

PRESS RELEASE

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IASB Develops Security Measures for Use of Synthetic Biology

Successful IASB workshop with a panel of top experts

A workshop on „Biosecurity in Synthetic Biology“ was held at this year's *analytica* in Munich on April 3, 2008.

More than 30 European and American experts from industry, research, EU and associations presented and discussed the requirements for biosecurity in the use and commercial supply of synthetic genes.

The workshop was organized by the newly founded Industry Association of Synthetic Biology (IASB) based in Heidelberg, Germany, that focuses on the advancement and development of this technology. Due to the increasing performance of DNA and gene synthesis, this area of research is growing dynamically and requires effective measures for safe use of these products.

The rapid and cost-effective availability of DNA molecules opens up new opportunities but also entails novel risks in biotechnology. According to the workshop participants, these risks primarily include the purposeful misuse of the technology. However, inadvertent mistakes in the proper use of the new technological potential of synthetic biology must be considered.

The workshop focused on planning of appropriate risk management measures: sources of error may be reduced by systematic cataloguing and adequate user information via a dedicated internet portal. The risk of misuse may be minimized by close monitoring of customer orders.

The first steps towards implementation of these strategies have already been taken: an anonymized survey of industrially produced and delivered genes will rapidly establish the current data status and provide a solid basis for the further development of biosecurity provisions. In addition, it is planned to establish a sequence database accessible for all companies involved in gene synthesis that will help to identify orders requiring closer scrutiny. A panel of experienced researchers and representatives from relevant authorities will be involved in the establishment of the database and the resulting reviews.

„Synthetic biology offers the potential to obtain new research results and products in very short time. Therefore, the use of this technology should be made as safe as possible. The IASB will support the creation of an appropriate regulatory environment in close cooperation with European and German authorities,“ declared IASB spokesmen Peer Stähler (chairman of the IASB), febit synbio GmbH, and Markus Fischer, Entelechon GmbH.

Since science is an transboundary endeavor, all participants agreed that appropriate measures must be established on an international basis and therefore arranged for close cooperation with ICPS (International Consortium for Polynucleotide Synthesis), the most prominent US association in the field. Countries outside the EU and the US should be integrated as soon as possible to provide adequate information and to prevent the circumvention of the planned control mechanisms. These efforts ultimately aim at a seal of approval for the delivery of controlled DNA elements.

About the IASB (www.ia-sb.eu)

The Industry Association of Synthetic Biology (IASB) is a consortium of leading companies in synthetic biology. Founding members include ATG: Biosynthetics GmbH, Biomax Informatics AG, Entelechon GmbH, febit synbio GmbH, MWG Biotech AG and Sloning BioTechnology GmbH. The main focus of the association is the advancement and future development of synthetic biology.

About synthetic biology

Synthetic biology means the artificial construction of biological components and systems. Fueled by the rapid progress of DNA synthesis techniques, synthetic biology offers unprecedented opportunities for the advancement of biological research. This powerful technology has a broad spectrum of applications, e.g. in vaccine development, optimization of drugs and renewable energy sources, among many others.

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Picture caption:

Besides the IASB members, representatives of the ICPS, Fraunhofer Institute, European Union, International Council for the Life Sciences, Goldman School of Public Policy and several European universities participated in the IASB workshop.