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## Cambridge wins Grand Prize for iGEM 2009

A team of Cambridge students has been awarded the Grand Prize for their entry into an international synthetic biology competition.



The iGEM team. Image courtesy of Dr Jim Haseloff.

Against stiff competition from over 100 teams in top international institutions, the Cambridge team was awarded the Grand Prize at the 2009 International Genetically Engineered Machine (iGEM) competition finals at the Massachusetts Institute of Technology (MIT) in November. As well as winning the overall prize for best project and the BioBrick Trophy, the team was awarded a gold medal and trophy for the Best Environment Project.

The undergraduate students (Vivian Mullin, Alan Walbridge, Shuna Gould, Siming Ma, Mike Davies, Megan Stanley and Crispian Wilson) faced the challenge of conceiving, designing and implementing a synthetic biological system using standard, interchangeable DNA parts ('BioBricks') and operating it in living cells.

Their winning idea, 'E.Chromi', is based on the engineering of bacteria that are normally found in the gut, in order to generate multicoloured pigments and provide improved biosensors. One hypothetical application of the invention was explored with Daisy Ginsberg and James King from the Royal College of Art: the engineered bacteria could be ingested as a probiotic to provide cheap, personalised disease monitoring. Chemical changes in the gastrointestinal tract caused by disease would result in a colour signal in faeces that is bright enough to be visible to the human eye.

The team was supported throughout the project by faculty staff from the Departments of Plant Sciences, Genetics, Pathology, Engineering, and Chemical Engineering and Biotechnology. One of the advisors, Dr Jim Haseloff from the Department of Plant Sciences, described the special role that the competition has played in Cambridge: 'Since 2005, when Cambridge was the first UK team to take part in iGEM, the competition has brought together a network of researchers interested in the interplay of biology and engineering, helping to strengthen the emerging field of synthetic biology in Cambridge. The competition is a highly motivating and educational experience for all concerned and we're delighted that the innovative ideas of this year's team have been so well received by the judges.'

**For more information, please visit [www.synbio.org.uk/igem.html](http://www.synbio.org.uk/igem.html) and [www.echromi.com/](http://www.echromi.com/)**