

# Chromosome 6

[Literature](#), [Russian Literature](#)



Chromosome 6 Robin Cook's book Chromosome 6 is about organ transplantation and the possible dangers that could arise if the organs became tradable commodity, but before reading the book we had no idea what it was going to be about. Biotechnology was not a subject us two girls knew a lot about. Hearing the word biotechnology we thought of cloning, lab work, and experiments. Little did we know that it is much more complex than we thought. Biotechnology deals with crops to animals, fruit, milk, and humans, but it doesn't stop there. As we read the book, listened to class discussions, and viewed the two movies that were shown during class we became a lot more knowledgeable about what biotechnology really is. Biotechnology is viewed as a very good thing to some people. Through biotechnology people envision developing new types of animals, finding almost unlimited sources of human therapeutic drugs, and growing crops that are more nutritious and naturally pest-resistant to feed a rapidly growing world population. In some cases, we have come a long way in the discoveries of some of those envisions. Throughout our human history, we have learned a great deal about the different organisms that have been used by our ancestors so effectively. With our increased knowledge and understanding of these organisms and their cell products, we have gained the ability to control the many functions of various cells and organisms. We can now combine the genetic elements of two or more living cells using the techniques of gene splicing and recombinant DNA. Recombinant DNA is DNA that has been created artificially from two or more sources than incorporated into a single recombinant molecule. Science has come as far as having the ability of taking functioning lengths of DNA from one organism and place

them into the cells of another organism. As a result, for example, we can cause bacterial cells to produce human molecules and we can synthesize therapeutic molecules that have never before existed. The growth factor is a great example of bacterial cells that were used to help avoid certain problems like dwarfism and the spread of brain disease. Before all the new technology, the old method was to take brain extract from a cadaver and now we can put the growth factor gene in bacteria through biotechnology. Another good example that proves biotechnology is very beneficial is that we can avoid problems like diabetes, allergic responses, or new diseases by putting the human insulin gene into bacteria instead of using the old method which was taking pig pancreas extract. Biotechnology is a great way to use living organisms or their products to modify human health and the human environment. Although biotechnology has caused many good things in the world today, concerns and questions have arisen. The safety of genetically engineered food is one main area of concern. Many people hear about fresh fruit or vegetables being genetically engineered and they immediately think that different problems or things could go wrong during the process leaving the food infested with disease and/or pests. Genetically engineered food is something that scares many people, but for logical reasons. Speculations have been proven facts, like animals becoming seriously ill or dying from genetically engineered food and also an unexpected poison in this type of food supplement killed 37 people and 1500 people were permanently disabled. Taking these kinds of life threatening risks just because our food has been genetically engineered is most definitely not worth it for several people. Reading this book, we came across many different questions about

biotechnology that were raised throughout the reading. Most importantly though, this book tackled the questions, How ethical is it to kill animals to harvest their organs? Who should get these organs? And, are all advances in medical science automatically good? The first part of the story takes place in New York where medical examiners are faced with a postmortem of a murder victim with various parts missing. Unfortunately before the autopsy can be performed the body disappears. In the other part of the storyline, Kevin Marshal, an employee of a biotech company, is researching "Bonobos" which is a type of primate. The major histocompatibility gene on chromosome 6 is taken and transferred to these special primates. The two doctors, Jack and Laurie, come to find out that the dead body is of a mafia kingpin whose liver is transplanted but cannot be traced back to a donor. In their attempt to find the liver, the doctors find out the actuality about Kevin's scheme with the bonobos. This book described to us the almost reality of how the transplantation of living cells, tissues, or organs from one species to another, also known as xenografts, have no rejection or side effects from primates to humans. Once people found out about these so called proto-humans, aka the bonobos, people started raising ethical issues. Some people in the story did not support the bonobos because of the fact that we as humans are creating these primates that are similar to us humans in more ways than we could ever imagine, and then killing them and using their organs to save human lives. Moral objection arose very quickly once more and more people became knowledgeable of these bonobos. This story was extremely interesting, but we both agree that the ending was not good. The ending not telling us a thing about the result of any of the happenings that

took place in the book really frustrated us. Although this book raised some logical ideas and situations, it is a proven fact that the proto-humans are almost impossible with technology used today. We feel that biotechnology is used in many different ways, some being more beneficial than others. Our view on biotechnology sides with more medical than ethical aspects. We believe that trying to improve the world we live in today with the medical advancements that biotechnology has given us the opportunities to explore is beyond beneficial to human beings. Exploring everything that biotechnology can give us is a breakthrough that we should be proud and appreciative for. When a couple is trying to get pregnant and can't naturally, we believe that in vitro is an amazing alternative that gives new hope for the family. Also, wanting goats and cows to produce healthier milk for us to consume is something we should be grateful for if it is better for us than regular milk. The people that oppose biotechnology have good reasons, but as far as we are concerned, biotechnology is a discovery that is helping our societies and future societies be better in the long run. In the large scheme of things, biotechnology has done many positive and negative things in our world, but the more tests and trials done, the more information is discovered. The more we continue to experiment and find new ways to improve the standard of living, the more people gain out of everything. We strongly back biotechnology, encourage and promote the future findings that will be discovered. Looking at all the pros and cons to what can come of the biotechnology field, we feel that the pros outweigh the cons by a significant amount. More experiments bring more breakthroughs for the future which we support one hundred percent.