

The Ethics Scholars

Q: What is your understanding and attitude towards microbial therapy?

A: The microbial therapies nowadays are very extensive, including some medical clinical intervention experiments developed by the Institute of Microbiology and probiotics for probiotics, and even engineering bacteria obtained through genetic editing enter the human body for medical purposes. etc. I have studied the ethical issues brought about by microbial therapy and microbiological research. There are many ethical issues involved in the promotion of microbial therapy. This piece is very much in need of attention. Now China's biotechnology and medical development is extremely rapid, so the ethical issues brought about by the research need us to pay attention to and regulate, otherwise it will bring extremely bad effects, such as Jiankui He's genetic editing baby event, which is worldwide. It has a negative impact. The current ethical issues should be regulated and the ethical awareness of researchers needs to be improved.

Q: What do you think are the main ethical issues that need to be addressed in the promotion of microbial therapy?

A: First of all, the problem of informed consent when communicating with doctors and patients. We all know that doctors need to fully respect the patient's right to know when recommending a patient to choose a therapy. Is the doctor's explanation objective and inductive? Is the patient fully informed about the efficacy and potential risks of this therapy? Whether the therapy is completely voluntary, these are very important. However, at present, microbial therapies, such as the most common fecal transplants, are many of the diseases that are relatively stubborn. There is no good treatment before. At this time, patients who are already in a weak position have suffered a series of treatments against him. The very painful treatment has no effect. When it feels desperate, it will have an impact on his decision. Then the potential risk of microbial therapy is not very clear and needs more data support, so this is a sum. Where traditional treatments are very different, it is not clear whether microbial therapy will affect people's health in the long run. Unlike the researcher, the doctor is responsible for the health of the patient and needs to bear these responsibilities. You can also take a look at my 2016 lecture "How Biomedical Research Gains Public Trust", which has more relevant content.

Another ethical issue with the human microbiome is the issue of ownership. The

most famous of these is the Heila cell line, whose relatives did not have a written statement to transfer the cell line to the research organization. The researchers found many remarkable results from the Hella cell line, but the relatives of Hella lived in poverty. Below the line, shouldn't part of the research results be distributed to their relatives? Human microbiome research can also lead to such problems, if a microbiome with great research value or even commercial value is extracted from a volunteer, So who is the ownership of these bacteria? Should volunteers receive some of the benefits? These ethical issues are subject to national regulation.

Third, it is very important that patients and volunteers have the right to choose. Whether the patient is completely autonomous to choose whether to accept this treatment and when to withdraw from treatment. Including volunteers, you can freely opt out in the middle of a trial, such as a clinical trial, without compulsory and inhumane things happening. These are some of the things we must do in trials and in the use of microbial therapies.

The last focus is on gene editing. At present, the acceptance of genetic editing in the society is generally not high, and the previous Jiankui He incident is even more fueling. The ethical issues involved in the microbial therapy involving genetically engineered engineering bacteria into the human body for therapeutic purposes are more. Will it cause some genetic changes in the human body? Will it cause irreversible effects on the normal microbial flora of the human body? The current research is still immature, lacking data and experimental facts, so there are still many ways to publish genetically engineered engineering bacteria.