Documentation

19/01/2017

We started to try out the microscope in order to see the *Tardigrada* with the camera. For that we had to make a special microscope slide, which will allow the tardigrades to move freely. We asked Nicolas Sénécaut, an alumni of the bachelor program, to share his protocol with us since he had to work with *Tardigrada* in seemingly conditions.
The slides are covered with a layer of a agar solution applied thanks to another slide.
The agar solution recipe is :

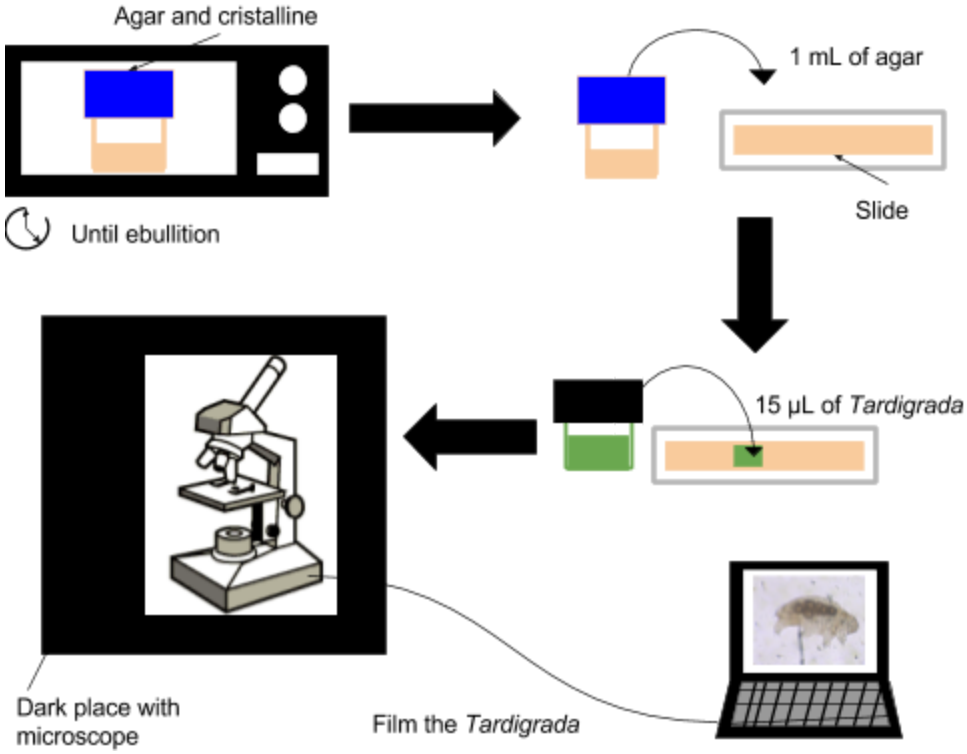
- 0.75 mg of agarose
- 80 mL of Cristaline water

Since the agar solution tends to solidify at room temperature, we had to warm it up with a microwave to liquify it in order to deposit 1 mL of it on the slide. We covered the first with a second one. We wait three minutes to form a thin agar film on the first slide and we back up the second one. For this point, we ran slowly one slide on the other.

Agar pathway manipulation

After a moment (around one minute), we putted 15 microliters of tardigrade's liquid culture on the agar slide.
First, we were putting a cover-slide on the top to flatten the surface of the agar in order to have a better focus and limit water evaporation.
But close-working master students pointed at us that it may compress the tardigrades, killing them or at least slowing their movements.

Final drawing of our experimentation



In order to maintain them alive, we have to feed them. That is why we collected some mosses from Nikola's garden (may contain pesticides) or from Cochin's roof (probably not containing pesticides). Indeed, tardigrades are known for feeding from unicellular algae or unicellular organisms found in their habitat : mosses.

About the visualisation under the microscope, we are using a **Xname** camera with the ToupView software. This afternoon, it was mostly experimentation and tests to determine how to properly use this tool.
We obtained movies of tardigrades and we succeeded.

20/01/17

Today, we focused on our experimentation. The first part of the day is about the manipulation (like we described it above). The second part is about data analysis.
In our bio-manipulation part, we tested three different light intensity five times: 0, 1 and 10. Monday, we provide for test two others intensity : 100 and 255. Moreover, we'll make a replicate of two or three intensity, with another manipulator to check our data.
The second part of the day is about the electric-manipulation. We put the sensor in the

dark place as the bio-manipulation : a slide away from the led. We reproduce our experiment with different light sensors.