

STARTING UP A BIOMEDICAL COMPANY

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Biomedical Engineering graduates choose different career paths. Some choose to go to graduate school while others choose to enter industry by joining a large company. A small minority, however, follow a more difficult route by starting a new technology company. One such entrepreneur is Dr. Samirkumar Patel. Patel received his doctoral degree in Chemical and Biomolecular Engineering from the Georgia Institute of Technology in the drug delivery lab of Dr. Mark Prausnitz. His work in the field of ophthalmic drug delivery led to the development of a microneedle technology for the treatment of ocular diseases, and he is now a scientific founder of the company Clearside Biomedical. Starting a new technology company is an onerous task, and most startups fail within the first few years. According to a University of Tennessee research study, the percentage of startups that continue to operate in the education and health field after four years is only 56%. Why do so many companies fail? Starting a company has no certainties and requires constantly making tough decisions without clear answers. Therefore, making good decisions is crucial for successfully operating a business.

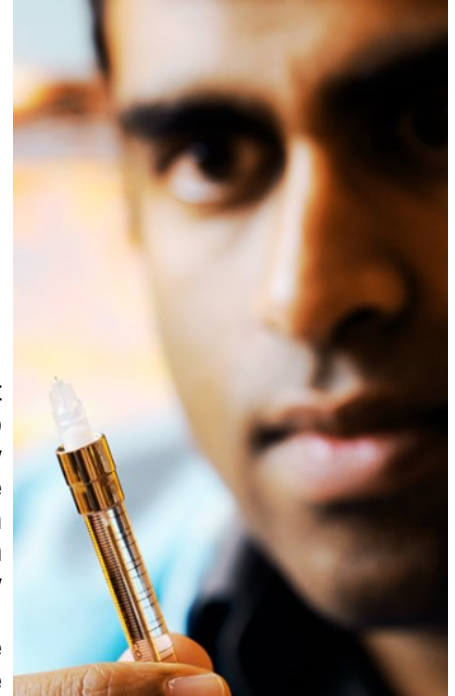
The first difficult decision that Patel encountered was whether to sell his intellectual rights to existing technology companies or start his own. Sometimes the technology requires a preexisting infrastructure or other unavailable technologies, necessitating that it be sold to another company. Retaining the rights to the technology, however, allows you to use it to start a business potentially yield a much greater financial return. Patel decided that starting a company was the better choice despite many others trying to dissuade him.

When people start up a company, they always face the problem of choosing whom to recruit into the company. As quoted by Patel, "People matter." In the case of established companies, the founders don't actually need to work for the company as they let others do the grunt work. However with startups, the founders often have to do a bulk of the work for the company since they know the most about their idea. The supporting cast that startup companies bring in could be new employees or consultants. It is important that the people whom they bring in are those who have similar goals and vision for the company and can be trusted.

The most challenging thing for a startup company is trust and alignment of goals for everyone involved. At the start of Clearside Medical, Patel hired two employees who didn't have much background in ophthalmology but had plenty of experience in starting a company. Those people seem very excited about the project, and, as the months progressed, Patel began to realize that they weren't very interested. Patel noticed an imbalance in their relationship with the company. These so-called experts were receiving access to a lot of useful information from the company, but they no longer contributed anything useful to it. That is when

DR. SAMIRKUMAR IS CURRENTLY WORKING AS THE DIRECTOR OF RESEARCH IN A STARTUP COMPANY CALLED CLEARSIDE BIOMEDICAL. THIS COMPANY MAKES BOTH DRUGS AND DEVICES TO HELP SPREAD THE DRUG IN THE BACK OF THE EYES.

(Credit: Gary Meek)



Dr. Patel knew that something has to change. The company needed to find someone else and so they got in touch with contacts from the Advance Technology Development Center. With their help, Clearside Medical finally had the right person for each

position. In a startup company, time is a very valuable asset and so it is very important that the person you hire matches the company's goal.

Aside from labor, capital is also a very important factor for starting a company. The founder needs to sell their idea to investors to get funding. Firstly, one needs to understand the total amount of money that is needed to be successful. There are three main funding sources that a founder could seek: a venture capital, a bank and a government grant. Dr. Patel wanted to move fast so he pursued venture capital funding. A venture capital fund is the fund that a company looks for outside capital to grow their business. A typical VC fund will be a professionally managed fund that has a few partners and junior level individuals who manage a pool of money raised from individual investors and institutional money.

Starting up a company is definitely challenging. From raising funds to hiring people, it all requires successful decision-making. It is important that people know the purpose of the company. An entrepreneur needs to hold their initial mission and keep an open mind toward innovation. In this way, they could be successful. When things fail, they should learn about why things fail and try again. Clearside Biomedical has become a successful running company and the credit goes to its founders' wise decision-making. For the students who are courageous, entrepreneurial and innovative, they could also think about starting their own business.