

DNA and its Impact in the Very Near Future

Crime

- ♦ May be used to create genetic profiles for suspects
- ♦ Collected evidence can be stored indefinitely.
- ♦ DNA can be found in many body fluids and tissues, retrieving materials is a simple and unobtrusive process.

- ♦ It creates privacy issues.
- ♦ Hacking becomes a major concern.
- ♦ It doesn't remove the idea of a false conviction.
- ♦ The accuracy of DNA fingerprinting is overly influential.

Cloning

- ♦ Infertile people or same-sex couples could have children made from cloned cells.
- ♦ Organ replacement
- ♦ Human development: Cloning could enhance and advance human development.

- ♦ Human cloning: Could be a violation of the clone's individual human rights.
- ♦ Unique identities: Cloning raises the question of a moral or human right to an exclusive identity.
- ♦ Societal impacts: Human cloning could produce psychological distress for the clone and society.

Food

- ♦ Cruelty free
- ♦ No more unethical treatment of animals raised for food
- ♦ No worry of food shortage
- ♦ Reduce the considerable environmental costs of meat production

- ♦ Is it safe to consume?
- ♦ Will it have any side effects?
- ♦ Will lab-produced meat pose a health hazard?
- ♦ Lab-generated products are not meat at all and some might say that it should not be labeled as such

1866

Before the many significant discoveries and findings, Gregor Mendel, who is known as the "Father of Genetics," was actually the first to suggest that characteristics are passed down from generation to generation. Mendel coined the terms we all know today as recessive and dominant.

1869

Friedrich Miescher identified the "nuclein" by isolating a molecule from a cell nucleus that would later become known as DNA.

Early 1900s

Theodor Boveri and Walter Sutton findings are fundamental in our understanding of how chromosomes carry genetic material and pass it down from one generation to the next.

1902

Mendel's theories were finally associated with a human disease by Sir Archibald Edward Garrod. He opened the door for our understanding of genetic disorders resulting from errors in chemical pathways in the body.

1944

Oswald Avery first outlined DNA as the transforming principle, which essentially means that it's DNA, not proteins, that transform cell properties.

1944-1950

Erwin Chargaff discovered that DNA is responsible for heredity and that it varies between species. His discoveries, known as Chargaff's Rules.

1953

Watson and Crick published on DNA's double helix structure that twists to form the ladder-like structure we think of when we picture DNA.