



DESTINATION STARTUP

BioLoomics, Inc.

One-Sentence Summary of What You Do: BioLoomics provides a B2B service to Pharma R&D companies that predicts clinically relevant effects of drugs using a high throughput platform drug screening technology.

Affiliated Institution: University of Colorado Boulder

Have you formed a company yet? Yes

Funding/Financing: Angel Funding (including Self or Friends/Family)

Please describe your company and the problem you are trying to solve: BioLoomics, Inc. is a seed stage Boulder company that uses a platform technology initially developed at CU to provide a B2B service product for the pharmaceutical drug discovery industry. Within the Pharma R&D market \$54B+ is spend by 4,000+ companies to discover novel pharmaceutical drugs. The resulting efforts yields drugs with 99% failure in clinical trials, which costs \$76B+ each year in clinical testing alone. These high costs provide an opportunity for generating revenue of 10's of billions of dollars/year to the first technology that can successfully identify clinical failures during the drug discovery process rather than in late stage clinical trials. BioLoomics is combining genetic engineering of vast libraries of fluorescent protein biosensors, high-throughput screening using cultured cells, and machine learning to provide a sophisticated drug analysis service: a drug developer sends us candidate drugs, and we conduct a pipeline of experiments to identify the risk of toxicity, efficacy, and off-target effects of each drug using our platform technology and our proprietary machine learning training dataset/algorithms. Our mission is to dramatically improve the quality, quantity, and efficiency of fully developed pharmaceutical drugs to improve the health and lives of millions of people.

What is/was your go-to-market strategy? Our beachhead market is the high throughput drug screening sector, where we will specifically target business developers that lack the necessary tools to directly measure the target molecular event of their drug development program using living cells in a scalable manner. This market sector of the pharma R&D market is comprised of 2,500+ companies, spends \$54B each year, and has a CAGR of 10+%. We are currently or preparing to market at conferences (SLAS Jan 2020), Contract Research Platforms (Scientist.com & ScienceExchange.com), social media (LinkedIn, Instagram), our website (BioLoomics.com) and via word of mouth from existing clients. The current competing state-of-the-art technology to directly measure molecular interactions is mass spectroscopy proteomics, which requires complex sample preparation, has a high cost per sample and lacks broad reproducibility. In contrast, our approach has a competitive advantage of being 10- 20x faster, costing up to 1000x less to operate, and demonstrating exceptional reproducibility. This innovative approach to create previously unattainable



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data during drug screening will allow for a paradigm shift in drug discovery away from broad screening of a targeted drug effect on a single activity (current) to massive screening of thousands of effects across hundreds of cell types (our approach). We aim to provide the ability of a client to freely choose to measure any measurement(s) on any cell type(s) at scale (106+ drugs) within 2 years.

How will/do you generate revenue? We will use our platform technology to perform experiments for Pharma R&D companies, where the exchanged product is a data report of the drugs effects on cellular pathways, processes, and predicted clinical effects. Thus, our service product is data. Our average contract size right now is \$45K/ contract, we can currently perform 15 contracts at capacity per month, and intend to grow this capacity 30% each month with our pre- seed funds alone. Within six months we will be able to perform \$5M+ in contracts with 60%+ profit margin using our seed funds alone.

How will this showcase benefit your company or technology? We are seeking \$10M in venture capital to increase our team by 5x, focusing on recruiting a strong marketing, sales and technical specialist team. By far, our technical capabilities have outpaced our marketing efforts, and we will focus heavily on strengthening marketing. We will also use this money to scale our hardware by 3x and our software team by 3x to increase our capacity to compete contracts by 10x each month. Additionally, we are particularly interest in strategic partners with one or many of the 25 largest pharma companies, which also engage in investments in partner companies (Novartis, Merck, Pfizer, Abbvie, J&J, Teva, etc.).

Who are the members of your team and why is this the right team to get the job done?

- The Founder/CEO is Doug Chapnick, PhD and has 15+ years in genetic engineering, molecular biology, and highthrouput drug screening. He has engaged in two accelerator programs (SAGE and Innosphere), 5+ commercialization academy workshops/events, led technical operations for a DARPA funded CU research project for five years, has successfully met each milestone on schedule for the company, and successfully raised \$600K in angel funds for the company to date.
- The Director of Bioinformatics and Automation is Jeremy Jacobsen, MS, who has 10+ years experience in machine learning/hardware software engineering and 5+ years in bioinformatics. He has successfully built our prototype hardware at BioLoomics, which is a critical part of our IP.
- A key partner for us is CU- Boulder Venture Partners, with whom we are engaged in an exclusive option agreement for exclusive licensing of our preliminary method for Biosensor design, which was developed by the founder at CU. The terms of licensing of this IP (currently a PCT application at the USPO) are actively under discussion.
- Another key partner is Innosphere, with whom we are in discussion about an additional engagement focused on further strengthening our marketing strategy and business development.