

Entrepreneurial ID «venture leaders» 2010



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Project: LFCM

Short description: *Large Field Confocal Microscope (LFCM) is dedicated to cover large imaging area for high precision fluorescence measurements in 3D. This flexible device is to the traditional systems what Google™ maps are to the paper maps: the release of size limitation.*

Industry: *biotech*

The Start-up

Status: The project has been initiated in 2009 and led to a proof of concept instrument and a patent application. Since March 2010, Dr. B. Rachet is in charge of the business development.

Product: A solution to increase the throughput when reading the results of analyses in biology. Unlike standard microscopy tools, the viewing area of the patented device is kept wide whatever the precision required.

Target customers: Customers who need a throughput increase while dealing with massively parallel biochemical studies like in genomic, drug screening, and diagnostics. These are application domains for pharmaceutical and biochemical industries like Roche, Sanofi Aventis, J&J, Merck Serono...

US objectives: Networking, education and US approach opening.

I'm seeking feedback from experienced people with instrumentation sale in the targeted domains. Besides, it is the right time to involve new people to build a venture on this project. I'm also identifying suppliers in the area of scanning stage, camera and image analysis software.

Description:

Fluorescence microscopy is a widely used technique in life sciences. However, high performances in detection come with a limitation on the area to be observed, which is slowing down large scaled studies. Parallelization is a key to increase the throughput and the LFCM provides such a solution in the fluorescence imaging domain. Beside time saving, former impractical studies become possible.

In the domain targeted, scanners and microscopes are two established markets exceeding the billions of USD each. The first one is dedicated to large area imaging (extensive studies) and the second one to high-resolution imaging (intensive studies). In both market, the demand is pushing toward a not yet fulfilled ideal solution providing both advantages. Current solutions are facing this tradeoff between resolution and viewing area that our product overcomes, showing therefore its first USP.

The venture leader (and his team)

My experience is strongly related to the optical instrumentation for life sciences and biosensor applications. My main education covers physics and optics, and now includes basis in biology and entrepreneurship. I enjoyed my first experience in cutting-edge instrumentation for biology, as I was programming for a biosensor start-up named Genoptics. The rest of my carrier is in accordance with my interest for applied optics in life sciences as I designed quality test during my master thesis in the start-up Genewave (microarray instrumentation), to then proceed with research on new detection systems in CEA/Leti (Grenoble - France), where I obtained my PhD. No wonder that my last position was in the Applied Optics Laboratory (EPFL) to lead a project including three industrial partners for designing a new biochemical analysis system.

I developed this new microscopy system according to the feedback of microscope users in the life science institute. More generally, I like to interact with the different actors involved in moving from a technique to an innovative product. My commitment in pushing this project towards the market relies on this interest. The region of the lake Lemman, somehow described as the "Health Valley", is a rich environment regarding high quality life sciences research in universities, institutes, and hospitals. Associated to the presence of leading industries like Nestlé, Roche, and Merck-Serono, there is a huge opportunity for the development of my project.