



## Heidelberg cleans up: “Ecolicence to kill” wins several prizes at the international iGEM Competition in Boston

Translated Press Release, November, 11, 2008

Finally all the labor of the recent months paid off: during the award ceremony of the international renown iGEM-competition held at the Massachusetts Institute of Technology (MIT) in Boston on November, 8-9 the team from Heidelberg have left a lasting impression. The team, which competed for the first time, won three special prizes as well as a Gold Medal for their scientific achievements. Under supervision of Prof. Roland Eils and Dr. Victor Sourjik the 16 students have elaborated on the “Ecolicence to Kill” project. Their aim was to construct bacteria able to seek and destroy other germ or even tumor cells.



The International Genetically Engineered Machine Competition (iGEM) is the premiere Synthetic Biology competition in the world. Working at their own schools over the summer, participants use standard biological parts to design, build, and operate biological systems in living cells.

On the 8<sup>th</sup> and 9<sup>th</sup> of November 2008, they shared their work at the iGEM Competition Jamboree at MIT in Boston and competed for a variety of awards. This year’s competition attracted 84 teams from all over the world, amongst them famous institutes like Harvard, Cambridge, Tokyo or Caltech (California Institute of Technology).

Heidelberg’s team, consisting of 15 students from the University of Heidelberg and one from the Technical University in Darmstadt, could accomplish extraordinary results in winning the “Human Practice Prize”, the “Best Poster Prize “ and the “Best Presentation Prize”. Furthermore they won one of the 16 Gold Medals for their scientific work.

Since July this year the students constructed under supervision of Prof. Dr. Roland Eils (German Cancer Research Center (DKFZ) and University of Heidelberg) and Dr. Victor Sourjik (Zentrum für Molekularbiologie Heidelberg) a killer-prey-system on the basis of ordinary *E. coli* bacteria. They created a killer strain able to specifically kill prey bacteria, which themselves were modified to produce a chemical attractant sensed by the killers. In the next step, medical applications based on this synthetic killer-prey-system shall be developed. Here the killer bacteria will be

enabled to track germs or even tumor cells and specifically destroy them. First results in destroying tumor cells were already achieved.

Synthetic Biology is a new area of biological research that combines science and engineering in order to design and build novel biological functions and systems. Beside the scientific topic of the projects, the iGEM-jury valued the public relation measures of the competing teams. The “Human Practice Prize” was given to the students from Heidelberg because of their extraordinary activities to provide information to the general public. They invited for example a school class into their laboratories to show them the practical side of their project and carried out surveys on science related topics with local people from Heidelberg.

All results of the team’s work as well as collection of all team sponsors without this success wouldn’t have been possible are available at <http://2008.igem.org/Team:Heidelberg> .

Pictures and further information is available from: Dr. Jan Eufinger ([j.eufinger@dkfz.de](mailto:j.eufinger@dkfz.de))



**The successful team after the award ceremony in Boston.**

1<sup>st</sup> row left to right: Roland Eils, Philipp Bayer, Stephen Kraemer, Daniela Richer, Maria Muench, Adjana Eils; 2<sup>nd</sup> row: Yin Cai, Pascal Kraemer, Kathrin Nußbaum, Andreas Kuehne, Marika Ziesack, Anna Stoeckl, Kolja Schleich; 3<sup>rd</sup> and 4<sup>th</sup> row: Dominik Niopek, Markus Stahlberg, Erik Sommer, Chenchen Zhu, Yara Reis, Maximilian Hoerner, Michaela Reichenzeller, Barbara DiVentura, David Kentner, Christian Moritz, Jens Keienburg; Missing: Victor Sourjik, Hauke Busch, Jan Eufinger, Michael Flossdorf, Phillip Hundeshagen, Nikita Vladimirov