

# TSN Centre for Bioscience Teaching Development Fund

Briefing  
papers on  
bioethical  
issues  
Dr Chris Willmott  
Department of  
Biochemistry  
University of  
Leicester  
email:

[cjrw2@leicester.ac.uk](mailto:cjrw2@leicester.ac.uk)

## Background

- A recent survey into the provision of ethics teaching highlighted the need for resources to support bioscientists who teach ethics

## Project Aims

- To produce a series of bioethical briefings containing case studies, news items, background on the science and the ethical arguments concerning recent developments

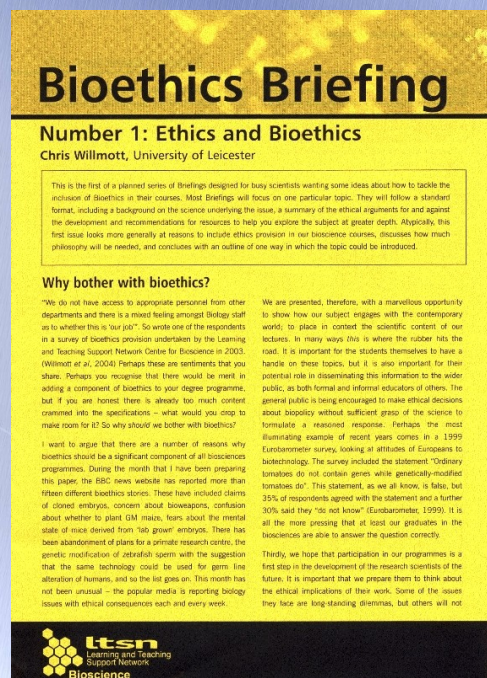
## Project outcomes

- Four Briefings on
  - Ethics and bioethics
  - Genetically Modified Crops
  - Preimplantation Genetic Diagnosis (PGD)
  - Xenotransplantation

Further details about the Bioethics project are available from

<http://www.bioscience.heacademy.ac.uk/projects>

<http://www.bioscience.heacademy.ac.uk/>



**Bioethics Briefing**

**Number 1: Ethics and Bioethics**  
Chris Willmott, University of Leicester

This is the first of a planned series of briefings designed for busy scientists wanting some ideas about how to tackle the inclusion of bioethics in their courses. Most Briefings will focus on one particular topic. They will follow a standard format, including a background on the science underlying the issue, a summary of the ethical arguments for and against the development and recommendations for resources to help you explore the subject at greater depth. Typically, this first issue looks more generally at reasons to include ethics provision in non-bioscience courses, discusses how much philosophy will be needed, and concludes with an outline of one way in which the topic could be introduced.

**Why bother with bioethics?**

"We do not have access to appropriate personnel from other departments and there is a mixed feeling amongst biology staff as to whether this is 'our job'". So wrote one of the respondents in a survey of bioethics provision undertaken by the Learning and Teaching Support Network Centre for Bioscience in 2003. (Willmott et al., 2004). Perhaps these are sentiments that you share. Perhaps you recognise that there would be merit in adding a component of bioethics to your degree programme, but if you are honest, there is already too much content crammed into the specifications – what would you drop to make room for it? So why should we bother with bioethics?

I want to argue that there are a number of reasons why bioethics should be a significant component of all bioscience programmes. During the month that I have been preparing this paper, the BBC news website has reported more than fifteen different bioethics stories. These have included claims of cloned embryos, concern about bioweapons, confusion about whether to plant GM maize, fears about the mental state of mice derived from 'lab grown' embryos. There has been abandonment of plans for a primate research centre, the genetic modification of starfish sperm with the suggestion that the same technology could be used for germ line alteration of humans, and so the list goes on. This month has not been unusual – the popular media is reporting biology issues with ethical consequences each and every week.

We are presented, therefore, with a marvellous opportunity to show how our subject engages with the contemporary world, to place in context the scientific content of our lectures. In many ways this is where the rubber hits the road. It is important for the students themselves to have a handle on these topics, but it is also important for their potential role in disseminating this information to the wider public, as both formal and informal educators of others. The general public is being encouraged to make ethical decisions about biotechnology without sufficient grasp of the science to formulate a reasoned response. Perhaps the most illuminating example of recent years comes in a 1999 Eurobarometer survey, looking at attitudes of Europeans to biotechnology. The survey included the statement "Ordinary tomatoes do not contain genes while genetically modified tomatoes do". This statement, as we all know, is false, but 35% of respondents agreed with the statement and a further 30% said they "do not know" (Eurobarometer, 1999). It is all the more pressing that at least our graduates in the biosciences are able to answer the question correctly.

Thirdly, we hope that participation in our programmes is a first step in the development of the research scientists of the future. It is important that we prepare them to think about the ethical implications of their work. Some of the issues they face are long-standing dilemmas, but others will not

