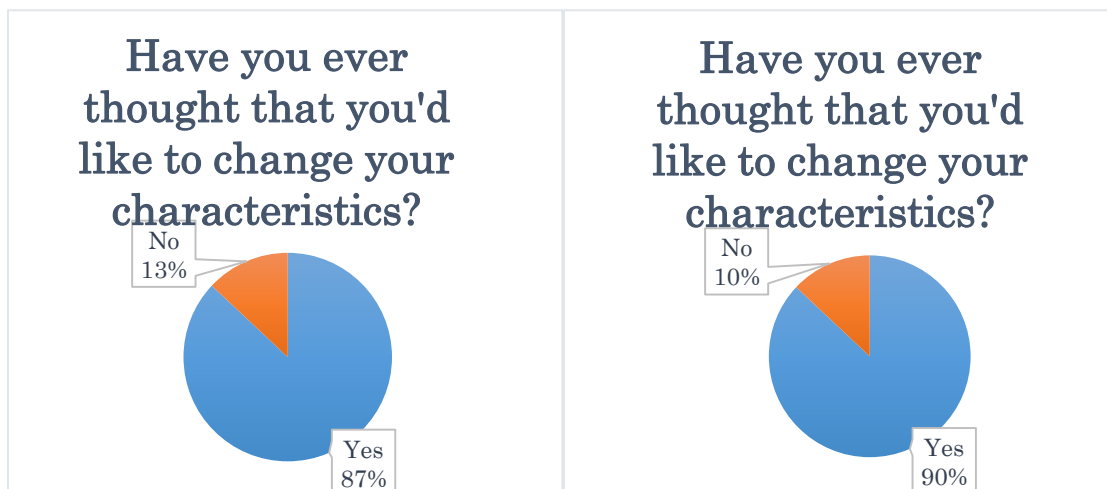


CRISPER/Cas9

3-2 Ichika Fujita

I suppose many people would have think they want to change their genetic characteristics. We have a one of the scientific technologies which can transform crops' genes, named "CRISPER/Cas9". We thought that by using it for human, we can transform our genetic characteristics and we don't have to suffer from our physical problems. But it isn't easy, there are many ethical problems. We have to keep thinking that in the future.

First, we conducted questionnaires for 4 classes in Funairi high school. Look at the below graph. The left side one shows students of science, and opposite one shows students of humanities and social sciences half of them are students of science and the others are students of humanities or social sciences. We found 90% students, almost all students want to change their genetic characteristics. And, we asked them "How do you think we use genetic modification for human?" Some said "OK." Because we can cure congenital diseases, we don't suffer from physical worry. On the other hands, others said "NO." because they are afraid of high-risk technology and big difference or the gap between poor and rich will arise. Also, there is ethical problem. When we use this technology, we have to conduct gene analysis. Some people don't know their gene problem or life span, so we do them carefully.



This high technology, "CRISPER/Cas9", is very useful. These days the team which made it won the Nobel Prize.

It's from the immunity system of bacteria. It has the special base sequence of DNA. "Cas9" plays an important role like scissors cut the section which is written by what we'd like to change the characteristics. In addition, this Guide DNA install new necessary part. As for that, by using a great way, we can change our features we have not been able to

alter before.

We can change our characteristics by using today's special technique. For example, in China, there is a child who was created by gene manipulation. It is called "designed baby". If we desired to have children who have different gene, we could do it, probably. Also, today, gene therapy is conducted all over the world to cure congenital disease. We can cure hereditary diseases which couldn't be cured before. Like this, Crisper/Cas9 could replace this technology and change our future someday, I think.

But if we use genetic information, we should examine the base sequence of DNA. Because of this, we may know remain days or disabled faculties. So, many ethical problems arise and have been argued for a long time. Then, we will have been thinking these problems in the future. High technology change our genetic information to weapons, which depends on our usage. However if we could use them exactly, it would be expected more human development. I'd like to study the best way to use genetic information of creature and this technology. I hope to be used my study for next generation someday.

