MAY 2020 | ISSUE 1

HERE WE GO: FIRST ISSUE

iGEM LEIDEN NEWSLETTER

"Biology is the study of complex things that appear to have been designed for a purpose."

RICHARD DAWKINS

HERE WE GO: OUR FIRST ISSUE

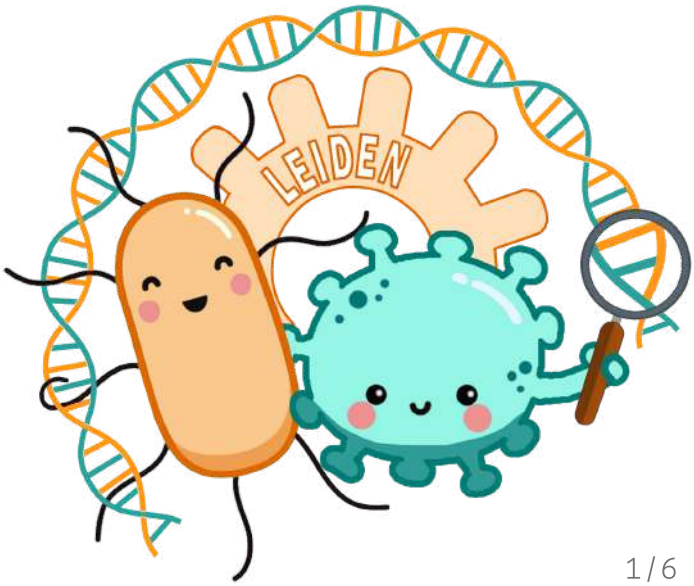
By Amber Schonk

Dear reader,

Welcome to our first monthly newsletter of the 2020 iGEM Leiden team! Each month, we provide you the ins and outs of our project and activities as well as introductions to our team members. In every issue, you will also find a small and fun quiz!

In this issue, we will be discussing the iGEM competition and our project, as well as how we handle our activities during the COVID-19 period and our involvement in the 'Week van de biologie'. But first, we would like to introduce our team!

CONTENT OF THIS ISSUE



THE TEAM

Our 2020 Leiden iGEM team!

We are proud to present you the iGEM team of 2020! With a diverse group from many different academic backgrounds and nationalities, we hope to make this an interesting year with much to learn from each other. Amber, Aukje, Eugene, Güniz, Joey, Kelly, Lucy, Marijn, Sebastian, Sinisha, Tijn, Tim, Tom, and Violette will be taking on the challenge of iGEM in the upcoming months. In the next issues of this newspaper, all members of the team will be briefly introduced.

The very first time the Leiden iGEM team of 2020 met! A little awkward, no? L.r.t.b. Joey, Tijn, Amber, Violette, Tom, Sebastian, Kelly, Lucy, Sinisha, Aukje, Tim, Marijn, Eugene and Güniz.

WHAT IS iGEM?

The International Genetically Engineered Machine

Every year, Leiden University assembles a team of talented and motivated students to compete in the iGEM contest. iGEM challenges teams all over the world to solve both local and global problems, considering environmental, medical, societal issues and many more. The goal is to tackle a relevant problem, implementing synthetic biology. Each year, over 350 teams work towards the Giant Jamboree, held in Boston. Here, the teams present their projects in the presence of more than 3500 fellow

iGEM's Giant Jamboree last year, at the Hynes Convention Center in Boston, MA, USA.

young scientists. However, this year, the Giant Jamboree will be hosted virtually, due to COVID-19.

For more information about the iGEM competition, be sure to visit the following website **https://igem.org/Main_Page**

OUR PROJECT: RAPIDEMIC!

Developing a modular, rapid, diagnostic tool: why and what?

The pandemic caused by the SARS-CoV-2 virus creates a rather unusual situation, affecting the iGEM competition as well. However, instead of letting it compromise our project, it inspired us for this year's project and pushes us to become more creative.

As witnessed the past months, the world was ill-prepared for this pandemic. Countries all of the world have been desperately trying to find quick tests for the virus. Testing is essential in tracking infectious diseases and keeping spread to a minimum. A lack of testing capacity, which we have experienced, results in a incapability to record the actual amount of infections and thus the spread of the disease. Most of the governmental measures taken are based on available, but incomplete data.

Besides the need in the western world for more testing capacity, there is even a higher need for diagnostic tools in less developed countries where not every hospital or clinic has access to a sophisticated lab.

Testing is essential in tracking infectious diseases and keeping spread to a minimum.

We hope to develop a modular, rapid diagnostic tool: Rapidemic! The kit will be capable of quickly identifying various pathogens without the need for extensive lab equipment. Its simplicity, modularity and high reaction speed will allow a quick response to novel outbreaks. Its capacity of distributing and storing the Rapidemic kit beforehand, makes international deployment possible. Also, Rapidemic will grant opportunities for areas with limited access to laboratories.

iGEM OPENING WEEKEND

iGEM organized an opening weekend full of webinars and other activities

During the weekend of 15-17th May, our team had the chance to participate in the big online opening weekend, organized by the iGEM headquarters in Boston. We participated in a range of online sessions, hosted by various iGEM committees, featuring previous iGEMmers, researchers and stakeholders from the industry.

The team learned about the award requirements, modelling, collaboration and communication. We even got to learn about the controversy on GMOs from Nobel laureate Dr. Richard J Roberts. During the weekend, iGEM provided us with advice on how to navigate through the current situation, making progress in our project, while getting an amazing experience out of it! More than ever, our team is determined to make this project happen!

MANAGING COVID-19

Naturally, COVID-19 impacts our team and project

As mentioned before, unfortunately, the Giant Jamboree of 2020 will be hosted digitally. As a team, we were disappointed upon receiving the news. However, despite this drawback, the team is as motivated as before and working hard on the project, finding new ways to be creative with the situation. Not only the Giant Jamboree is affected by COVID-19, but also the opportunities to organize and attend events has been limited for now, although we continue to seek for alternatives. Also access to the lab for this summer is still uncertain. We hope to update you soon about this issue.

Like any other team, we attend our meetings via Zoom. Team building activities also continue through online platforms; hosting quizzes and trivias, playing online pictionary and relaxing with Netflix Party. We recommend “Pandemic” on Netflix, as it debates several aspects concerning outbreaks, coming close to the COVID-19 outbreak, although interestingly the series has been released just before the current crisis.

Netflix tip from the team: Pandemic: How to prevent an outbreak. A series covering topics like predicting new outbreaks and how to manage these.

WEEK VAN DE BIOLOGIE

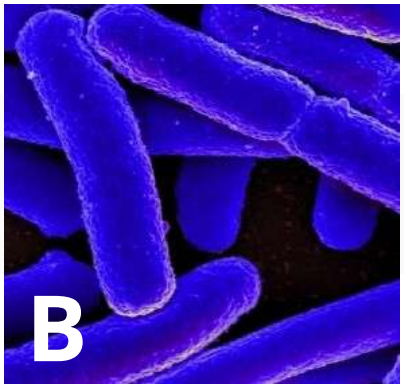
Our team joined in with the 'Week van de biologie' May 25th - June 1rst

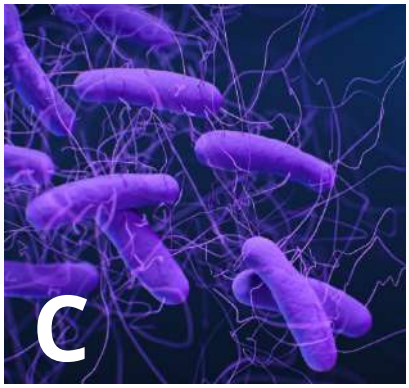
Each year, the 'Week van de biologie' is organized by the Dutch Institute for Biology (NIBI), where they and joining parties can arrange activities for several different age groups. We have set up a small competition for kids, 'kleurijke beestjes', for coloring bacteria, virusses and other microorganisms.

QUIZ TIME!

Every issue, we hope to return with a small, fun quiz!

Can you spot the virus from these 3 pictures below? Answers can be found at the bottom of this page.





SOCIAL MEDIA

If you are interested in a more in-depth experience surrounding our team and project, please follow us on one of our social media platforms! They will contain regular updates of the project, fun facts and quizzes, and other worthwhile information. Thank you!

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Correct answer: A! This is not a bacterium, but this is a rabies virus! Although it looks similar to the 'typical' bacillus form of bacteria, this virus is in fact from the group of Rhabdoviruses. Picture B is from the famous *Escherichia coli*, better known as E. coli, widely used in labs worldwide. Finally, picture C is the spore forming pathogen *Clostridiodes difficile*, which can colonize the gut and cause serious disease.

We hope you have enjoyed reading the first issue of our monthly iGEM Leiden newsletter. For any questions, feel free to contact us via our email address: igem@science.leidenuniv.nl