



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Report Panel discussion 'Why shouldn't I design with DNA?'

International Border Sessions festival

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A. van Leeuwenhoeklaan 9
3721 MA Bilthoven
Postbus 1
3720 BA Bilthoven
www.rivm.nl

T 030 274 91 11
F 030 274 29 71
info@rivm.nl

On November 11 2015, the Dutch National Institute for Public Health and the Environment (RIVM), hosted a session about the role of synthetic biology from a Do-it-yourself (DIY) perspective at the International Border Sessions festival. The following is a summary of the panel discussion.

The first speaker, Günter Seyfried, artist and lecturer at the University of Applied Arts in Vienna, explained and highlighted the roots of the DIY Biology movement. "DIY Biology Movement wants to understand, develop and conduct (synthetic) biology research themselves. This development is comparable to what we know from disciplines like electronics or computer programming. There is an overall growing interest from people with creative and curious minds, and access to knowledge and facilities clearly gives this DIY development a boost. Günter also stressed that generally 'open source' and 'open science' is a leading philosophy in the DIY Biology community.

Pieter van Boheemen, who runs the DIY Biology lab at the De Waag Society (Institute for art, science and technology) in Amsterdam, supported this notion and highlighted that the DIY biology movement is also important for democratizing and demystifying knowledge. In understanding a development like synthetic biology access to knowledge is vitally important. And what better way is there to do this with likeminded people and let them do actual experiments? Pieter stressed that the basic skills for doing genetic modification experiments are relatively easily acquired but that this type of experiments are strictly regulated, and may only be performed at a facility with the right permit. The Waag Society just recently acquired one.



The following discussion with the audience, moderated by Johan Melse of the RIVM, was lively and informative. Synthetic biology uses techniques that modify organisms at the genetic level. A part of the discussion focussed on whether providing people with knowledge, skills and facilities to do basic synthetic biology, would lead to unwanted and unforeseen developments. Suppose that anyone could make the proverbial glow-in-the-dark-six-legged cat in his own garden shed in the near future; shouldn't we worry more about what this can mean for man and the environment and shouldn't we regulate this more pro-actively? Another question is what this would mean for intended miss-use.

Both Günter and Pieter stressed that the synthetic biology technology is still far from achieving these kinds of results. Günter stressed that DIY Biology is not in the business of doing bad things and that there are strict regulations to comply with. Pieter added that the community approach also provides an additional layer of safety-thinking. Not only is the technical feasibility discussed within the group, but also the ethics and possible impact. Unsafe or unethical proposals and ideas are rejected by the group.

On the question what the role of an organisation as the Dutch National Institute for Public Health and the Environment (RIVM) should be, the audience was clear: providing clear objective information for the general public. Public awareness of the risks and benefits of synthetic biology should be increased.