Minutes of the nineeteenth iGeM meeting

21st of July 2010

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

Supervisors: Annelie Oswald

Organization:

Next meeting Friday 6 p.m. at MPI.

Project updates:

1. The production of acyl ACP protein and hence AHL generation is still not clear as to which method to use to produce it – buy it commercially or produce it in the lab.
2. The paper 'Preparation of fatty acylated derivative of ACP using Vibrio harveyi Acyl ACP synthetase' could throw light on this issue.
3. The expenses regarding the purchase of ACP (or) synthesizing it in the lab has to be clarified.
4. From the talk with Frank Gross, it was thought if it is possible to produce ACP from some other protein other than converting ACP and SAM to AHL by means of the LuxI enzyme.
5. In order to avoid false result of AHL concentration, we can separate the fractions of acyl ACP produced in the lab, take the same physical conditions and measure protein concentration and determine the same.
6. It is also important to find if the protein attaches to the cell and cell cleavage occurs.
7. Regarding the issue of acyl ACP stability, the solution was found – ATP is required to produce acyl ACP and so, when cleaved, it should be stable.

8. Also, if we produce ACP in the lab, we have the option of introducing a new Biobrick which is even better for the team.
9. Another alternative would be to use AiiA, an enzyme that degrades AHL that would degrade and hence decrease AHL level and lead to increase in GFP expression. But, for this, an initial higher concentration of AHL is needed for the degradation to occur. So, for this, concentration of CD33+ is significant here.
10. It is important to consider the effect of AHL on E.coli at any point of the project and also to shine some light on the degradation products of AiiA along with producing AHL (incase they influence the reaction in any possible way).
11. Instead of using the Gene Construction Kit (GCK), we would use the APE kit in our project.

Lab updates:

1. An introduction on the PCR machine has been given for the team members who have already started lab work.
2. Anni said she has the verification primers so that we could use them for checking the genes.
3. The safety briefing would take place again next Wednesday 28.07.2010.
4. It was proposed to start updating the official wiki page with the recent experiments done and the information on the students and the supervisors.