iGEM weekly meeting
4/8/12

**Announcements:**

Isiah, Lab Manager –

The next 2 weeks is about organizing the lab. We need to divvy up the remaining work. Expect Isiah's email about the inventory in a few days. Isiah will just finish cleaning a few more things up and then the lab will be ready to go. 2 books will be created, one for the glycerol stock and another for primers/buffers/ etc. There will be a physical copy in lab and one digital one.

Cara, Social, & Anthony, Treasurer –

Thursday at 4 PM is the deadline for applying for SORF. WashU has not responded to Cara, so we will try to use Uros' biobrick contact. We will not be able to take more than 2 trips, and 1 trip would be awesome and enough work. This trip would be great for human practices and collaboration. Cara will contact Northwestern. U Mich will ultimately collaborate with us, so that's our option. We will apply for the money anyways, because even if we don't use it the money will just get reallocated back to the SORF fund. The application will be about how the trip helps our human practices collaboration.

Cara & Asha –

contact Courtney O 'Connor about funding deadlines. EC funding works similarly to SORF, but we need to check deadlines about that. Asha will be emailing Courtney (outgoing) and Troy (incoming).

Results of the EC elections:

- Pres: Courtney O'Connor
- VP: Patrick Kennedy
- EXPO: Elena
- EOH Director: Gloria Lin (voted to allow a non-engineering on EC)
- Director of Leadership: Steven Marks
- Secretary/Treasurer: Troy Meeham
- Dean's Student Advisory's Committee Director: Akash Shah
- Future enrichment opportunities: Kritika Jetkey
- EIB Director: Douglas Podgorny
- SITE director: Mary Kate Krouse
- Awards director: Samantha Tone
- Publicity Director: Rachel Gross
- Social Director: Rachel Seidner
- Service Director: Sara Moshaga
- Director of Information: Sid S.
- Knights of Saint Patrick: Christopher Massie

Adi –

Meeting with Dr. Amos Monday at 8 am. We're not looking at funding, but using facilities instead. Website new, Alex has been sent designs from past years and he is now requesting filler data and specifics on what we want included on the website. Everyone should write a short bio and find a picture to send to Asha. Asha will compile these and the meeting minutes to send this to Adi and Alex. Send these by Friday. We actually did have a website in 2010, so that will be consulted.
For entrepreneurship, we need to find a faculty advisor. Bob emailed Rao's contact, but she never followed up. Angela will contact her professor who is interested in bioethics. We also need to register for the entrepreneurship competition in the same way that we applied to the normal iGEM competition. Apply without the membership code and Courtney will approve of us later.

Divya –

practice time for undergrad research symposium will be on Tuesday. Uros, Angela, and Divya will be presenting. The symposium is on April 11, from 9-3/4. It is an hour poster presentation. We are now registered for quad day.

Bob – Has created an entirely new page to start the website from scratch.

Angela –

For the next advisor's meeting we are meeting Dr. Gene Robison in the first floor of the gatehouse. From 3-5. Dress casually, but not sloppy. At the end of the meeting if time permits, Courtney will discuss how to keep a standard lab notebook for us.

April 28th is the chemistry outreach demos that Courtney is doing. The demos will be for high schoolers. Example demos are the vomiting pumpkin (elephants toothpaste) and the exploding gummibear. We will be going to Rantoul for this, but transportation is providing. Ideas for demos: color changing solutions, liquid nitrogen/soap/water, make a pickle battery, fire in a pumpkin. Cara will contact Dr. Ray of Chem 104 for demo ideas and protocols. Concrete times and a date for practice will be announced at the next advisor's meeting.

Entrepreneurship and human practices needs to draft a proposal. These proposals will get presented to the advisors on April 24th. On April 22nd we will practice these presentations.

**Agenda:**

UIUC-Illinois Judging Form

- Bronze: submit a biobrick
- Silver: characterize biobrick
- Gold: Characterize a biobrick that is not for our team.
- Be sure to familiarize yourself with this! We're going to continually consult this during the summer. We *are* going to get a gold medal!

Lab updates

- Bhalerao: Isiah and Anthony prepared electrocompetent cells. The experiment will begin Monday/Tuesday this week.
- Jin: Last Wednesday Dr. Jin assigned us to post-doc Dr. Lee. Tomorrow Uros will meet with Dr. Lee to plan how the project will be executed. Tuesday from 9-11 everyone will meet to replicate the experiment.
- Brad: Cara has been working hard every day. She transformed some cells with 3 different plasmids that each have a his tag and then either GFP, FoA, or LacZ. The LacZ failed and is being redone.
- Rao: Angela is working with 2 operons to see if a deletion will effect expression. She tried out 4 different cloning methods. If the PUF project is done, one of 2 specific cloning methods needs to be used.

Proposal discussion:

- Next Tuesday is the second proposal round.
- Isiah: Original idea: Use genetically modified E. coli to modify crude oil/biofuel to refine/recycle oil. Naturally occurring bacteria would be used. Further research indicates that time issues make this project infeasible over the summer. Current research being done has revealed that it is really difficult to grow this stuff in the lab. Also, one of the reagents to get the bacteria to grow is very harmful for humans.
    - Will's feedback: For anything biodiesel look at University of Washington. This is a complex proposal, so to make this successful go look at past successful biodiesel projects and try to improve it/continue it slightly.
- Uros: Magnetic bacteria.
    - Will: Can we use magnetic bacteria in a machine? Use b fields to control the bac or use the bac to signal things through b fields. These are ideas of applications.
- Adi: Degradation of plastic composites.
    - Will: An Australian team has worked on this before.
    - Potential for a great human practices project: Write reviews on different topics (biofuels, sensing, etc) to help future iGEM teams orient themselves each year. That way it makes it easier to see what work has been done before. Also, we could devise a strategy to organize and exercise quality control over the parts registry. Start with a call/teleconference survey and then recompile.
    - Stanford-Brown created a human practices website and an alumni website. Max Song did this, and we're going to try to contact him for further information and collaboration.
- Angela: update: she has all of the PUF protein sequences and the RNA/aa info. It can be synthesized by a company (time and money) or self-synthesize (2 weeks, little money). University of North Carolina is researching the PUF protein and so we could ask for a template DNA PUM1 gene from them. Jin's lab could also PCR out the PUM1 gene that expresses the PUF protein. So overall there are 4 different sources to get the gene. Translational repressors are an application. GFP can be used to characterize. Small side project – design and optimize a construct for the project (to be presented in the next advisor's meeting).

- Divya: looking at things with microbial properties, but not plants. Maybe yeast.
- Bob: Found a part that uses light to run an ATP pump. We could look into photosynthetic bacteria rather than interfacing the electro-animal/slug with bacteria.
- Uros: There are fungi/bacteria that can degrade plastic via serine hyrdolase. Yale is probably going to do this project for iGEM. It's a simple but pretty cool project. We can anticipate that this will be a popular idea. Collaboration with Yale is an option.
- Anthony: Looked into the price of the substrate ARA, but is unsure about how much is needed. Also, there are troubles getting e. coli to take up the fatty acids.
- Asha
    - Broad review of how tuberculosis is treated. Look for someone on campus who is researching on how to treat tuberculosis/bacteria. Look for a direction to research further.
- Cara:
    - An Australian team has put e. coli in sewage water before. It would be a 2010/2009 team. So we can look into improving that project.

What we will be further researching:
PUF project – Angela, Divya, Asha
Plastic degradation – Adi, Uros,
Fatty acid producing e. coli – Anthony, Isiah
E. coli waste management – Cara, Bob

The next time these ideas are presented – genes and a schematic should be presented.

Next weeks:
- April 10 –meeting with Dr. Robinson
- April 15 – general meeting to prepare for the second round of advisor's presentations
- April 17 – advisor's meeting for second round of presentations
- April 22 – general meeting for the third round of presentations
- April 24 – advisor's meeting for 3rd round, entrepreneurship and human practices proposals
- April 29 – quick update to everyone and a quick summer plan
- May 1 – last meeting! The advisor's meeting to give updates and feedback on our main and side project. Entrepreneurship and human practices will also be discussed. This is when we will plan our summer schedule and agenda.