



## **S.I.N. REPORTING REQUEST RETURN**

This response was submitted to the consultation held by the Nuffield Council on Bioethics on Emerging biotechnologies between April 2011 and June 2011. The views expressed are solely those of the respondent(s) and not those of the Council.

**REPORTING TASK: NUFFIELD COUNCIL ON BIOETHICS EMERGING BIOTECHNOLOGIES CONSULTATION  
SECTOR: BIOETHICS  
DEADLINE FOR RETURN: 15 JUNE 2011**

**COUNTRY / GEOGRAPHIC REGION: CHINA  
RETURNING POST: SHANGHAI**

**1 How would you define an 'emerging technology' and an 'emerging biotechnology'? How have these terms been used by others?**

'An emerging technology' means it is relatively new and not as yet accepted into routine use; 'an emerging biotechnology' is an emerging technology with a biological basis or use.

**2 Do you think that there are features that are essential or common to emerging biotechnologies? (If so, please indicate what you think these are.)**

The essential features are developing rapidly, arising from new knowledge, influencing the market and creating new opportunities for scientists.

**3 What currently emerging biotechnologies do you consider have the most important implications ethically, socially and legally?**

Gene therapy, xenotransplantation, genomic medicine, genetically modified crops and synthetic biology.

**4 Are there examples where social, cultural and geographical factors have influenced the development of emerging biotechnologies (either in the past or currently)?**

Europeans oppose genetically modified crops, while North Americans have little such opposition.

**5 Are there examples where social, cultural and geographical factors have influenced public acceptance or rejection of emerging biotechnologies?**

Public reactions to human therapeutic agents in Europe are not provided for in advance by those developing the technology.



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**6 Are there examples where internationalisation or globalisation of research, markets and regulation have influenced the development of emerging biotechnologies?**

Some companies with their head offices and financial base in Europe and the US now work in China, India and etc.

**7 How have political traditions (such as liberal democracy) and political conditions (e.g. war) influenced the emergence of biotechnologies?**

For example, penicillin was widely used in the Second World War.

**8 Are there ethical or policy issues that are common to most or many emerging biotechnologies? Are there ethical or policy issues that are specific to emerging biotechnologies? Which of these, if any, are the most important?**

In my opinion, human intervention in nature, harms to health and environmental harm are common factors to emerging biotechnologies. Widening the gap between the rich and the poor, the risk and benefits of new developments for future generations are specific to emerging biotechnologies.

**9 Do you think that some social and ethical themes are commonly overlooked in discussions about emerging biotechnologies? If so, what are they?**

For example, harm to health and environment are both overlooked in discussions about emerging biotechnologies.

**10 What evidence is there that ethical, social and policy issues have affected decisions in (i) setting research priorities, (ii) setting priorities for technological development, and (iii) deploying emerging biotechnologies, in either the public or private sector?**

N/A

**11 What ethical principles should be taken into account when considering emerging biotechnologies? Are any of these specific to emerging biotechnologies? Which are the most important?**

It can use patent control, for example, the patent office should not allow the patenting of products the production of which necessarily involves the destruction of some emerging biotechnologies.

**12 Who should bear responsibility for decision making at each stage of the development of an emerging biotechnology? Is there a clear chain of accountability if a risk of adverse effects is realised?**



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I think those who should bear responsibility include public policy makers, regulators, academic researchers, funding bodies and those involved in public engagement.

### **13 What roles have 'risk' and 'precaution' played in policy decisions concerning emerging biotechnologies?**

Evidence of the absence of all risk should be demonstrated before research in a new area is carried out or the release of substances into the environment goes ahead

### **14 To what extent is it possible or desirable to regulate emerging biotechnologies via a single framework as opposed to individually or in small clusters?**

N/A

### **15 What role should public opinion play in the development of policy around emerging biotechnologies?**

Public opinion plays a very important role in the development of policy around emerging biotechnologies. For example, inquiries, written consultation exercises, seminars, focus group, surveys, patent control, consensus and dissensus conferences, they all help to make policy making more transparent, objective and acceptable to the public.

### **16 What public engagement activities are, or are not, particularly valuable with respect to emerging biotechnologies? How should we evaluate public engagement activities?**

N/A

### **17 Is there something unique about emerging biotechnologies, relative to other complex areas of government policy making, that requires special kinds of public engagement outside the normal democratic channels?**

N/A