopoietic growth factors. Epimedium has a good inhibitory effect on tumor cell metastasis, and increases the antigenicity of

tumor cells, which improves the activity of immune cells.

3.5 Compound SH

Compound SH is the world's first pure natural anti-HIV botanical drug. AIDS patients can take it for a long time, and the treatment efficiency is very high. The anti-HIV mechanism of the drug is that it has a good inhibitory effect on HIV protease (Protease). At the same time, drugs can enhance the activity of natural killing cells and improve the function of immune cells. And drugs can play a certain role in inhibiting bacteria. In the study of Pan Yongquan[21], rabbits were used as research objects, and compound SH-Antidu mixture was used on them to analyze the blood components of rabbits 1, 3, 5, 7, and 14 days after treatment. The results showed that the levels of RBC, PLT, HGB, WBC, and LYM in the blood of rabbits were all increased 1-3 days after administration. Within 3-14 days of medication, the levels of the above indicators in the blood of rabbits remained at a high level. The research conclusion shows that the use of compound SH-Antidu mixture can promote the production of blood cells and enhance the immune function.

3.6 Ailing Granules

Ailing granules are used in clinical treatment of patients with qi deficiency and blood stasis type, evil poison stagnation type HIV infection and AIDS, and have an ideal clinical effect. Ailing granules have the functions of removing blood stasis and detoxifying and nourishing qi and nourishing yin, which can regulate the immune function of patients and improve the immune function, thereby improving the quality of life of patients. The use of Ailing granules for HIV-infected patients can effectively prolong the onset time of AIDS. After HIV infection and AIDS patients use Ailing Granules, it can effectively improve the function of CD4 cells and reduce the HIV viral load of patients. The reduction of HIV viral load may be related to the enhancement of the body's immune function. Therefore, the reduction of viral load generally occurs after the immune function is enhanced, and the immune system responds. The use of Ailing granules helps the patient's T cells to proliferate for rent, thereby improving the body's specific immune response to HIV and exerting an antiviral effect. Chen Shanshan[22] showed in the study that the use of traditional Chinese medicine Ailing Granules in HIV/AIDS patients can significantly improve the peripheral blood T cell subsets and Th1/Th2 levels of patients. In the study of Wei Jian'an[23], Ailing granules were used to treat 15 HIV-infected patients, twice a day, 2 bags each time, for 1 year. The patients were treated for 3 months, 6 months, 9 months, and 12 months, and the CD4+ T cell counts of the patients were measured respectively. The results showed that with the increase of the medication time, the CD4+ T cell counts of the patients gradually increased, indicating that the patient's immune function enhanced. The HIV viral load was detected at 6 and 12 months after the patient's medication. The results showed that the overall level of HIV viral load in the patient after 6 months and 12 months of medication was lower than before medication, but there was no significant difference and remained stable. Song Chunxin[24] used traditional Chinese medicine Ailing Granules to treat HIV/AIDS patients for 4 months, and the treatment effect was satisfactory. The levels of CD4+T and CD8+T in patients were significantly higher than those before treatment. Studies have shown that the changes in the number of CD4+ T cells

There is a moderate positive linear correlation between TNF- α and the ability to secrete IFN- γ . The use of Ailing granules can stabilize CD4+ T cells, improve the ability of CD4+ T cells to secrete IFN- γ , and play a coordinating role in the balance of Th1 and Th2 cytokines in patients. There are positive effects on immune cell function.

3.7 Yi Aikang Capsules

Yi Aikang Capsule is a Chinese patent medicine for the treatment of AIDS. The main ingredients include Poria, ginseng, white peony, Chuanxiong, Astragalus, Scutellaria, Atractylodes, Angelica, etc. The main effect is to improve the immune function of AIDS patients, and to increase the expression level of co-receptors. Increase, while restoring T-cell activation levels. Poria is sweet, light, and neutral in nature. It returns to the heart, lung, spleen, and kidney meridians. Ginseng is warm in nature, sweet, slightly bitter, and slightly warm. Return spleen, lung meridian, invigorate the spleen and benefit the lung, replenish vitality, soothe the nerves and increase wisdom. White peony is sweet, pungent, warm in nature, and has the functions of dispelling wind and dampness, detoxifying and antispasmodic. Chuanxiong is pungent and warm, enters the liver and gallbladder meridians, and has the functions of promoting blood circulation and promoting qi, dispelling wind and relieving pain. Scutellaria

baicalensis is bitter in taste and cold in nature. It returns to the lung, gallbladder, spleen, large intestine and small intestine meridians. Atractylodes atractylodes is bitter, sweet, warm, and has the effect of invigorating the spleen and replenishing qi, drying dampness and diuretic water. Angelica is sweet, pungent, warm in nature, and returns to the liver, heart, and spleen meridians, and has the effect of nourishing blood and promoting blood circulation. In the study of Li Jie[25], the combination of Yiaikang capsules and HAART was used for HIV-infected patients, and the levels of peripheral blood and Th1/Th2 cytokines of patients were significantly improved, suggesting that Yiaikang capsules can have a positive effect on the immune status of patients. , inhibit viral nucleic acid. Li Jie[26] used Yiaikang Capsules to treat AIDS in the study, and the patients were subjected to gene fragment scanning to detect the diversity of T cell receptors. Through analysis of the detection results, it was found that the dispersion of each tube of TCR β chain in AIDS patients before and after treatment was greater than healthy control group. At the same time, the gene recombination diversity of TCR β chain D-J region increased in AIDS patients after treatment compared with before treatment.

4. Conclusions

To sum up, traditional Chinese medicine compound preparations have important therapeutic value in the prevention and treatment of AIDS. At present, there are a variety of drugs available for use, and appropriate drugs can be selected according to the actual situation of the patient and the progress of the disease. The main mechanism of action is to enhance the body's immunity, improve Antiviral ability, and inhibit virus proliferation and transcription, reduce viral load and titer, so as to alleviate disease symptoms and delay disease development.

References

- [1] Gao Guojian. *Feasibility Study on the Effect of Traditional Chinese Medicine on the Immune Reconstruction Function of AIDS*. Chinese Academy of Chinese Medical Sciences, 2015.
- [2] Huang Mingyan, Ma Xiuxia, Ding Xue, Meng Pengfei, Li Liangping, Song Xiyuan, Xu Liran. *Preliminary Discussion on the Treatment of HIV/AIDS Patients with Tumor by Traditional Chinese medicine*. China AIDS and STD, 2022, 28(03): 364- 367.
- [3] Liu Yanan, Li Pengyu, Wang Danni, Chen Lihua, Guo Huijun. *Based on the Method of Strengthening the Spleen and Nourishing the Kidney to Explore the Method of Traditional Chinese Medicine To Interfere With Poor Immune Reconstitution in AIDS*. Modern Chinese Medicine, 2022, 29(01): 64-66+71.
- [4] Cai Xiaoyang, Xu Liran, Sang Feng, Meng Pengfei, Li Liangping, Ma Xiuxia, Liu Nan, Guo Yaya, Huang Mingyan. *The Practice and Prospect of Treating AIDS on Zhongjing's Classics and Prescriptions*. China AIDS and STD, 2022, 28 (01): 121-124.
- [5] Li Pengyu, Chen Lihua, Jia Huangchao, Jiang Qi, Wang Yueyuan, Zhu Keying, Guo Huijun. *The Current Situation and Thinking of Traditional Chinese Medicine in the Treatment of Aids with Poor Immune Function Reconstruction*. Henan Journal of Preventive Medicine, 2022, 33(01): 12-16 +48.
- [6] Huang Shijing. *General Situation and Thinking about the Prevention and Treatment of Aids-Related Progressive Multifocal Leukoencephalopathy with Integrated Traditional Chinese and Western medicine*. China Journal of Integrated Traditional Chinese and Western Medicine, 2021, 41(11): 1290-1293.
- [7] Wang Li, He Lisheng, Yang Yuqi, Li Qin, Sun Jun, Pu Yaping, Gao Wenjun. *Kangai Baosheng Pill Combined with HAART in the Treatment of 404 patients with stage IIB AIDS: A Randomized Controlled study*. China Journal of Integrative Medicine, 2021, 41(11): 1307-1311.
- [8] Cheng Ruhong. *Clinical Efficacy and Safety Analysis of Traditional Chinese Medicine Combined with Antiviral Drugs in the Treatment of AIDS*. Tianjin Pharmacy, 2021, 33(05): 56-59.
- [9] Wang Li, He Lisheng, Yang Yuqi, Li Qin, Sun Jun, Pu Yaping, Gao Wenjun. *Clinical Observation on 402 Cases of AIDS Treated by Kangai Baosheng Pills*. Liaoning Journal of Traditional Chinese Medicine, 2021, 48(10): 99- 102+222.
- [10] Wang Yanan, Li Qingya. *Based on the "Gut-Immunity" Axis to Explore the Mechanism of Traditional Chinese Medicine in the Treatment of AIDS*. China AIDS and STD, 2021, 27(06): 668-670.
- [11] Chen Yongyi, Ruan Yunhe, Dai Fen. *Analysis of the Efficacy of High-Efficiency Antiretroviral Combined with Chinese Patent Medicine Tangcao Tablets in the Treatment of HIV Infection*. Shenzhen Journal of Integrative Medicine, 2017, 27(08): 24-25.
- [12] Jia Haipan, Zhang Wei, Guo Yuzhong. *Study on the Pharmacological Effect of Tangcao Tablet Against AIDS*. China Prescription Medicine, 2016, 14(09): 18-19.

- [13] Yang Liya, Shao Baoping, Li Qian, Ru Yun, Chen Jingqing, Huang Yanchun. *Clinical Research and Application of Tangcao Tablets. Modern Distance Education of Chinese Medicine in China*, 2015, 13(04): 14-17.
- [14] Zhang Yongxiang, Wen Ruixing, Guan Chongfen. *Observation on the Effects of Zhongyan No. 1, Zhongyan No. II and Aitong Granule on Viral Load and Immune Function in HIV/AIDS patients*. *China Journal of Basic Medicine of Traditional Chinese Medicine*, 2004(08): 41-42.
- [15] Guan Chongfen, Wu Xiaoxian, Lu Yaozeng. *Experimental study on the treatment of monkey AIDS model with Zhongyan No. 1 formula*. *China Journal of Traditional Chinese Medicine*, 1995(05): 42-46.
- [16] Weng Xinyu, Guan Chongfen. *Experimental study of "Zhongyan No. 1 formula" on human immunodeficiency virus reverse transcriptase*. *China Journal of Basic Medicine of Traditional Chinese Medicine*, 1995(02): 38+10.
- [17] Miao Zhihua. *Anti-AIDS traditional Chinese medicine "Keite Capsule" entered Phase II clinical trial*. *Capital Medicine*, 2004(22):3.
- [18] Mo Yixian. *Clinical study on 14 cases of HIV/AIDS treated by traditional Chinese medicine Keite Capsule*. *Capital Medicine*, 2003(12):40-43.
- [19] Ma Quanlong, Xu Dongsheng. *Preparation and clinical application of Kangai Fuzheng Tablets*. *Chinese Medicine Guide*, 2011, 9(22): 33-34.
- [20] Zhang Guiju, Chen Haixia. *Observation on the therapeutic effect of Kangai Fuzheng Tablets on malignant tumor*. *Contemporary Medicine*, 2011, 17(15): 140-141.
- [21] Pan Yongquan, Yang Junqing, Han Zhigang, Zhang Yunmei, Bi Xiaoyun. *Study on the effect of traditional Chinese medicine compound SH-Kangdu mixture on blood components in rabbits*. *Sichuan Animals*, 2006(03):629-631.
- [22] Chen Shanshan. *Clinical study on the effect of traditional Chinese medicine Ailing granules on peripheral blood T cell subsets and Th1/Th2 in HIV/AIDS patients*. *Chinese Academy of Chinese Medical Sciences*, 2012.
- [23] Wei Jian'an, Song Chunxin, Li Ning, Wang Xiaoxue, Huang Xiazhen, Wang Yuxian. *Clinical observation of 15 cases of HIV-infected patients treated with Ailing Granules*. *Beijing Traditional Chinese Medicine*, 2011, 30(07): 483-485.
- [24] Song Chunxin, Wei Jianan, Huang Xiazhen, Wang Xiaoxue, Li Ning, Wang Yuxian, Xue Lihua, Zhang Tongzhi. *A preliminary study on the effect of traditional Chinese medicine Ailing granules on immune cell function in HIV/AIDS patients*. *China AIDS and STD*, 2010, 16(01): 4-6+17.
- [25] Li Jie, Yue Jingyu, Deng Bowen, Sang Feng, Liu Zhen, Li Qiang, Guo Huijun. *Effects of Yiaikang Capsules combined with HAART on peripheral blood and Th1/Th2 cytokines in HIV-infected patients*. *Chinese Medicine Research*, 2021, 34(06):18-21.
- [26] Li Jie, Sang Feng, Deng Bowen, Yue Jingyu, Li Qiang, Guo Huijun. *Observation on the Effect of Using Yiaikang Capsules to Treat AIDS by Gene Fragment Scanning to Detect the Diversity of T cell Receptors*. *Chinese Medicine Research*, 2021, 34(02):12-17.