The response reproduced below was submitted to the consultation held by the Nuffield Council on Bioethics on the ethics of research involving animals during October-December 2003. The views expressed are solely those of the respondent(s) and not those of the Council.

This response was submitted using the online facility:

<u>Dr Flavia Zucco, CNR-INeMM, Italian National Research Council, Institute of Neurobiology and Molecular Medicine, Italy</u>

## **QUESTIONS ANSWERED:**

## 1. Background: the use of animals in research

#### **ANSWER:**

I believe that a lot of knowledge can be gathered by research on animals. In the case of biology in understanding the mechanisms that connect the molecular background to the phenothype (normal or pathologic). It depends from the experimental design and a correct interpretation of the results. No: it depends on a balance between ethical and scientific aspects. This question is unclear; doesit refer to different species? Is there any good definition of animal suffering available? and again to which animal species we are refferring to? Cruel treatment.

### 2. Genetically modified animals

#### **ANSWER:**

GM animals rise new issues concerning the possibility of planned modification of the human being. GM animals should be considered as inventions so that they are unnatural. As for other inventions it is of no concern to me. The centaur. If it is the only way to study specific aspects of the disease, which are otherwise unaccessible. Xenotransplantation. This is an area where cultural ad ethical aspects should have at least the same weight than the scientific ones.

#### 3. Alternatives

# **ANSWER:**

The word alternative is ambiguous: we are speaking about alternatives experimental models, or alternative researches (questions)? Yes, even if I believe that it is more a matter of searching and optimizing very advanced scientific approaches already available in basic research. (in silico, in vitro etc.) The public institutions. Applied sciences and technology I think that this aspect is overevaluated. Yes, there is a conservative attitude in not taking into account the ethical aspects involved in the animal experimentation.

#### 4. Ethical issues

### **ANSWER:**

Sentient being, thus I think that there is a difference between different animals. Lack of consciousness. I think that there is no general concept of suffering etc. applicable to both. All the following are retoric questions leading to the conclusion implicit in the last one. I think that this is an unfair way to ask questions. Ethical responsibility is a factor that should be very important.

# 5. The regulations

#### **ANSWER:**

I am not referring to the UK regulation in particular. My general comment is related to the very generic approach from the conceptual point of view: It makes a great difference if animal are used for research, testing or biological production. It also makes a difference if it is part of a procedure, or if it is the only information providing tool. Regulation should be innovative not only concerning methods to be used but also concerning languages and concepts, taking care that they are shared and commonly understood.

# 6: Providing information to the public

### **ANSWER:**

All these questions may be answered following a dialogue between scientists, philospher and public at large. Common languages,reference concepts and shared knowledges are still missing. Any institution practicing this kind of approach, will advance in the area of a correct information.