Press release

Young scientists design new microorganisms for the European iGEM Jamboree

Beginning of October, young scientists presented novel approaches to solve current world-issues in nutrition, medicine, energy and environment at the VU University of Amsterdam. iGEM is an annually organized synthetic biology competition, in which the participating students design and construct a microorganism 'machine' in the summer-break. The event was successfully organized by six Dutch Universities (VU, UvA, TUD, WUR, TU/e and RUG) showing the strength of Dutch universities in Synthetic Biology.

The iGEM competition is world-wide with more than 180 participating teams in 2012. Beginning of November, the world-championships will take place at MIT Boston. There, teams from Europe, Asia, East, West and Latin America will compete for the best designed biological system. First the European teams competed in the weekend of 5-7 October to get a spot in the World Championship.

The iGEM competition is all about designing and construction of biological building blocks, the so-called 'BioBricks'. The BioBricks are pieces of DNA that provide a new function to microorganisms. Besides challenging science, biology, engineering and computing, the students evaluate the risks and benefits of their projects for society.

To strengthen the importance of integration of scientific advanced and society, the European iGEM Jamboree started with a debate organized in collaboration with the Rathenau Institute. iGEM students of Delft University of Technology and University College London discussed along with other scientists, politicians and policy-makers about the impact of synthetic biology on society. In the end all parties concluded that mutual communication and control are crucial for the future.

On Saturday more than 600 students and team leaders were nervously running around and throughout the building there were iGEM posters everywhere one looks. All iGEM participants were clearly ready for their team presentations and exert themselves to the outmost to interest as many people as possible for their project. Folder, comic's books and gadgets were distributed. The team of the TU Munich even dressed up in lederhosen and dirndls to promote their project "SynBio Beer". It was clear that all students have a great passion for science and passionate to transfer their ideas.

In the end, the jury of forty scientists was most impressed by the teams from Cambridge, Groningen and Slovenia.
The Cambridge team developed a system that improves the quality and amount of biosensors. The English students presented an internal control to make biosensors more reliable and therefore an important discovery for science.

The students from Groningen made a sticker containing bacterial spores of *B. subtilis* which are sensitive to the smell of rotten meat. The BioBricks of the team color the bacteria in the sticker blue when the meat should not be eaten anymore. A very handy sensor for every household and reduce the food waste of currently 1.3 billion tons of food per year!

Slovenia developed an ingenious system for the production of therapeutic proteins in mammalian cells. The method is safe, cost-effective and makes it possible to turn the production of drugs in the body on and off: a targeted controllable *in situ* drug delivery system.

After an exciting jury deliberation, the European Grant Prize Winner was announced: The 'Food Warden' project of the University of Groningen. Furthermore eighteen out of the forty-six teams were selected to advance to the World Championships, which will take place in early November at the Massachusetts Institute of Technology in Cambridge, USA.

More information
2012.igem.org/Regions/Europe/Jamboree

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