Minutes of the 16th iGEM meeting

01/07/2010

Participants: Rahul Akkineni, Habib Bukhari, Charanya Sampathkumar, Svea Grieb, Victor Gordeev, Sarah Mansour, Mareike Roth, Lucas Schirmer, Jonathan Tam

Supervisors: Johnson Madrid

Organization:

1. **Biolympics**.
    a. The barbeque event for the Biolympics take place on Friday, 09.07.2010.
    b. Please do not be late for the sport events as we will be penalized.
2. **Lab space at the MPI**
    a. The MPI lab should be ready by this weekend.
3. **Lab protocols**
    a. Mareike has gathered all the protocols from the iGEM website and will prepared them for use.
4. **Lab materials/experiments**
    a. A list of experiments and materials that we need for the SensorBrick project was decided upon and will be posted as a table on our iGEM wiki.

Project ideas

1. PoPS measurement project – the last nail on the coffin.

After a meeting with Eugene Petrov to discuss the feasibility of PoPS, the following problems were raised:

- The fastest camera available in BIOTEC is 25fps. Given that the rate of transcriptional elongation can reach speeds of up to 150nt/s, we might not have the means to detect the FRET/Quenching events required for PoPS detection. In addition, it was speculated that the amount of time required for data analysis will take up to four months.
- The limited lifetime of the fluorophore may prevent accurate detection of FRET/quenching events.

Ultimately, it seems that the theoretical approach for PoPS measurement is feasible and should work. The caveat is the time constraint and inadequate detection methods.

2. SensorBricks

The following individuals presented their work thus far on the following subtopics. *Please note that their presentations/write-ups are attached as separate files. These files will be* available *in a separate email (Supplementary materials)*

1. **Svea:** Chiba iGEM team 2009
    - All protocols were in Japanese. Thus, we will have to email them with any questions regarding their *LuxR* constructs and GFP colony detection methods.

- Johnson commented on the importance of the binding constant during such assays. Thus, we need to take into consideration the binding constants of LuxR-DNA and LuxI-SAM.

2. **Sarah and Charanya:** AHL quantification strategies
3. **Jonathan and Mareike:** Protein A and other IgG binding alternatives

The next step

To prepare for the next meeting, we came up with questions for the SensorBricks project that need to be answered. Each member will be responsible for finding a solution to a problem. The questions and members responsible are as followed:

1. Charanya: Do the components of blood affect LuxI activity?
2. Lucas: What is the concentration of CD33 on leukaemia cells?
3. Sarah: How expensive are the current methods for tumour antigen detection?
4. Jonathan: Is there another cheaper method for detection?
5. Svea: Is there a quorum sensing expert in Dresden?
6. Victor: Fusion protein alternatives?
7. Rahul: Finding a suitable amplification system

Habib, Mareike and Adi, please try to come up with a problem and solution for this idea.