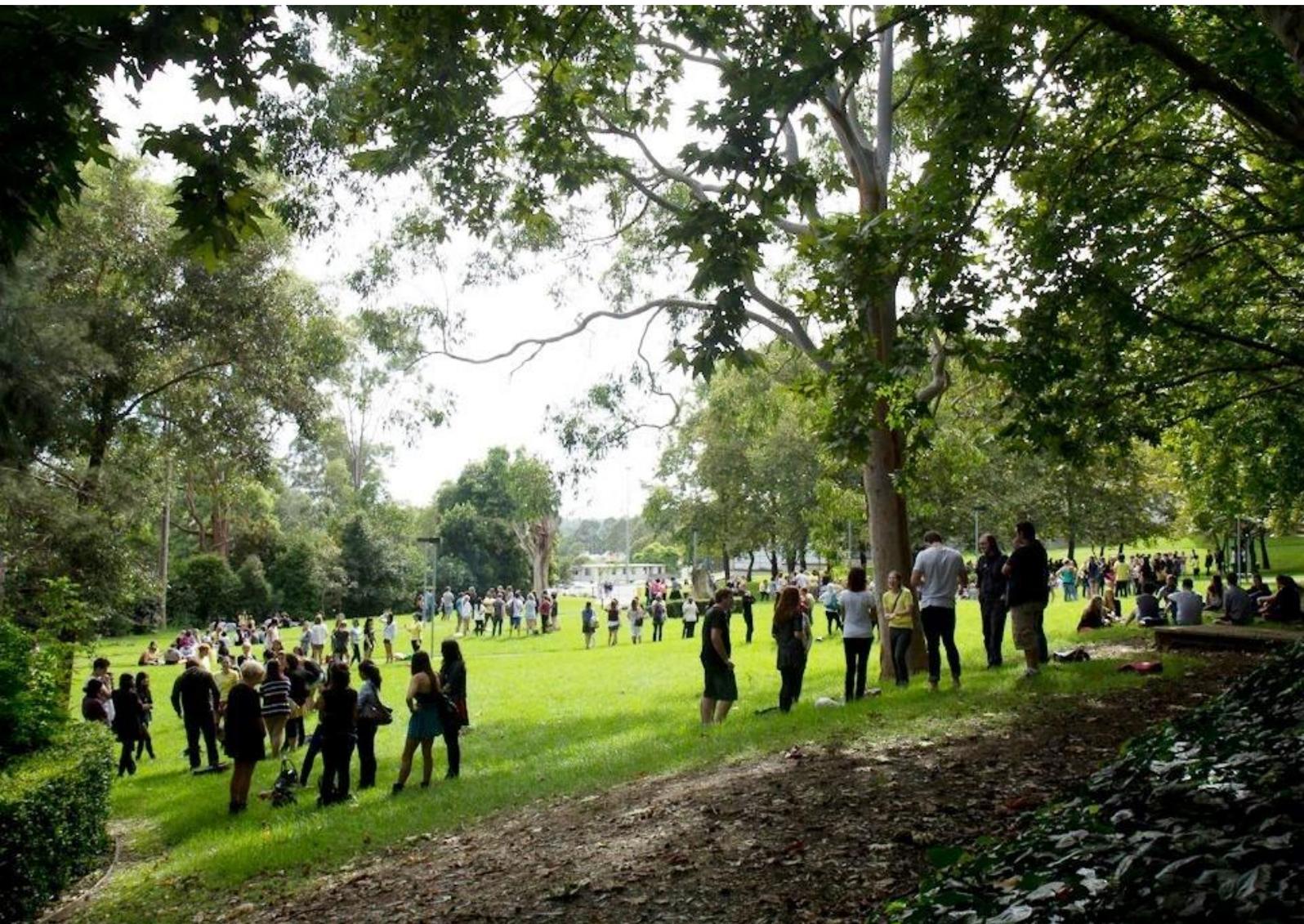




MACQUARIE
University
SYDNEY · AUSTRALIA



Department of Chemistry and Biomolecular Sciences
Faculty of Science and Engineering
Macquarie University
North Ryde, NSW 2109, Australia



Sponsorship Opportunity

Macquarie iGEM 2015



Sponsorship of team Macquarie Australia at the international Genetically Engineered Machine (iGEM) competition 2015

We are writing to you on behalf of a team of biomolecular science students in their final year at Macquarie University. Our team is working on a synthetic biology project as part of the 2015 iGEM competition.

The aim of our project is to synthetically create the genes that encode chlorophyll and express them in a bacterial host. If our goal is achieved it will be a world first and a step towards a renewable energy source. Outreach activities will also be run to engage with the community about issues and controversies surrounding advanced biology.

This will be Macquarie University's 6th year competing and we are the highest performing of the Australian teams. The 2014 team won a gold medal and we also have high expectations for this year. We are asking for assistance in helping us represent not only the University but Australia's scientific industry.

The field of synthetic biology is a relatively new research area that combines biology and engineering. The students that participate in the iGEM competition are an important part of this evolving discipline and have the opportunity to demonstrate their skills through cutting edge research in the field.

Being the premier competition in synthetic biology, iGEM is the only of its kind in the world (see <http://igem.org>). In 2015 iGEM is in its 11th year. An international conference will be held in Boston from September 24-28th, with over 2,500 students from 280 teams and 32 countries expected to attend.

The work we are conducting is outlined in this document. If you would like additional information about our project, the competition, or sponsorship requirements please contact one of our advisors Dr Louise Brown louise.brown@mq.edu.au or Prof. Robert Willows robert.willows@mq.edu.au.

Thank you in advance for your time and we look forward to hearing from you.

Kind regards,

Tanya Smith & Lauren Wunder

On behalf of the Macquarie University iGEM team

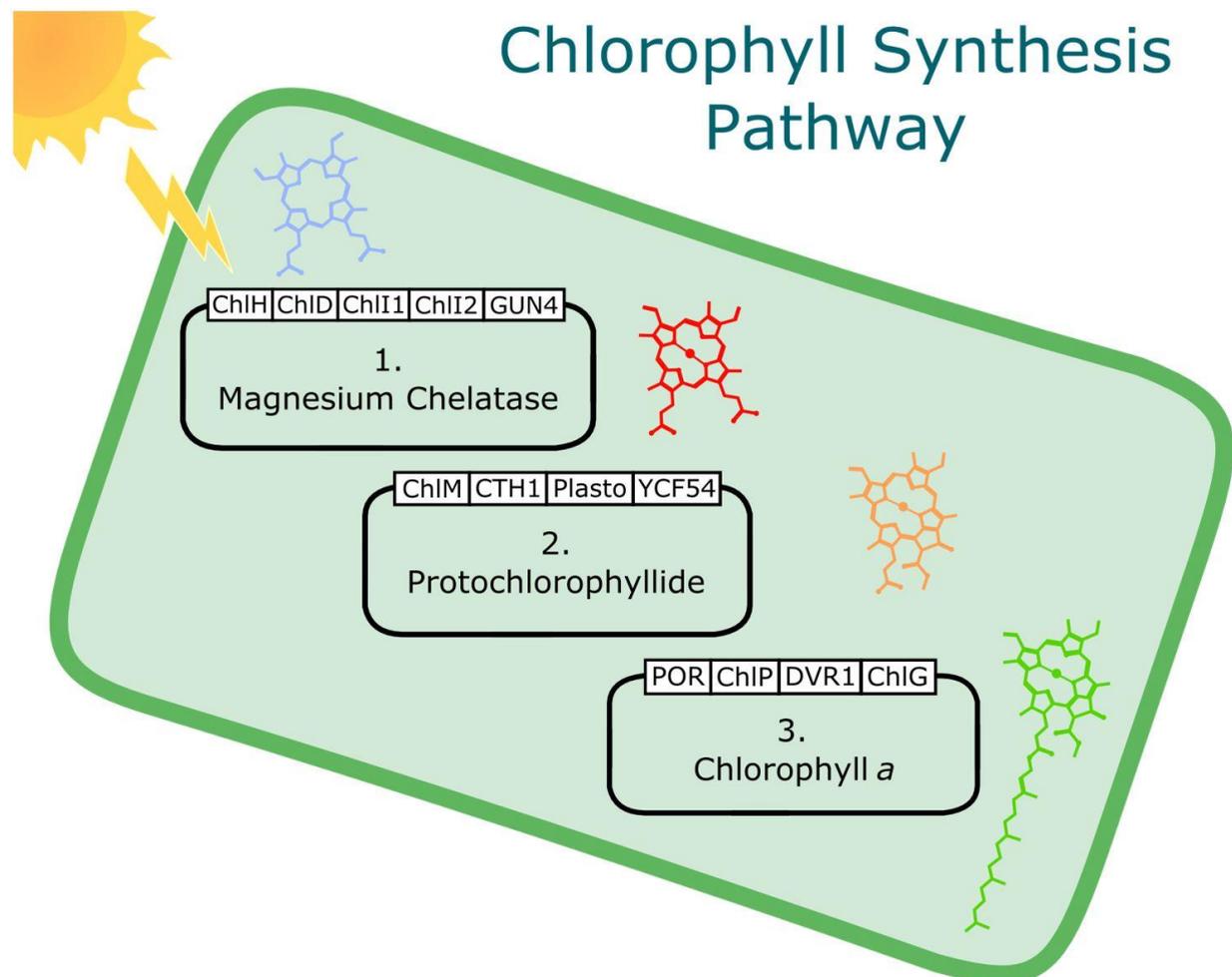
MqAust.iGEM2015@gmail.com



Re-imagining Biological Processes

Our project has its focus on photosynthesis - the natural process where plants and algae convert sunlight into useable energy. By developing artificial photosynthesis in a biological system we can better harvest the unlimited supply of solar energy. The long-term goal is to engineer bacteria that can produce hydrogen gas on an industrial scale. We want to be a part of the clean energy solution.

This year the aim of our team is to engineer bacteria to manufacture chlorophyll, the primary molecule of photosynthesis. Chlorophyll harvests light and is involved in the excitation transfer of energy. Chlorophyll can be synthesised via a pathway from the protoporphyrin IX molecule. By placing 13 genes into 3 biobrick vectors we can recreate the pathway in *Escherichia coli* (see figure below).



Engaging the Community

As part of our involvement in the iGEM competition we will be running outreach programs to educate the local community about various issues surrounding not only synthetic biology but advanced biology in general. This will include sustainability, economic impacts, bioethics, and safety issues in regards to synthetic biology.



The cornerstone of our outreach campaign is our interactive online contest titled '*So You Think You Can Synthesise*'. Run in the format of a reality television show, voters choose their favourite 'scientist' each week with three respected academics as judges. We will be targeting undergraduate and high school students to take part in the weekly sessions where they can ask questions about synthetic biology. In its first year this campaign was highly successful, with 10,000 individual visits to the online site.

Other activities include Macquarie University's Open Day, radio interviews, and info-tainment videos. We will be utilising our University, local media, and also social networking to generate interest in our outreach campaign and project in general.

Through your sponsorship we will be able to brand your company as a chief benefactor of these outreach programs.

Sponsorship Details

We hope to obtain sufficient funding to send a team of five or more students to Boston to present this year's research project, at approximately \$3,500 per student including a \$700 registration fee. Any financial contribution you can make towards this goal will be highly appreciated and all donations above \$500 will be recognised as shown below.

As mentioned, iGEM is the largest gathering of synthetic biologists globally. There is significant visibility potential at the Giant Jamboree conference and events leading up to it. Additionally sponsors gain exposure and interact with both students and academics. Many of our team members are graduating next year and are likely to pursue careers in this field. This is a worthwhile chance to scout some of the emerging graduates whilst also bridging the gap between undergraduate study and industry.

All sponsors will receive a post event summary report and certificate. Press releases are also available on request.

Our team would be very humbled to have your generous support.

	Bronze \$500- 3000	Silver \$3000- 5000	Gold \$5000+
Company logo on all print promotions	x	x	x
Company logo and website link on our iGEM wiki sponsors page	x	x	x
Acknowledgement in our growing social media presence	x	x	x
Company logo on front page of our Wiki		x	x
Company logo on our interactive website (<i>So You Think You Can Synthesise</i>)		x	x
Company logo on the back of all team t-shirts to be worn in Boston and public events		x	x
Verbal acknowledgement of sponsorship in the lead up to the Giant Jamboree conference		x	x
Company logo on the front of all team t-shirts and mascot			x
Branded as a major sponsor throughout our advertising, press releases, print promotions and at the conference			x



