

## Animals and human responsibility

# B1



Do humans have the right to use or kill animals? If so under what circumstances?

Animal issues

## Are humans more important than animals?

# B2



Is a human being more important than an animal? Does it matter what kind of animal?

Animal issues

## Experimental animals are unacceptable

# B3



It is wrong to rear animals just to keep them in laboratory cages and then to die prematurely by a lethal injection when the experiment is over. Animals are not just laboratory reagents.

Animal issues

## Animal living conditions and factory farming

# B4



The living conditions of animals in factory farms are far less humane than the conditions of laboratory animals. If we permit eating meat, should we object to using animals to advance human medicine?

Animal issues

## Strict controls over animal testing

# B5



All animal tests are subject to strict legal controls. Only tests that are considered to be justified are allowed. Animal suffering must always be in proportion to the human benefit.

Animal issues

## Researchers get too used to using animals

# B6



Because medical researchers are allowed to use animals, it's too easy to forget this is just a special allowance, and so they do not give enough attention to looking for alternatives to animals.

Animal issues

## Animal testing concerns everyone

# B7



If one really disapproves of animal testing should one also not accept drugs or other treatments that have been developed by means of animal testing?

Animal issues

## Can we replace animal testing?

# B8



To test drugs for toxic effects in specific body organs, human cells could reduce and replace many animal tests. But to test the effects over the whole body, there seems no real alternative to using animals.

Animal issues

## Testing for side effects

# B9



Active substances used to treat serious diseases often also have serious side effects (e.g. chemotherapy). Would you want to use a drug which had not been tested on animals first, to find out what these are?

Toxicity testing

## Toxicity tests on animals

# B10



Before any drug can be tested for toxic effects on humans, it is only common sense to test it on animals first. Even if it is not a completely effective guide, it is better than not doing it.

Toxicity testing

## Is an animal a good model?

# B11



An animal is not the same as a human. If animal tests cannot correctly predict what is to be expected in humans, then we should not use animals to test drugs.

Toxicity testing

## Some toxicity tests are out of date

# B12



Many drug toxicity tests using animals were developed a long time ago, and some don't work very well. Not enough is done to replace them.

Toxicity testing

## Human cells to replace animal tests

# B13



Human cells are the obvious alternative to testing drugs on animals. After all, we are not mice!

Toxicity testing

## Thalidomide tragedy

# B14



Animal tests don't always prove a drug is safe. Thalidomide was once prescribed as a sleeping pill for pregnant women. It had been tested on mice but in humans it had terrible side effects.

Toxicity testing

## Destroying embryos for research is unacceptable

# B15



Destroying embryos for stem cell research is wilfully killing human life. Even to research treatments for fatal diseases, it cannot be justified. And there are potential alternatives.

Status of embryo

## When does human life begin?

# B16



When does human life begin: at fertilisation, at birth, or somewhere in between?

Status of embryo

## What status has a human embryo?

# B17



What status should we give to an early embryo: just a ball of cells; a potential or developing human being; fully human?

Status of embryo

## Using embryo cells for drug testing

# B18



Is the prospect of treating terminal illnesses justification enough for stem cell research using human embryos? If so, is using these stem cells to test drugs for toxic effects also acceptable?

Status of embryo

## Is embryonic research just wrong?

# B19



Is embryonic stem cell research wrong because it is unacceptable to destroy a new life even to save the life of an ill person?

Status of embryo

## Treating embryos as a source of spare parts?

# B20



If we make stem cell lines from human embryos and use these cells for toxicity testing, is it treating embryos like a resource for spare parts, and not as the beginning of a new human person?

Spare and research embryos

## Creating embryos for research?

# B21



Is it acceptable to create embryos just for research because we never intended them for reproduction, or wrong because we would be creating them only to destroy them?

Spare and research embryos

## Surplus IVF embryos: a moral problem?

# B22



Is the growing number of 'surplus' embryos left over after IVF treatments a concern, given that these embryos will eventually simply get destroyed?

Spare and research embryos

## Is it acceptable to use surplus embryos for research?

# B23



Is it wrong to create embryos just for stem cell research, but okay to use surplus embryos from IVF or embryo selection that will be destroyed otherwise?

Spare and research embryos

## Is it really informed consent?

# B24



Is it fair to ask couples going through the trauma of IVF or embryo selection to face making decisions whether to allow their spare embryos to be used for research?

Consent

## Cells from human embryos for drug testing **B25**



Should we use human embryonic stem cells to test new medical drugs for toxic side effects as an alternative to animal testing? What about for testing other chemicals or cosmetics?

ES cells for drug testing

## What justifies embryonic stem cells research? **B26**



When the UK Parliament voted in 2001 to allow embryo stem cell research the main argument was for treating serious diseases by cell replacement therapies, but not testing medical drugs for toxic effects. Should society now debate this?

ES cells for drug testing

## Embryonic stem cells can be used for therapy and drugs testing **B27**



If we only reluctantly allowed embryos to be used because we felt it was justified for treating terminal diseases, is it now wrong to use those stem cells to also test medical drugs?

ES cells for drug testing

## Are there ethical limits to using cells from embryos? **B28**



Is it acceptable for drug companies to use embryonic stem cells in an automated system to screen chemicals for toxicity, (most of which will never be suitable for drugs), or only on the very best drug candidates?

ES cells for drug testing

## Induced pluripotent stem cells (iPS) as alternatives to embryos? **B29**



If induced pluripotent stem cells (iPS) can make all cell types of the body, from the patient's own body, without using human embryos, should we stop researching embryos and research iPS cells instead?

iPS cells

## Stem cell research is still young **B30**



Stem cell research from embryos and iPS cells are both still young sciences. It could be many years before we see which works best, and longer still to use them in clinical therapies.

iPS cells

## Researching both embryonic and IPS cells **B31**



Many scientists believe that to understand cell processes and for the best eventual therapies we should research embryonic stem cells, induced pluripotent cells and cord blood cells together for the best understanding.

iPS cells

## What is the balance of risk and ethics? **B32**



If in future toxicity tests based on iPS cells worked well, but carried slightly higher risks than with embryo stem cells, should we prefer to use iPS cells, which have less ethical problems?

iPS cells

## Today's moral values

# B33



How far should we make up our own minds about the world we want to live in? How far should we be bound by the moral values of previous generations?

Old and new values

## Don't dismiss deep human values

# B34



Should we be careful not to sacrifice deeply rooted human values under pressure from scientific innovations?

Old and new values

## Moral limits on science?

# B35



Should we place moral limits on science, allowing only non-embryo stem cell research; would we still gain all the expected benefits from stem cells?

Science and ethics

## Testing for toxic effects on the early embryo

# B36



Human embryonic stem cells give a unique way to follow the different stages of development of the embryo, to look for possible toxic effects that new medicines may have. This may prevent tragedies like thalidomide in future.

ES cells for drug testing