

Synthetic Biology Risk assessment

*You can never again get rid
Of a new idea or a new invention
Once it has been released.
The dumb will use it enthusiastically without limits,
The wise will verify its value
Knowing that it cannot be controlled
By the tools of yesterday.*

W.Stück

Synthetic biology is prophesied to become the technological revolution of the 21st century. It will change industrial production, medicine, ethics, and influence society as a whole and every individual's life. Synthetic biology initiated by Craig Venter and others is the emerging possibility of creating artificial life. It aims to design and produce all simple biological components that can be plucked together like electronic parts. The field opens up the possibility of manipulating living systems and their component parts in the way in which engineers design new machines. These "living machines" may consist of merely artificial components that do not exist in nature.

Proclaimed goals are: clean energy sources, new chemicals and tissues, microbes binding toxics and carbon dioxide, targeted medical diagnostic and therapeutical devices, etc.

The possible risks dealing with artificial organisms are:

Accidental/intentional release, uncontrolled proliferation, unpredictable new functions, cross-breedings with natural organisms, threats to biodiversity and disruption of ecosystems, bioterrorism, incurable new epidemics, artificial biological arms race.

We do not have the tools to regain novel organisms once escaped and out of control.

Consequently, considering its potentially great importance and enormous impact on all spheres of existence synthetic biology needs to be dealt with before uncontrollable facts exist.

As a facilitator withing the EPH Programme my intention is to establish working groups for the different aspects of the field of synthetic biology. We might want to define more precisely the most important aspects within the wide range of the field of synthetic biology, as there are ethical, social, medical etc. implications in accordance with the Antverp Declaration of 1993.

My first step will be to call for experts in my country. However, the EPH being a European programme it is necessary to take resort to experts of different European countries. To fulfil my tasks I need access to all relevant available national and European pools of experts and expertise. As EPH/SREH is localised in Brussels and in collaboration with the EU I hope to get sufficient assistance from you.

I would like to address all experts present at this conference asking them whether they are prepared to take an active part in the envisaged working groups or whether anyone of their knowledge might be interested. If so, please contact me immediately.

My goal is to be able to present first results of activities in Krakow.

Many thanks.

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