

A Global Biotechnology Tools Company, Labcyte Inc. Revolutionizes Liquid Handling through Echo®, a System Used Worldwide that Implements Sound to Precisely Transfer Liquid Without Contact, Eliminating the Use of Pipettes

**Life Sciences
Liquid Handling**

Labcyte Inc.
1190 Borregas Avenue
Sunnyvale, California 94089
408.747.2000
www.labcyte.com



Mark D. Fischer-Colbrie
CEO

BIO:

Mr. Fischer-Colbrie became president and CEO of Labcyte in September 2008. He has more than 30 years of experience in diagnostics, medical devices, therapeutics and high technology. He has been involved in three IPOs.

Prior to joining Labcyte, Mr. Fischer-Colbrie was senior vice president of finance and administration and chief financial officer at Adeza Biomedical

Corporation, a women's health care company, which went public in December 2004. The company was subsequently sold for \$450 million, more than nine times its revenue. During his tenure at Adeza, Mr. Fischer-Colbrie was inventor on six patent applications and led the business development function for three years. Mr. Fischer-Colbrie was senior vice president, finance and administration and chief financial officer for nearly nine years at a vision correction company. Earlier in his career, he held several positions including vice-president, finance, corporate controller and advanced technology business manager at a manufacturer of disk drives that grew from a start up to \$1.2 billion in revenue.

Mr. Fischer-Colbrie holds a B.A. from Stanford University and an M.B.A. in Marketing and Finance from the University of California at Berkeley. He has served in numerous roles for the Juvenile Diabetes Research Foundation (JDRF) and is currently on the board of directors for JDRF. Mr. Fischer-Colbrie is also a board member of the Analytical Life Science Diagnostic Association (ALDA), an industry association.

About Labcyte Inc.:

Labcyte, a global biotechnology tools company headquartered in Sunnyvale, California, is revolutionizing liquid handling. Echo® liquid handling systems use sound to precisely transfer liquids without contact, eliminating the use of pipettes. Labcyte instruments are used worldwide throughout the pharmaceutical industry, as well as by biotechnology firms, contract research organizations, and academic institu-

tions. Our customers work across a wide spectrum of scientific research, including drug discovery, genomics, proteomics, diagnostics, personalized medicine, and imaging mass spectrometry. Labcyte has 63 global patents, along with additional filings.

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine

CEOCFO: Mr. Fischer-Colbrie, would you tell us what attracted you to Labcyte Inc. and how the company grown under your leadership?

Mr. Fischer-Colbrie: What attracted me to Labcyte was the fact that it is an incredibly revolutionary technology that is going to have immediate benefit in all areas of life science research and discovery. With the ability to use strictly sound energy to move liquids down to a billionth of a liter at a time, it offers the capability to transfer liquids from one container to another without any mechanical interference of a pipette tip or a nozzle, which are the traditional transfer techniques. That fundamental capability of having exquisite precision and control through sound waves to affect these kinds of transfers has a massive benefit in terms of quality, cost, productivity, and other benefits that are going to be extremely important across all areas of life science.

CEOCFO: Would you explain how sound moves liquid?

Mr. Fischer-Colbrie: The science of being able to move liquid with acoustic energy is very straightforward. A transducer, which generates a sonar

pulse, is placed below a container with the liquid. A sound pulse is then sent through the container to measure where the top layer of the liquid is. That sound energy is then focused at that point, and one can then create an upwelling of liquid with the sound energy that is further forming a mound through which ultimately a droplet is ejected and shot upward much like a rifle shot. It is very targeted and very precise, and each transfer is exactly the same as the next transfer. When you shoot up, you are shooting into a container that is inverted, and the force surface tension is much greater than the force of gravity, so the liquid does not drop back down. By being able to turn the world upside down, one can precisely make transfers of liquid of fairly significant volumes. Traditionally, this is used by pharmaceutical firms to look at the effect of compounds that might be great therapeutics, where compounds are stored in containers called microtiter plates. There are millions of these compounds for each major pharmaceutical firm, and they are running hundreds of thousands of tests in an operation called high through-put screening. The ability to rapidly and precisely transfer liquids from where compounds are stored into test locations is of great importance, and that is just one of the many application areas where this technology is currently used. We sold instruments to all 20 of the top pharmaceutical firms.

CEOCFO: Are they replacing all of the older technology, or are they working it in little by little?

Mr. Fischer-Colbrie: In the high through-put screening operations where the company has its original and initial focus, this has essentially become the standard process and has replaced the standard technology that uses pipette tips to make those transfers. People are probably familiar with things that are very similar to a drinking straw where you use a pipette to suck in a liquid and then move it over to dispense it into a location, which is the standard process. Our systems have been replacing those standard techniques because there is a huge amount of error that occurs in those transfers, including contamination, inability for

control over the low volumes you are dispensing, and many other problems including the things that you are testing being stuck to the pipette. Therefore, you think you are testing something but you actually are not because it never was transported over. This has already resulted in pharma firms discovering compounds that they thought were ineffective as a potential drug candidate ending up actually being very potent and very effective as a drug and are moved forward into clinical studies as a result of using our systems. There has already been exciting developments in that respect.

CEOCFO: Are you selling a single piece of equipment and are there disposables that go with it?

Mr. Fischer-Colbrie: We sell an entire system. We sell the equipment, the acoustic dispensing and the consumables which are related to the microtiter plates that are used- it is helpful to have an acoustically friendly plate to be able to transfer the liquids from. We also sell automation that is incredibly easy to install and operate because we provide a software system. What that means is that today we have expanded our overall market and overall capability where we are selling to molecular diagnostic firms and people who are looking at individual patient cells. We are selling to institutes who looking to help those who have failed leukemia treatments. They are using our systems to rescue patients by being able to rapidly evaluate compounds that are on the market for other treatments as a potential therapeutic. We are selling it to genome centers, academic centers, and to contract research organizations. We have been able to use the sound energy to not only affect the transfer drop by drop of the liquids, but also we can determine from the sound pulse the nature of the fluid we are transferring, which means that can be done on a fully automatic basis and there is no operator intervention required. That development has broad-scale applications because one can now easily miniaturize the transfer of the liquid. Standard tip technology requires larger volumes of liquid, so what that means is that we can

significantly reduce costs by eliminating pipette tips, substantially reducing the amount of chemical agents necessary for use in diagnostics or other testing, or if you have a precious amount of sample the ability for us to transfer a billionth of a liter at a time allows you to be able to do a lot more with that sample. Those kinds of capabilities are simply not achievable with standard technology.

CEOCFO: How well protected is the patent?

Mr. Fischer-Colbrie: We are in an environment where we have over 63 issued patents, and there are over 50 in the United States alone. We have more patent applications behind it. The technology was developed by two of the co-founders here at Labcyte, so it is all original technology designed, developed, and commercialized by Labcyte. We also have patent protection around the world, and we continue to add to the patent portfolio because we are able to learn more and more about the signal and processing as we continue to expand our capabilities across all areas.

CEOCFO: Do the segments of the industry that should know about Labcyte know you?

Mr. Fischer-Colbrie: We are in an environment where we are very excited to broadcast and share the news of how important this technology is to a broad range of areas. In the pharmaceutical environment where we have become the standard treatment and modality for how to move liquids, we are very well known. For the broader application areas of diagnostics and some of the other areas I mentioned, the knowledge of acoustic dispensing is much more limited because it has been a more recent development for the company. One of our biggest opportunities is to share how seminal this technology is and how much of a leap forward it is. Companies such as Bristol-Myers Squibb, AstraZeneca, and others have already published those comments in peer-reviewed journals. It is not just us broadcasting that information that is important, it is also our customers and how they are using our technology that

will serve to broaden the awareness of this exciting technology.

CEOCFO: When you speak with someone about your offering, do they understand easily?

Mr. Fischer-Colbrie: The first description is fun because it goes completely against everyone's experience ever since they were a little kid playing with straws. The first thing is that we shoot a liquid up out of a container, and nobody does that. The second thing is that we are able to do that with exquisite precision and accuracy, and nobody is able to accomplish that with standard approaches. The third thing is that we can do this to incredibly minute levels of transfer, and you can aggregate the droplets to get whatever liquid transfers you would want to have. Even though it can go to the billionth of a liter, you can aggregate those very quickly. That is not the world's experience, however. The world is used to liquids being very chaotic and difficult to handle, and they are used to things jamming up in pipette tips. They are not used to the ability of transferring fluids from any particular location to another location with extreme ease on a drop-by-drop basis. The result of all of this is initial confusion about the understanding of the physics and things that are going on. Once that is clarified with pictures and an animation, people realize the capability of the technology. Further realization comes from how the technology will benefit everybody for much better data quality and significant cost reduction as well as higher through-put capabilities. That is then shown by what customers are using our equipment and systems for and sharing that information. That is a lot of fun, and it is very exciting to talk about our technology with the understanding that it is much more than the novelty of the technology. It is significant to note the impact that this is having in life sciences and what it is going to have in all areas.

CEOCFO: Would you tell us your business strategy going forward as

you look to make more penetration in different areas?

Mr. Fischer-Colbrie: First of all, we are a very interesting company. 50% of our sales are international, and we have direct sales, application and support in North America as well as Japan, Europe, and Asia. We are continuing to expand the awareness of what our technology is capable of doing, and as a consequence, we have a whole new set of customers beyond the original major pharma firms, such that we are in the top five contract research organizations in China. We are in academic accounts around the globe, we are in smaller biotech companies, molecular diagnostic firms, genome centers and groups also doing personalized

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medicine applications. The strategy is to build by adding feet on the street to increase awareness. That is one of our number one objectives- to have people understand the opportunities with this technology and how this will affect people who are looking at genomics and diagnostics or proteins, cells, and whatever other liquids they want to transfer. We are very excited to continue to roll this core product out, and the beauty of all this is that it is one instrument that can do a broad range of applications. That is incredibly unique. Generally, there are many tools out there that are confined to doing one or two things. The beauty of what we offer is that we have become a general all-purpose liquid handler, because we provide all of these amazing value propositions.

CEOCFO: Will your financing earlier this year take you where you need to go?

Mr. Fischer-Colbrie: We have been very capital efficient as a company.

We did no equity financing from fiscal year 2005 to fiscal year 2012, and we added a very small round of about five million dollars to continue to work to build out our portfolio. The first activity around that is putting our acoustic transfer systems into different form factors, whereby we have had numerous requests for putting acoustic dispensing inside of other people's equipment. There are a number of programs we have underway for new products as well as our next generation platform. Those are things that we are interested in pursuing.

CEOCFO: How do you stay focused as CEO with so much opportunity available?

Mr. Fischer-Colbrie: The issue of focus is absolutely critical, and that is true of any business. From my background, I have learned that in great detail. For Labcyte, you have a technology that has so many potential applications and so many environments where it can be used. Therefore, one has to be extremely ruthless about targeting the priorities and then executing against them. One can think of the Labcyte equipment as similar to the iPhone, where you have hundreds of applications that you can use and employ on the Labcyte system. We are very different, and we are very unique in that structure. Most of the companies that you are talking to have one general market area they are addressing, one specific set of diagnostics or drugs, or one particular product offering that they are driving through. This is a different construct in that regard, so it makes it that much more challenging to ensure that you stay focused. That is what we are able to accomplish and it has been through the discipline of supporting an incredibly demanding customer set. We are supporting global pharmaceutical firms in multiple locations, and that has allowed us to build up the discipline to provide that and stay focused.

CEOCFO: Why should people in the business and investment community pay attention to Labcyte Inc.?

Mr. Fischer-Colbrie: The entire world of life science research is dependent on a major key step, which is called sample preparation. That is where we are, and what we have developed is an incredibly disruptive technology that is light years ahead of what is out there today. If one looks at the underlying themes of what people need to do in life sciences, they need to be more efficient at producing and developing new drugs and diagnostics

as well as techniques for looking at DNA. We can provide the equipment that will facilitate all of this, and the impact is huge in the sense that new drugs are being developed as a consequence, and companies are able to be much more efficient at lower costs when performing diagnostics. The ability to enable personalized medicine is already evident in one institution with the capability of identifying and rescuing leukemia patients, which can only be done with our systems. The ability to understand fundamental science through the

understanding of proteins and cell analysis requires the best solution possible in the sample preparation world. We offer the ability to do that on a miniaturized basis with automation, consumables, and the ability to have on the data quality side a significantly different and better result across all of those areas. It is amazing what a dramatic impact this technology already has as we are just getting going.

