

## FICHE REVISION: SCIENTIFIC DEVELOPMENT

Examples:

### **\*Pittsburgh children hospital:**

It acquired a new technological device that can follow every patient's health data on a tablet.

→nurses are more efficient as they don't need to check on the patient by going into the room.

It's time-saving and the decrease of human traffic curbs the spreading of germs.

→the saving of energy allowed the hospital to reduce the number of employees causing some interns to be unemployed

### **\*The cloning of animals and stem cells:**

- A woman spent 50,000\$ to clone her dead and beloved dog. She got two cloned puppies that are physically identical to the former dog but they both have different personalities.

→ is it really useful/necessary if the dogs are just physically similar-could just be the same breed

→underlines the ethical question of the unity and the identity of an individual + the respect of the cycle of life

- A laboratory developed a system to clone stem cells in order to create pieces of animal muscles that are edible

→people could still eat meat without killing animals or raising herds ( which requires a lot of water and space)

→cloning is a long process that requires a huge scientific investment and laboratory equipment that can be expensive

### **\*The possibility to choose some of an embryo's trait:**

Scientists discovered a way to select traits like the sex, the color of the eyes or the hair of the future baby. Parents could then choose the way their baby would look according to their personal tastes

→having a baby gets closer to adopting a certain breed of dog: purely aesthetic decision

+ loss of the principle of the sharing of the parents' genes

BIG ETHICAL QUESTION

### **\*Organ transplantation**

-In 2021 Transmedics created a new medical device called the Organ Care System, known as the "heart in a box". This system dispenses with the traditional freezing method to keep an organ before transplantation by recreating the environment of a living human body.

→Important progress in medicine, saves more lives by keeping the organs longer out of the body.

→The first transplant of a full heart from a pig has been successfully done, hope for many people in need that suffer from the lack of organ donors.

**\*China is developing fusion energy:**

China is currently planning on creating the China Fusion Engineering Test reactor, also called the “artificial sun”. They’ve created a massive loop of plasma that creates an environment with a temperature that equals 5 times the temperature of the sun for around 20 minutes.

→Creating energy thanks to fusion is an infinite source of energy.

→The energy created is green and renewable

Should scientific development be carried out at all costs ?

To what extent can scientific development be driven by profit ?

To what extent scientific progress can have a market value ?

To what extent scientific research is compatible with the protection of the environment ?  
Is public research more efficient than private research?

Vocabulaire:

cellules souches: stem cells

energie verte, énergie renouvelable: green energy, renewable energy

remote controlled: contrôlé à distance

bioéthique: bioethics

manipulation génétique: genetic engineering