

# Synthetic Components Network

## Towards Synthetic Biology from the bottom up

### Synthetic Biology Dialogue June 2010

#### Introduction

BBSRC and EPSRC commissioned a public dialogue project on synthetic biology with the aim of collecting and understanding public attitudes, in order that the Research Councils' future policies can better reflect public views. The work was conducted by market research company TNS-BMRB, and included public workshops and stakeholder interviews. The full report of the work can be downloaded from

<http://www.bbsrc.ac.uk/society/dialogue/activities/synthetic-biology/findings-recommendations.aspx>

Professor Dek Woolfson, PI of the Synthetic Components Network, sat on the steering group for the synthetic biology dialogue, and was involved throughout the project. He commented:

"It was really interesting taking part in this process and we welcome the report. Our network focuses on a bottom-up components approach and so we are not creating synthetic life, but the comments from public participants around the excitement of the science, coupled with anxieties about the breadth of the potential, really resonate. I'd encourage network members to read the report and relate it to their particular area of research and the public engagement activities they are involved with."

#### General findings

Public participants were able to grasp the complexity of synthetic biology and were excited by its possibilities. However, the breadth of these possibilities made people uneasy. Although there was no call for a moratorium on synthetic biology, people wanted the right checks in place and wanted individual scientists to consider their motivations for their work and the possible wider societal impacts.

The report identifies five central questions that interested the public. These would be worth considering when preparing for any public talk or discussion:

- What is the purpose?
- Why are you doing it?
- What are you going to gain?
- How do you know you are right?
- What else will it do?

## **Conclusions and recommendations**

### **The public feel that synthetic biologists should proceed with caution**

- People saw the potential of synthetic biology, and were particularly interested in the possibility of using the science to address the big issues facing society. However, there was some scepticism around the ability to address those issues, based on the promises of other technologies being only partially realised.
- The huge potential of the science made people uneasy, fearing that in taking large strides forward scientists might miss wider implications and issues

### **The conflict between synthetic and natural**

- Rather than issues directly around 'playing God', people were uneasy about the concept that something might be artificial but at the same time alive. This is related to a concern about what value a synthetic life might have – that although intuitively something artificial has less intrinsic value than a natural life, any lowering of values may lead to a blurring of boundaries about what it is ethically acceptable to use the life for

### **Issues with applying engineering principles to biology**

- People felt biology was too complex to be viewed as parts that could be assembled
- The possibility of producing things on an industrial scale made people uneasy, as if problems arose, the impact would be huge
- There was unease about speeding up evolution – that gradual and random changes in the living world would become forced and quick

### **Recommendations for the Research Councils**

- Science funded by the Research Councils should be made accessible for the public
- There should be scope to feed public views into research at an early stage

## **What next?**

Both the Chief Executives of EPSRC and BBSRC were present at the launch of this report. The greatest specific recommendation for the Councils is around the feeding in of public views to the development and funding of synthetic biology grants. Neither Council were prepared to answer how they might deal with that request, but from their answers to questions a big change in the funding process seems unlikely. Later informal discussions suggest they might act on the recommendations around encouraging scientists to consider the motivations for their work, through targeted training.

*Maggie Leggett, June 2010*