

Automated Outsourced DNA Genotyping Service enabling Genetic Researchers around the World to Maintain their Scientifically Modified Genetic Animal Models



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“If you are a genetic researcher we want you to pay attention to Transnetyx because what we can give you is the one thing that you cannot make, discover, or create, and that is time. Something no one has enough of.” - Bob Bean

CEOCFO: Mr. Bean, would you tell us about Transnetyx?

Mr. Bean: Our company is an automated genotyping provider that services researchers around the world. There is a genotyping procedure done in labs in order to maintain their modified genetic animal models. This requires a great amount of time and energy on the part of the laboratory but it does not provide any true scientific discovery. It is an identification process for the modified animals to determine which ones have inherited the gene mutation that they are studying and which ones have not. This is a starting point for the scientists that leads to experiments and hopefully to eventual therapies and cures. We have automated this process so when we approach them, we are able to show them the amount of time and energy that can be saved in their laboratories. As a result, they can spend their time making discoveries. We hope to convince them to use our services rather than do the genotyping themselves.

CEOCFO: What are the challenges that you have overcome in creating a system that automates efficiently and correctly?

Mr. Bean: The biggest challenge is the throughput. In order to handle the volume of samples that we must have to be a viable company, we needed to completely automate the process, which is a pretty big lift. You start with a biopsy sample, break the sample down to a liquid, open the cell membranes, harvest the DNA from the tissue, clean it and then examine it for all the mutations that the researcher needs. Currently we have over twenty thousand different mutations that researchers have used our service for, and we never know what we might see next. So, we get up every day and test whatever is in front of us, which in any given month can be ten thousand different mutations. We had to build a system that was highly responsive to web orders and could basically measure the correct amount of chemicals for every specific mutation requested, apply them to the correct samples, and calculate the results. We must make sure we are giving the customer the most accurate answer every single time. At present, we are doing this almost 300,000 times a month. That is a lot of automation and throughput.

CEOCFO: Were you sure in the beginning that it could be done?

Mr. Bean: Not only was it hard, it was fraught with failure. The original scientific detection method that we intended to use to distinguish gene mutations did not work. We tried to modify that particular method and it still did not work. We swapped out that part of our technology and development for another method and were able to proceed from there. Then we went back and reconfigured all the code, the web ordering, the robotics that were leading up to it and out of it, and changed all procedures around it. Not only did it take a couple of years, but it was very painful.