

**Jun 9, 2016**

Hi Antony,

Excuse us for not having the skype conference this Thursday but time constraints are getting tight for us Highschool students in IB. Nevertheless, here are some questions that we wanted to ask you and your team. We would appreciate some responses to these questions, thank you.

1. What is the project your Brazilian team is currently working on?
2. What active role do you play in the Brazilian iGEM team
3. How are you guys dividing the roles and responsibilities within your team
4. How are you acquiring the funds for your project?
5. Any advice in obtaining corporate sponsorship for high school teams
6. How are you documenting your process?
7. What are you getting the specific protocols used in the processes?
8. Have you encountered any major issues in the development process of your project?
9. Do you have any difficulties with importing genetic materials?
10. How do you deal with any setbacks that you might have encountered?
11. What are some advantages and disadvantages of being an international school?
12. Are you guys familiar with bioluminescence? Any if not, what are you familiar with.

Thank you for your advice and assistance, please don't feel pressured to answer all of these, simply give us any information you can.

Best wishes, David

**Jun 10, 2016**

Hey, David,

How are you going?

Don't mind. We can set another schedule that doesn't overlap with your activities.

Let me introduce you to Manuel Carrasco. He has obtained his B.Sc. in genetics and biotechnology from UNMSM and has a strong background in biotechnology, synthetic biology and some genomic edition tools. I think he can tell us a little bit more about him.

I would love to answer all your questions but it will take some time to summarize everything. I want to help the Peruvian team as much as I can, thus, I consider appropriate use another message to answer quietly all questions.

However, I am gonna answer some, and the rest we can discuss it in a skype call with Manuel and your advisor if he can.

Q1 Our project will yield a polymerized-like structure made of spider silk fibers with an attached enzymatic that targets multiresistant-drug microorganisms. Burned patients with exposed skin are high prone to nosocomial infections, mainly composed by resistant-drug bacteria. (Check out our video! <https://www.youtube.com/watch?v=i5yGrCJ7awo> still needs subtitles). Since iGEM and sponsors are offering some helps with kits and genetic sequences, there is a high chance to introduce CRISPR/Cas9 techniques to modify our host microorganism, too.

Q2 And this could partially answer the 3rd question. At the beginning, there were like 2 or 3 sub-groups that addressed the scientific and the divulgation part. Afterwards, it was needed to add the financial (crowdfunding, request to private enterprises and so), human practices, safety, side-project sectors... This is the 4th time that this team goes to iGEM, so they know how to split the areas. By that moment that we started to divide the sub-groups or sectors, I was really busy dealing with my qualifying examination, so I did not made any commitment with any responsibility. Now, I'm giving support to the scientific (I'm also interested in the Cas9 matter), human practices and the OpenHardware part.

Q13 Maybe we can discuss this topic if we schedule a skype call. My friend Manuel has experience in this regard and we are looking forward to help you (By the way, Manuel is still in Lima and willing to assist in everything the team could need). Moreover, I can help with you with some equipment or reagent drawbacks. DIY-Hardware is the best, after all... and making your own biobricks is also a positive for everyone!

Feel free to write us,  
Have a nice weekend!

Best regards!

**August 14, 2016**

Dear David,

I hope you have done so well with your exams and classes!

I am not very familiar with your current curricular grade, so I am not sure if you are on vacations or frenetically working on the iGEM hehe.

So far, we have started the hard work with the experimental part. New cloning technique and an amazing new expression system for me is coming. I have not cloned in *C. reinhardtii* before, even in any other eukaryotic system.

Our team would like to meet the Peruvian iGEM team! We were wondering if you have enough material or equipment for your experiments? Due to awesome collaborations between our instructor (A PhD student) and clever guys of an open hardware club, the last week was organized a workshop. This workshop aimed to assemble three different biotechnology equipments: **acentrifuge**, an **electrophoretic chamber** and a **gel transilluminator** (for fotodocumenting). Therefore, if you are needing this class of instruments, there might be a way to you to construct them (we can send it through Sedex service also!)! Given the fact that are open hardware equipments, they're not really expensive.

Furthermore, I can help you to contact some fab labs at Lima in order to use laser cutters or 3D printers. I am having a wonderful time working alongside my mates in this aspect!

We would be really pleased if we can help you to solve any kind of questions, experimental drawbacks, equipment constraints... If needed, the team is very eager to collaborate with you in any matter, reciprocally.

See the attachment please, I have answered more questions!

Have a nice Sunday!

Best,

Q7 You mean... From where are searching our protocols for experiments (wet lab)? If that's the question, there is a bunch of sites and info where one can start to sneak around, and, by the way, learn a loooooo! And solve a lot of problems you might encounter in your experimental design. Most of protocols we have developed, except by those very standardized like Plasmid DNA extraction by commercial kits where following manufacturing instructions is very common. Even in this situation, it's possible to prepare your own solutions (mixture of Tris-HCl, chaotropic salts, EDTA and different pHs) and re-use columns for more than one run. Some protocols start with iGEM and world-wide recommendations. We have found some iGEM Wiki's sites very useful, like the 2015 UCLA's Notebook. Moreover, most part of the expression system and cloning technique was taught by our instructor and her student. The team also has another very clever guy with molecular biology background who is supporting a lot! I'm a master's student in molecular biology so PCR is like my best ability. We are e-documenting now our protocols in a more organized manner, so feel free to ask if you encounter any difficulty! We are having some troubles with few sequences to amplify them, and I'm trying to solve this mystery heh.

Q10 This is an amazing and secret trick I would ever imagine it could be done hehe! João Molino (our PhD instructor) has brought some plasmids in paper. Yap, in paper as you read it. Plasmids are very stable, so, it's very easy to aliquot in a clean piece of absorbent paper. Many plasmids were brought through this way. Some of our mates are graduate students, so they often travel to USA for conferences or short stages. This has helped us to bring some lyophilized primers, more plasmids... It's very difficult bringing enzymes in baggage due to temperature constraints.

The rest of materials offered by the iGEM delays a bit but they finally arrived. IDT sequences also took a while to come over here. So, I think that must be one of the things that should be requested at the very beginning of the call. No matter what, national policies will always delay imported product delivery. So, we should be prepared in advance and consider those setbacks.

Q12 I think the most important disadvantage is the financial support. Given the fact that this university is really huge, there is a substantial number of members in the team that is very engaged! It's a shame that there is only financial support for some members. As you can see, Synthetic biology is not a research priority as well as you can feel it at Peru, but it's growing and it should get its position in this decade, I hope so...

Advantages? I think the FDR team is more international than us hehe! So tell me more about this regard! We have 5 spanish-native speakers... But as a team, it's like we can fit perfectly without any kind of misunderstanding. It's a very delightful team work.