

## Fabrication et caractérisation d'une puce microfluidique fonctionnalisée chimiquement pour analyse cellulaire

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**Stage pouvant se poursuivre en thèse :** Oui

### Résumé :

Protein secretions from individual cells create varying concentration profiles in the extra- cellular environment, which guide a wide range of biological processes. The precise definition of cell function and in particular of their secretions is of interest for both medicine and biological research.

In this project, you will be in charge of biosensor fabrication in the cleanroom <http://pta-grenoble.com/> and chemical biofunctionalization. The objective of this master project will be to explore different routes in terms of microfluidic design and chemical functionalization in order to trap single cells and analyze their secretions. Chemical functionalization of such a device will be based on thiol-gold chemistry but other types of chemistries can be researched. Fluorescence live cell imaging will be done to validate results.

### Compétences requises :

master microtechnique/bio-nano-tech