

Master internship

« *Design of a droplet microfluidic chip for high throughput applications* »

6 months from March 2017 – Permanent position available if successful internship

Ref: [INTERN17-MF]

COMPANY

Stilla Technologies is a biotechnology startup company based near Paris (Villejuif, Metro 7) and experiencing a strong growth since its incorporation in September 2013. Using breakthrough microfluidics technologies, Stilla has developed and is commercializing the *Naica*[™] system, an innovative tool for high precision gene detection that combines ease-of-use, fast time-to-results and unprecedented triplex analysis capability. These innovations have received a large audience from the industry and academia (Concours Mondial de l'Innovation, MIT Technology Review, etc...).

For more information, please visit our website www.stilla.fr !



At the heart of the *Naica*[™] system lies the *Sapphire*[™] chip, a microfluidic consumable that integrates all the steps for the genetic analysis of a sample. Once pipetted into the inlet port of the chip, the sample is partitioned into tens of thousands of droplets. Each droplet is then used as a microreactor where the detection of a specific gene is performed by PCR. The partitioning step yields extremely high sensitivity and precision of the detection method.

Today, while commercializing the *Naica*[™] system while developing the next generation of the system to push its performance one step further.

POSITION

Building on the technologies embedded in the *Sapphire*[™] chip, this new chip must be compatible with automated lab equipment, process twice as many samples as the *Sapphire*[™] chip and further simplify the existing user scenarios.

Stilla is looking for a Product Development Engineer in microfluidics to lead this project, someone interested in biotechnologies and innovative startups. This position would become permanent if the internship is successful.

MISSIONS

The Product Development Engineer in microfluidics has 4 missions:

1. Building on Stilla know-how, designing and testing innovative microfluidic channels (incl. CAD and PDMS prototyping)
2. Designing new chip inlets and outlets for compatibility with automated lab equipment
3. In collaboration with the other Product Team members, adapting the existing Naica instruments, software and production protocols to the new chip and developing potential new dedicated tools.
4. Experimentally validating the chip performances (precision, reproducibility, aging, transport...) and launching the production ramp up.

COMPETENCES ET QUALIFICATIONS

- A Master's degree in Engineering specialized in soft matter physics or fluid mechanics, ideally in microfluidics.
 - An excellent capacity to identify, understand and solve complex both scientific and engineering problems is a must.
 - A strong attraction for experimental work and hands-on activities is a must since it will represent a large part of the product development process.
 - Good English, both written and spoken, is a must to interact with our numerous partners abroad
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- A first lab experience in microfabrication, PDMS prototyping, microscopy or two phase viscous flows would be highly valued.
 - A first experience with a CAD tool is a plus (Catia, Rhino, Inventor...)
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- A strong interest in biochemistry and medical diagnostic is desirable. A first experience in the sector is a plus
 - Ability to adapt to a fast changing environment

Apply by sending your resume and a cover letter at recrutement@stilla.fr !

Please use the reference of this offer [INTERN17-MF] in all your written communication