Chitozen

Stratech

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Chitozen

“We wanted to understand how our bacteria, Myxococcus xanthus, moves on a surface. So we tried to design a smart microscopy system to observe it. But there was a problem: the Myxococcus cells were not adhering to our glass slides. When we read a paper on how people use chitosan to get their bacteria better move on plates, we got an idea: maybe we could coat our glass slides with some chitosan? We tested it. And it worked! We then implemented our prototype with a microfluidics system to test the real time response of our bacteria to antibiotics. Now we're thrilled to share it with the community of research! We hope that people working on bacteria will appreciate to use Chitozen because it is a very easy system to run that combines microfluidics and high-end microscopy. We are looking forward to getting feedback of use: it would mean that we have developed a device useful to the community and that is always a deep satisfaction!

Tâm Mignot **Olivier Théodoly** **Amandine Desorme** **Guillaume Sudre** **Laurent David**

What is it for?

Use it if you want to image your favorite bacteria both still and alive under the microscope. Or if you want to perform long-term imaging of bacteria. Or if you want to change the growth conditions (e.g. antibiotics, chemicals, inhibitors) during the experiment and directly observe, in real-time, the bacteria new comportment under the microscope.

Features

- **Long-lasting:** a bench-stable surface coated with chitosan, the most efficient way to immobilize your bacteria on a microscope coverslip.
- **6 independent channels:** Either perform up to 6 experiments at the same time or use 1 channel one day, and the others later.
- **Full compatibility with most of your conditions of experiments:**
  - → Optical microscopy techniques: TIRF, super-resolution (3D-SIM)
  - → Size: the coverslip dimensions (25x75 mm), are compatible with the most common available sticky slides and microscope stages.
  - → Compatibility with advanced microfluidic techniques, nanolithography, PDMS.
- **Fast:** Use it the same day it is prepared.

Applications

- Long-term live bacteria cells imaging
- Drug-screening on bacteria cells

WARNING
For research use only.

A technology designed by Tâm Mignot, Olivier Théodoly, Amandine Desorme, Laurent David and Guillaume Sudre

Cover image:
Fluorescent microscopy image of Pal mcherry at septum in E. coli (W3110 Pal mcherry), in LB ½ medium and using chitosan coverslip.

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