NEWSLETTER AUGUST – iGEM BOKU Vienna

Lab work and progress

Due to trouble creating an efficient single plasmid solution for CRISPR-enhanced chromosomal integration for *E. coli* we had to design and build 4 generations of plasmids, continuously improving our concept. Finally, we came up with a trick that helped to neutralize toxic background expression levels and now we can start integrating our D.I.V.E.R.T. cassettes. Unfortunately, we also had trouble cloning some key components but are working on a solution employing another strategy right now. Regardless of those problems, the bigger part of the genetic building blocks needed for our ambitious project are either finished or on their way to be. Up to date the iGEM BOKU Vienna team has generated ~110 plasmids and constructs, has done ~100 preparative PCRs, ~500 colony PCRs and used up close to 200 sequencing reactions.

Recent Activities

A few weeks ago we published the explanatory video that we had filmed in July. You can now watch it on our wiki webpage! Furthermore, we interviewed an employee of ARA, Austria's leading collection and recovery system for packaging. Our goal was to investigate the theoretical feasibility of PET-recycling with genetically modified organisms (GMOs). We learned that this approach would be more suitable for niche projects such as the recycling of composite materials, since there are already well-established and efficient processes in use for PET. Additionally, we have registered for the concluding iGEM event – the Giant Jamboree in Boston, where we will present our project idea and results to the jury in November. The flight to Boston and our accommodation have been booked already as well.

Outlook

In September, we are going to conclude the wet lab work and will need to finalize the online documentation of all the theoretical concepts we elaborated and all the experiments we carried out in the lab on our wiki page. Furthermore, we are going to meet up with experts in the fields of environmental ethics and hazards of genetic engineering to discuss the potential impact of our idea and what we should do to keep it safe. Additionally, we are helping other iGEM teams with their projects in team collaborations.

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