

## Promotion video is up!

We are happy to show you our promotion video. Go watch it on our Youtube channel "iGEM Aachen" or just follow the link in the Email.

## Lab Work: "Dip Method" for DNA Synthesis

In the past few weeks, we worked on our synthesis system to generate base transition in the DNA. With help of Prof. Blank we came up with the so called "Dip Method": A primer is immobilized on a thin stick and is dipped in a solution with our enzyme, the Terminal Transferase, as well as one kind of dNTP. During each cycle only one kind of nucleotide is being attached. The advantages of this system are the easy reaction set up and the recycling of our enzyme.

We have now found a means to immobilize the primer to the stick: First the primer is conjugated to an adhesion peptide which then binds to the stick. We are now trying to make this work and hope to give you an exciting update in the next newsletter.

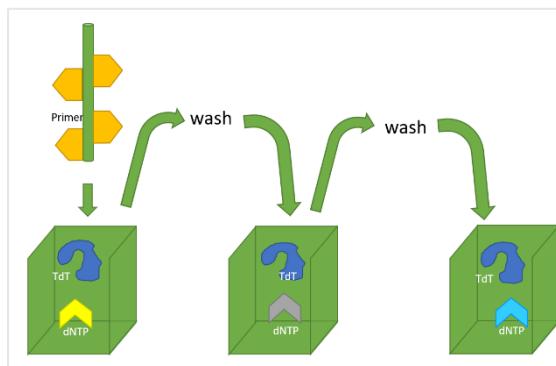


Illustration of „Dip Method“

## Hardware for Automated "Dip Method"

The hardware is in its prototyping. After having finished our 3D model, we will soon start building it. The hardware automatizes the

synthesis by dipping the stick in different TdT solutions. The design is relatively simple and will hopefully be integrable with our DNA-translating software.

## Modelling of Terminal Transferase Kinetics

The modelling of the DNA synthesis is an important part of the project because knowing the kinetics of our enzyme allows us to control the reaction. We have worked on a model, which calculates the reaction velocity, thus making it possible to determine the velocity of a nucleotide being attached to a single stranded primer. Since not every primer is "tailed" (attached with nucleotides) equally, strands of different length are synthesized. Furthermore, we want to improve the model to the point where we can predict the reaction in wet lab.

## Social Media: Posing in front of the Aachner Dome

iGEM is an international competition with teams from all over the world. To represent the city of Aachen, we participated in the Instagram monument challenge organized by iGEM Paris. Victor, Clemens, Kim and Malte took pictures in front of the famous "Aachner Dom" as well as Elisenbrunnen and Rathaus.



**for a better world – for a better future – for a better us**