

Задание 1. Переведите предложения, содержащий термины и аббревиацию. Запишите перевод ТОЛЬКО терминов/аббревиации, выделенных жирным шрифтом в именительном падеже (см. «Критерии оценивания»).

1. **The BEC** plays a critical role in overseeing the ethical conduct of clinical trials, ensuring patient safety and the responsible application of new therapies.
2. Stringent regulations enforced by **the Biotechnology Regulatory Authority (BRA)** safeguard responsible development and use of biotechnology, minimizing potential risks to the public.
3. **The biocompatibility** of the material with the tissues of the organism is a key factor for successful transplantation. Modern research is focused on creating artificial tissues and organs with biocompatibility, which will solve the problem of organ donor shortages.
4. **Bioaugmentation**: Enhancing the ability of microorganisms to degrade pollutants in environmental remediation.
5. **Bioremediation**, relying on natural biological processes, provides an environmentally safe and cost-effective solution to soil and water pollution, but often requires a long time and a comprehensive approach.
6. **CRISPR-Cas9** technology, a revolutionary gene editing tool, has unlocked a wealth of possibilities for precise genetic modification, paving the way for advancements in diverse fields, ranging from agriculture to therapeutic medicine.
7. **Biofuels**, a sustainable alternative to fossil fuels, are increasingly being explored and developed, offering a potential solution to our dependence on non-renewable energy resources.
8. **DNA sequencing**, a cornerstone of modern biotechnology, enables the precise analysis of genetic information, unlocking new possibilities for understanding disease mechanisms and developing personalized therapies.
9. A mainstay in molecular biology research, **Polymerase Chain Reaction (PCR)**, a powerful technique for amplifying DNA, enables the analysis of genetic material in minute quantities.
10. Biomaterials, like **biodegradable polymers** and biocompatible implants, are essential for creating medical devices that seamlessly integrate with the body, minimizing rejection and promoting healing.

Задание 2. Прочитайте текст на английском языке и сделайте пересказ текста на русском языке. Объем русского текста должен быть 150-160 слов. Текст, объем которого меньше 135 или больше 180 слов, не проверяется.

Hacking the Human Body.

Your body is your most versatile tool, but what if you could improve it?

We are limited by our biology: prone to illness, doomed to wear out over time and restricted to the senses and abilities that nature has crafted for us over millions of years of evolution. But not anymore.

Biological techniques are getting cheaper and more powerful, electronics are getting smaller, and our understanding of the human body is growing. Pacemakers already keep our heart beating, hormonal implants control our fertility, and smart glasses augment our vision. We are teetering on the edge of the era of humanity 2.0, and some enterprising individuals have already made the leap to the other side.

While much of the technology developed so far has had a medical application, people are now choosing to augment their healthy bodies to extend and enhance their natural abilities.

Kevin Warwick, a professor of cybernetics at Coventry University, claims to be the “world’s first cyborg”. In 1998, he had a silicon chip implanted into his arm, which allowed him to open doors, turn on lights and activate computers without even touching them. In 2002, the system was upgraded to communicate with his nervous system; 100 electrodes were linked up to his median nerve.

Through this new implant, he could control a wheelchair, move a bionic arm and, with the help of a matched implant fitted into his wife, he was even able to receive nerve impulses from another human being.

Professor Warwick’s augmentations were the product of a biomedical research project, but waiting for these kinds of modifications to hit the mainstream is proving too much for some enterprising individuals, and hobbyists are starting to experiment for themselves and explore different ways of augmenting our skin.

Amal Graafstra is a double implantee, he has a Radio Frequency Identification (RFID) chip embedded in each hand: the left opens his front door and starts his motorbike, and the right stores data uploaded from his mobile phone. Others have had magnets fitted inside their fingers, allowing them to sense magnetic fields, and some are experimenting with aesthetic implants, putting silicon shapes and lights beneath their skin. Meanwhile, researchers are busy developing the next generation of high-tech equipment to upgrade the body still further.

Not so much an implant as a stick-on mod, the high-tech electronic tattoo from the Massachusetts Institute of Technology (MIT) can store information, change colour, and even control your phone. Created by the MIT Media Lab and Microsoft Research, DuoSkin is a step forward from the micro-devices that fit in clothes, watches and other wearables. These tattoos use gold leaf to conduct electricity against the skin, performing three main functions: input, output and communication. Some of the tattoos work like buttons or touch pads. Others change colour using resistors and temperature-sensitive chemicals, and some contain coils that can be used for wireless communication.

Tiny neodymium magnets can be coated in silicon and implanted into the fingertips. They respond to magnetic fields produced by electrical wires, whirring fans and other tech. This gives the wearer a sixth sense and strength of invisible fields in the air.

All this emerging technologies could be used to augment our bodies in the future. In the next five years more open biolabs, biomarkerspaces are going to set up, and the level of sophistication will increase.