



Erasmus+



- Biotechnology in our life -

## SCHÜLERBERICHTE PROJEKTTREFFEN 2015/2016

des von der Europäischen Union unterstützten internationalen Projektes

**Drittes Projekttreffen:** 17. – 22. Mai 2016  
Haarlem  
Niederlande

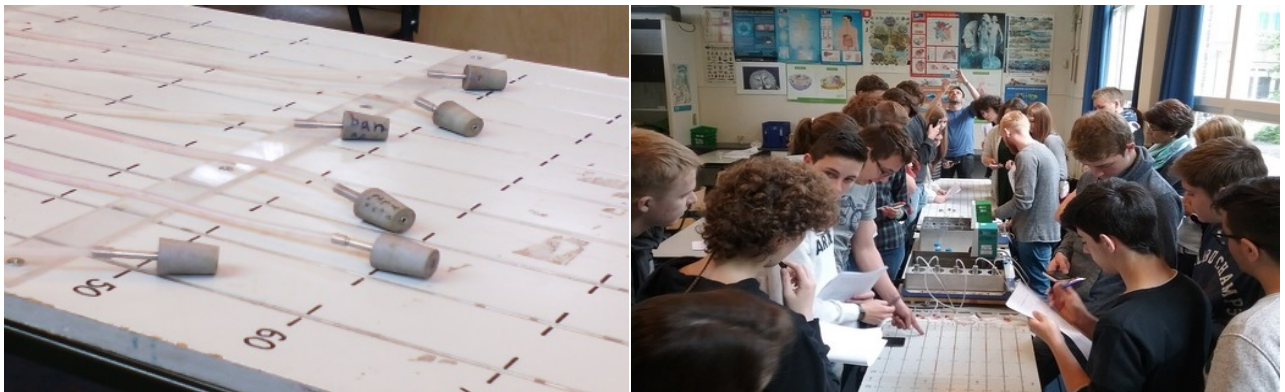
*Report from Ellis, Lucas, Maarten and Kees, Coornhert Lyceum Haarlem, The Netherlands*



On Wednesday afternoon after doing some work in the morning on the project, the whole group of students went to the city centre of Haarlem. We left the school and biked to the “Grote Houtstraat”, one of the more important shopping streets in Haarlem. The weather was kind of nice and we started off by visiting a small garden with lots of plants and trees.



These gardens are typical for Haarlem and there are quite a lot of them there. Unfortunately they are not always open, so we were lucky to visit this one. Next we went to the Frans Hals Museum, Frans Hals is the most famous painter of Haarlem, for free as people aged from 18 or below are able to go there without paying. The paintings looked very beautiful and everyone had the opportunity to watch the work of a Dutch Master. When we left the museum we walked past the river "Het Spaarne" heading towards the Grote Markt and the Saint Bavo Church. The Saint Bavo Church by the way has one of the most iconic clock towers of all the churches and basilisks in Europe. We went in the church and, as I had never been in there before, I must say that I found it way more impressive than I had thought. Also the organist was playing and it created a very special atmosphere. To finish of the trip we all had a drink on the Grote Markt.



Thursday we all did experiments. The mobile lab from the TU Delft organised a race using toiletpaper. Yeast uses the glucose from toiletpaper and put that into  $\text{CO}_2$ .

The produced gass moved the coloured bubble in the tube and the group with the best glucose/yeast ratio won the race. After lunch we all worked on our presentation.



On Friday 20 May professor Adam Cohen visited us. He studied medicine at the University of Leiden. Now he is professor of Clinical Pharmacology at Leiden University and has a clinical attachment at the department of nephrology at Leiden University Medical Centre.

He wanted us to learn how to think about problems. How are you going to start solving it. For an example we had to think that slow cycling is a disease. We had to make a mind map about what we need to do or have to cycle fast. Then

we had to think how we could make someone cycle even faster, what are the things we could change in this circle of activity. The last step was about EPO. EPO is used as a drug to cycle faster, but would it make any difference? That's something he is

investigating in the lab. It was a very interesting college, and I think we learned something from it. He showed us that if you want to tackle a problem, you have to look at all perspectives.

Next we went to Amsterdam. We had a nice lunch at a burger restaurant and after that we went to Micropia. It's a museum about micro-organisms. It shows us how many bacteria and fungi there are in the world. And of course they can't show them all. Probably not even 1 %, but the microorganisms they show us are very cool. They can survive extreme cold or heat or give light. They are beautiful to watch, but with a bare eye we can't see them. It's a hidden world for us, but this museum showed us a little part of it.



Next we got a little tour through Amsterdam. Maarten organized it. He showed us the Anne Frank house, the Jewish museum, the steelyard, the dam and the palace and etcetera. We had fun and I think that the rest got a good impression of Amsterdam.



On Saturday we finished our presentations. We did this at Coornhert Lyceum. Around half past eleven we cycled to the Oase. This is a pancake-restaurant. We had our lunch there. Then we cycled to the beach. It was very windy but the sun was shining so it was nice.



Some of the students went for a swim.

We stayed there for almost two hours and after that there was some free time. Some of the students went to Haarlem. Others already went to Lucas place to help prepare the BBQ. In the evening the students and the teachers were invited for the BBQ. It was really nice. The evening ended with a karaoke.



Sunday: The presentations at Teylers museum.

The day was there, we had to present what we worked on for 3 weeks.

We went to the Teyler's museum and met each other outside the building, then we all walked in to embrace the magnificent beauty of the museum. First we had a little time to prepare our presentations and then we got a tour of the museum, including the library. The library is special because they have very old literature, which you will find nowhere else.

After that we had lunch at the cafeteria of the museum, when everybody had their tummy's nice and full we headed back to the presentation room, where the guests had already started to arrive.

We had some time to tell people about our posters, talk a little, Lucia and Kerstin even had a little movie made which they were playing in the presentation room. There were some beverages and something to eat.



After some time everybody went to their seats and the principal of our school gave a little speech just like our teacher Ms. Van Leersum. Then everybody had their presentations. After that there was a little discussion by a local politician and a biotechnological professor, who was active within the red biotechnological sector.

After that we had a little time to say our goodbye to the whole group and share some memories of the time we had together.



Then we all went home to get our stuff and tell our guests goodbye.