

## 2014 Sponsorship Brochure

## **Team Letter**

Thank you for your interest in sponsoring the 2014 University of Warwick's International Genetically Engineered Machine (iGEM) team, the world's capital synthetic biology competition for high schools and universities, both undergraduate and postgraduate in the goal of designing and implementing a genetic system to solve a significant challenge we face today, in areas such as limiting environmental impacts of industry to medicine and creating economic solutions.

Whilst this is the University of Warwick's first team to be entered for the competition, our team remains competitive to those enrolled by other universities due to our rigorous selection process and our supervisors, Prof. Alfonso Jaramillo and William Rostain, who not only specialise in the field of synthetic biology, but have actively collaborated in at least 3 previous iGEM competitions (awarded the gold medal three times and additional prizes for Best Model and Human Practices). We predict that, with your sponsorship, we will achieve the first Gold medal for the University of Warwick.

The amount of teams, and sponsorship coverage, has been increasing steadily year on year over iGEM's history; this year, 246 teams are currently registered for the project, over a quarter in Europe alone. In addition to these teams, judges and visitors from academia and industry will be in attendance of our annual research presentation in Boston, Massachusetts where over four thousand people will view our research and your sponsorship will feature distinctly in our presentations, posters, social media and website.

Sponsorship has played a significant role in the success of iGEM teams, without the generous financial support and necessary supplies provided by sponsors, teams such as ours would not be able to add to the scientific community through the iGEM parts registry or assist next year's iGEM teams develop their own initiatives. As our presence grows through sponsor support, we can also develop our abilities and become inspired by collaborating with your business.

With a motivated team lead by guidance from experienced, award-winning supervisors, we expect nothing less than success during our 2014 season and the iGEM team will be proud to represent the University of Warwick and the iGEM competition. We would be privileged if you choose to join us in our endeavours in solving a real-world problem with synthetic biology.

Yours sincerely,

Leo Vong Head of iGEM Sponsorship, Warwick 2014



# What is **GEM**

### What is iGEM?

The Internationally Genetically Engineered Machines Foundation (iGEM) is an international competition aimed at advancing scientific research and education in synthetic biology. Teams must design and use biological 'parts' or 'biobricks', standardised DNA sequences, to be used to engineer new biological systems which serve useful purposes. Previous projects have included engineering bacteria that can be used as a sensor for arsenic, bacteria that change colour based on concentrations of an inducer and bacteria that can replace red blood cells. Teams are divided: high school, undergraduate and postgraduate; who work on their projects over the summer, and travel to the Massachusetts Institute of Technology (MIT) to present their projects to a panel of judges during October.

### The Registry of Standard Biological Parts

One of the goals of iGEM is to create a database of standardised, modular, gene sequences or 'parts', so that synthetic biologists can easily find the sequences they need. This is in the same way that engineers can find standardised nuts and bolts to fit whatever construction purposes they need. For this purpose, the Registry of Standard Biological Parts was created. Every iGEM team is required to add parts they create to the registry, and document their characteristics, as well as their effectiveness. The registry currently contains several thousand parts, growing with each cycle of submissions.



## The Team

The University of Warwick iGEM is a student-run undergraduate multidisciplinary team funded by the School of Life Sciences and will be recruiting new members for future entries via a Student Union run society, Synbio Soc from 2015. This team is new, but we believe with our highly experienced supervisors, we can increase involvement of the university and iGEM.

The team is composed of ten undergraduate students across five major disciplines (Life Sciences, Chemistry, Mathematics, Physics and Engineering), using expertise and knowledge imparted from all five fields of study we will create a project incorporating design elements from these disciplines in a seamless fashion to create use in an integrated manner.

Our outreach grants our students with an intense interest in any field of research an opportunity to experience a diverse, co-operate yet professional working environment, to develop their practical skills and pursue their goals. Our recent human practices have allowed the team to share and collaborate with fellow iGEM teams both nationally and in South America in finding solutions to their own design dilemmas and via this process, we develop stronger ties between students and bring the knowledge of synthetic biology tighter to the fold. Furthermore, we have hosted an A-level student to gain work experience in our laboratory to further understand a week working in Life Sciences





## Our supervisors

### Alfonso Jaramillo

Prof. Jaramillo has been the Professor on the Chair of Synthetic Biology since 2013 at the University of Warwick, he was awarded a PhD in Particle Physics and delved into synthetic biology thereafter to a total experience within the field of more than 15 years, rising to group leader of the ISSB (Institute of Systems and Synthetic Biology) before his professorship. He has been associated with 6 iGEM teams, and worked with fellow supervisor William Rostain on at least three occasions.



### William Rostain

William Rostain is a current PhD student working in the Jaramillo laboratory developing synthetic phages for future antibiotic therapy, he earned his BSc in Edinburgh in Biology and has been involved in three iGEM teams as both a student and advisor, earning gold with additional prizes in each one, in the undergraduate and postgraduate category.



#### Sian Davies

Dr. Sian Davies is a current post-doctorate at the University of Warwick having completed her PhD in Molecular Genetics at the university. Her previous BSc (Biochemistry and Genetics) was at the University of Nottingham.





### Human Practices and Outreach

Human Practices is the fusion of economic, ethical, legal and social dimensions of an iGEM project. From the beginning, iGEM has always been about developing synthetic biology so that it can solve industry and societal needs.

However, most of these results stagnate post-competition due to lack of funding, awareness and interest. We have tackled this issue through the development of a Synthetic Biology Society at the University of Warwick, as a way of continuing to fund future iGEM projects but also insuring the continued awareness of the field amongst students and academics. We also hope to increase understanding amongst the general public through community wide events.

We have also tried to gauge an understanding of current public opinion of synthetic biology by means of surveys, and will be presenting at a conference aimed at advertising the new Synthetic Biology Centre for Doctoral Training. We hope that by engaging with people of all levels we will be able to help advance the field, but most importantly ensure its continued growth.



## **Project Budget**

Expenses	Amount	Description
Primers/DNA		
Vectors	£200	Used for PCR to amplify DNA for experiments.
Drylab supplies	£1,000	Miscellaneous equipment, eg. Software licenses, stationary, etc
DNA Synthesis	£2,000	Customised sequencing of DNA
DNA sequencing	£500	Verification of DNA sequences
Reagents	£1,000	Enzymes, biological reagents, etc
Misc Lab Supplies	£500	Other equipment used in labs, e.g. pipettes, gloves, etc
Total Expenses	£5,200	

### **Outreach and Competition Budget**

Expenses	Amount	Description
		Registration fee for the competition (university and
iGEM Team Registration Fee	£2,200	students)
iGEM Jamboree Fee	£6,000	Cost of attendance at the Jamboree
		Accommodation for the duration of the international
Accommodation	£2,500	conference
Travel Expenses	£6,250	Cost of travel to Boston, MA
		Costs incurred by attendance, and hosting of various
Conference Costs	£700	conferences
Total Expenses	£17,650	

Please note that these are only current and projected expenses are may increase further before the end of the project.



## **Benefits of Sponsorship**

### **Competition visibility:**

The Warwick iGEM team will compete at the largest synthetic biology competition in the world at the international level, all our sponsors will be featured in our competition poster, presentations, project Wiki as well as our social media. We feel that this type of active brand exposure improves the portfolios of our sponsors in supporting professional, undergraduate initiatives and exposes the sponsors to thousands of current and future researchers, as well as industrial and academic visitors representing their respective corporate interests.

### University networking:

The University of Warwick is a reputable and respected university on many league tables across multiple disciplines and are the university of choice for over 45 international governments and bodies, one third of our students are from overseas and we have links with institutions across the world, notably Monash University (Australia). Thus, we have a very sophisticated alumni network where we can relay our sponsors to graduates who may be enthusiastic in pursuing respective careers with these sponsors through these contacts.

### Society:

In addition to public coverage and access to our networking, we will be recruiting future iGEM teams through the newly created SynBio society via the Warwick Student Union, we will feature sponsors in SynBio to further expose your organisation to talented and generally interested students who may also wish to pursue their respective interests or as a society to learn about biology. We also hope that, by the creation of this dedicated society, Warwick iGEM can bring the competition and industry even closer to create student-industry collaborative relationships that may benefit both parties by solving problems in biology or in general through this intellectual partnership.



## Gifts in Kind

As a biology research team, we use and require many different materials and we graciously accept gifts in kind, an example of the items we typically use in an iGEM season:

- Plasticware and glassware: centrifuge tubes, micropipette tips, cuvettes, etc
- PCR Reagents (e.g. DNA polymerases, dNTPs)
- Cloning/Restriction Enzymes (e.g. Ecorl, Spel, T4 Ligase)
- Antibiotics (e.g Geneticin, Gentamcyin)
- Molecular Biology Kits (e.g. *in vitro* transcription kits, gel extraction kits)
- Any unwanted or surplus materials that may be of use to a student team.
- Refreshments that can be donated for use in post-conference discussions or for raising awareness during exhibitions

## **Financial Support**

In addition to gifts, we also accept any monetary donations, as iGEM has a limited resource allocation, financial contributions to the University of Warwick's iGEM program allows its continued existence for many cycles to come. These contributions will typically be used for things such as iGEM registration fees, DNA synthesis, travel and lodgings, custom primers and other unique laboratory items that are difficult to receive by donation. Some money may also be saved to fund next year's team.



## **Donation Form**

### **Donation form**

Warwick iGEM provides talented undergraduate students of any discipline to follow their research interests in an equal opportunity team environment. Whilst the University provides our team with laboratory space, access to facilities and minimal funding for fees and travel arrangements. Funding for some components is necessary for parts of our project.

If you are interested in aiding our program this year and becoming an integral part of our success as a synthetic biology team, please fill out our form and return it to the address provided. Cheques may be made payable to "Warwick iGEM" and attached to the form. The team will be happy to answer any questions or clarify any points regarding our contributions to you or what we require on a year to year basis.

Thank you for your time.

Mailing Address: Warwick iGEM Attn: Alfonso Jaramillo University of Warwick, Coventry, Warwickshire, CV4 7AL	Contact Information: P.I: Alfonso Jaramillo Alfonso.Jaramillo@warwick.ac.uk igem.warwick@gmail.com Y.H.Vong@warwick.ac.uk
General Information:	
Name of Organization:	
Mailing Address:	
City:	Postcode:
Contact Information:	
Contact Name:	Contact Title:
Phone Number:	Email Address:
Donation Information:	
Gift in Kind:	
What is the gift in kind?	
Monetary Donation:	
What is the donation amount?	
Donor Signature:	Date:

## Feedback



"It's very encouraging that you and Warwick team has developed this important technology to potentially treat Type II diabetes" – Dr. Chou

"It's great to hear about your work" – Chris Hingley (PrimerDesign)

"You pose an interesting idea and I commend you on your entrepreneurial approach to funding your project" – Dr. S.E. Broedel (AthenaES)

## Thank you for your interest!

Some of our current sponsors include:

