CEO CFO

HARVARD BIOSCIENCE

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With A Move Into Creating Tools For The Area Of Regenerative Medicine, Which Is The Future Of Health Care, Harvard Bioscience Is Continuing To Build On Their Strong Track-Record Of Revenue And Earnings Per Share Growth

Technology
Scientific & Technical Instruments
(HBIO-NASDAQ)

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David Green
President

BIO:
David was graduated from Oxford University, England in 1985 with an honors degree in physics. From 1985 to 1989 he was a brand manager for consumer goods such as Lux and Shield soaps for Lever Brothers (Unilever) in London. In 1989 he moved to the USA and was graduated with distinction from Harvard Business School in 1991.

From 1991 to 1995 he was a strategy consultant with Monitor Company in Cambridge, MA and Johannesburg, South Africa. Corporate strategy work included profit and revenue growth initiatives for global clients in the aerospace, retail, life insurance and platinum mining industries. The South African work was advising the newly democratic government on national competitiveness (based on Porter's Competitive Advantage of Nations) and increasing GDP growth rate. He personally presented the work to the President and the Cabinet. The work was heavily covered by South African media as well as internationally. In addition, David ran all of Monitor's worldwide training programs.

In late 1995 David returned to the USA and put together the venture backed deal that created Harvard Bioscience (which began as Harvard Apparatus at Harvard Medical School in 1901) becoming Co-Founder, President and a Director. Harvard Bioscience's products are used to advance life science research at virtually all pharmaceutical and biotechnology companies and research universities worldwide. Through a combination of organic growth and over twenty acquisitions Harvard Bioscience has grown from $9m in revenues in 1996 to approximately $88m in 2008 and is highly profitable. Harvard Bioscience went public in December 2000. In 2004 Harvard Bioscience was ranked number three for revenue growth in the Boston Globe 100 index of publicly traded Massachusetts companies. In 2005 Harvard Bioscience was named one of America's Top 25 Fastest Growing Technology Companies by Forbes Magazine.

David lives in Dover, MA with his wife Diane and their three children. When not raising companies or children he enjoys growing organic fruit and playing rock guitar. He is a citizen of the United Kingdom and permanent resident of the United States.

Company Profile:
Harvard Bioscience is a global developer, manufacturer and marketer of a broad range of specialized products, primarily apparatus and scientific instruments used to advance life science research and regenerative medicine at pharmaceutical and biotechnology companies, universities and government laboratories worldwide. HBIO sells its products to thousands of researchers in over 100 countries primarily through its 850 page catalog (and various other specialty catalogs), its website, through distributors, including GE Healthcare, Thermo Fisher Scientific and VWR, and via our field sales organization. HBIO has sales and manufacturing operations in the United States, the United Kingdom, Germany and Spain with additional facilities in France and Canada.

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFOinterviews.com

CEOCFO: Mr. Green, there have been some changes over the last year or so for Harvard Bioscience, what has been the traditional focus, and what is your focus today?

Mr. Green: Harvard Bioscience is a scientific instruments company, so we sell to scientists around the world, mostly academic research, but also biotech companies. They use our products to advance life science research. So that is our base business. Today we have $100 million or so in revenue; we are a very profitable company. We have had a long history of growth and profitability even during the great recession of 2008 through 2009. I am very proud of that record. That record is driven by three things; organic growth, the second thing is what we call tuck-under acquisitions, which I will come back to later, and the third thing is operational improvement. The combination of those three has enabled us to show earnings per share (EPS) growth, very consistently throughout that time. That base of our business has been the cornerstone of our success for fourteen or fifteen years now. We have done something new recently. In our 1st Quarter call, we announced a new area that we are investing in, which is the area of regenerative

medicine. Regenerative medicine is really a subsection of stem-cells. There are very promising ways to treat people with all kinds of diseases using stem-cells. Now regenerative medicine is a subset of the stem-cell field that uses stem-cells either as cells, injecting them back into the body to help the body repair damaged tissue, or those cells can actually grow outside the body to create tissue and organs for transplant back into the body. It is a very exciting field. You don't have to take our word for it, the US government through the Department of Health and Human Services has said this is a $350 billion market and $100 billion in the US alone. The government is very keen on regenerative medicine because they see it as a way to treat what has not been treated with standard therapies like drugs and medical devices. We agree that it is a very big market in the long-term. Our strategy though is to be a tools provider. From the start we have been a tool provider for researchers for 100 years now, making scientific instruments to help researchers do life science research. We are now trying to become a leading provider of the tools needed by regenerative medicine researchers to build tissue and organs for transplants.

CEOCFO: How do you become a leader in that field?

Mr. Green: Our research technologies have been used for decades to do scientific research. Starting about two or three yeas ago, some of our leading researchers started approaching us and asking if we could make our product sterlizable. That was an unusual request because if you are doing basic research on pieces of tissues that you have taken from animals, then you don't really care about sterility. However, if you are going to grow something for transplant into a human being you care very much about sterility. So this peaked our interest and we recognized very quickly that a lot of these researchers who were using our basic research tools and were starting to adapt them for regenerative medicine. In many ways, it was our customers who pulled us into this and opened our eyes, and as we went to investigate, we agreed with them. This is a major new market opportunity approaching us. Our technology is very well positioned to be adapted for growing tissues outside of the body and injecting cells into muscle and spinal cords for example, for cellular therapy. We already make the market-leading research syringe pumps. We have about 70% market share in the research syringe pump market under our Harvard Apparatus name, which is a very famous well-known brand-name. We have announced we will be applying to the FDA for 510K approval of our research syringe pumps to turn them into clinical syringe pumps that can be used on humans, for use in injecting cells in cell therapy.

Our strategy is to adapt our current technology; it is not like we are trying to start this from scratch. It is not a big idea we had in the bathtub one morning and decided to go out and invest five or ten million dollars to develop this from scratch; quite the opposite. We are using our current brands and we are using our current technologies. We are adapting them in collaboration with leading researchers and major academic medical centers. I will just tell you one little story to illustrate that this is not science fiction. Back in November 2008, an article was published in the Lancet, which is one of the top medical journals in the world by a surgeon called Dr. Paolo Macchiarini. He had performed a bronchus transplant using a regenerated bronchus. The way he did it was a lady who was sick who was a patient was going to have her left lung removed, because the bronchus, which is a tube that connects the throat down into the lung was occluded. However, rather than remove her lung what he did he took a trachea, which is the hard tubular section of your throat, from a cadaver of a person who died in a road accident, and stripped all the cells off it leaving a thin tube about 6 inches long and an inch diameter. He then took cells from the patient, this is where the stem-cell side comes in, because he then took a biopsy of tissue from the lungs of the patient; separated out the stem-cells, cultured them, layered them back into the tube taken from the deceased donor. Inside a bioreactor the cells grew and formed the tissue and then he transplanted that tubular section of tissue back into the patient, so replacing the occluded section. The patient made a complete recovery and is alive and well to this day. She and also showed no immune response. Now of course if we did a kidney transplant, if I gave one of my kidneys to you then you would need to take immuno-suppressive drugs for the rest of your life because you would have an immune reaction, because it is not your tissue, it is my tissue. This patient did not have any immune response showing that you can regenerate a patient's organ or tissue outside the body, put it back into them and cure them of the condition they have without getting any immune response. This was the world's first bronchial transplant made from regenerated tissue and it used a bioreactor, which is the chamber in which the tissue was grown. In the summer of last year we licensed that bioreactor technology, which is patent pending, we made production prototypes in the fall and we launched it for commercial sale this spring. It is a good example of one of the products that we are currently selling for regenerative medicine.

People should remember our strong track record of revenue and earnings per share growth. I think they should look to the future of regenerative medicine and our strong position in that emerging market. - David Green

CEOCFO: Are you selling the bioreactor into your current customer base or are you reaching a new group?

Mr. Green: The answer is both, because although I just described a clinical transplant, there is still a lot of research going on in this field. I think this is true for the bioreactors and even the cell therapy injectors that we are starting to make, even though in the case of the cell therapy injectors, they will be FDA approved for use on humans. So you will see an awful lot of research going over the next few years. This market will evolve in three phases; the first phase will be tools for research. There will be a lot of research going on; how the tissue grows, how does it differentiate, how do you get one type of cell here and another type of cell there? There is a lot of research to be done to understand its basic process even though the first clinical transplant has already

been done. Secondly, there will be a clinical trials market and when large scale clinical trials start taking place for 100 patients here and 100 patients there, they will need lots of bioreactors because the tissue takes quite a long time to grow in the bioreactor. So you need lots of them in order to do lots of transplants. I think that is the point where we will start to see significant revenue; it will be in the clinical trials.

The big market is when somebody gets an FDA approval for the therapy, not for the bioreactor or the syringe injector, but for the therapy. So when the therapy becomes FDA approved, then the market is enormous. There are very long waiting lists for organ transplants particularly for the bigger organs like kidneys, lungs, liver, heart, pancreas, etc. There are very long waiting lists and people die on these waiting lists. These conditions are life-threatening, so developing new organs even if those organs aren't perfect, addresses a very large unmet medical need that are very badly addressed by current treatments. For example, if you have end-stage renal disease your kidneys have failed, so you have dialysis, which is the current treatment. Dialysis is a $50 thousand a year treatment and it is very inconvenient for the patient, as you have to go to the hospital three days a week. So it is a very poor substitute for having a kidney transplant because with a kidney transplant you don't do any of those things other than take immunosuppressant drugs. The pay-back on doing the kidney transplant is about two years because the cost of a dialysis treatment is so high that it is very economically advantageous to do a kidney transplant. The problem is there are not nearly enough donors. If we could supply those organs, we could treat a lot more people who are currently dying while waiting for a transplant organ.

CEOCFO: Harvard Bioscience is working with researchers who are using equipment that you already have; how do you adapt to new demands and develop the products?

Mr. Green: I would say it is moderately complicated. It is not as simple as tweaking the products. They do need it to be adapted, but it is not like we are inventing it from scratch. It is not like we are trying to create cold fusion or something. We are talking about biology here and the products that we make today are a good base from which to build the next generation of products. They are of course not the next generation of products and that is why we are working with collaborators in the field who are doing the cutting-edge work and actually growing the tissue themselves. They are doing the transplants themselves, and they know what the problems are with the current equipment. So we work with them in collaborative relationships to evolve the equipment such that it can be used for these much more challenging applications like growing kidneys and livers and hearts, lungs etc.

CEOCFO: Are there areas of the world where you would like to be more active?

Mr. Green: Yes. We do sell in about one hundred countries around the world, but the majority of our revenue comes from the US, western Europe and Japan. However, there are high growth areas like India and China where we are not so well represented today and part of our plan for this year and going into the future years is to strengthen our presence in those fast-growing emerging markets.

CEOCFO: Do most of the scientists get a wide variety of your products or is it much more selective?

Mr. Green: Individual scientists tend to be very specific in their needs, so although we have a very broad product line, any one scientist might only buy a very small fraction of our product line.

CEOCFO: How do you keep track of all of the inventory in all of the countries?

Mr. Green: That is what computers are for. When you use computers and your IT systems to keep track of inventory and shipping, that is pretty basic stuff, but keeping track of customers, there is much more upside to keeping track of customers. Harvard Apparatus, which is our biggest business unit, has been a catalog company since the start. In fact, we have an original copy of our 1901 catalog and for one hundred years, this has been a catalog company. So we have had that database approach to managing customers since the start and one of the great strengths of the company on the inside is its catalog marketing and direct marketing capabilities. We have always been a catalog company, and as the web and email have come along, we have adopted new technologies. We became experts in the field of direct marketing, whether it is electronic or whether it is through hard-copy mailing.

CEOCFO: Would you tell us a little about the tuck-in acquisitions for Harvard Bioscience?

Mr. Green: Tuck-in acquisitions are the second part of our growth strategy. The first part, which is most of what we have been discussing so far, is about organic growth. So it is how do you create new products and how do you drive organic growth? We have actually talked about two themes; one was creating new products including the regenerative medicine products and the second was geographic expansion. Those two themes drive our organic growth, but the second part of our overall growth strategy is tuck-under acquisitions. The scientific products markets are very fragmented, most companies in this industry got started by a professor at a university that had a good idea and started to create a product, and all of a sudden, his or her colleagues wanted one and so it became a company. For those companies they tend to have very good products, but tend not to have good global distribution or good manufacturing, at some point they make very good acquisition targets. Therefore, when the owner is ready to sell, we are ready to buy. We are always in discussions with half a dozen to a dozen potential acquisition candidates; they tend to be small businesses, in the $5 to $10 million range. They tend to be more like product lines rather than full businesses. Over the last fourteen years we have made 20 acquisitions. So we can buy a good product line and tuck it in. That is where the tuck-under comes from in our acquisition strategy; meaning we can share a manufacturing facility or distribution channel. That gets synergy out of the acquisition, so the tuck-under acquisition is a very important part of our overall growth strategy.

CEOCFO: And round it out on the third part of your strategy.

Mr. Green: The third part, which really affects earning per share group, it doesn't affect revenue growth, is operational improvements. So as we acquire these businesses, we tend to be fairly cautious on the day we acquire them. We don't immediately try to consolidate the operations, but over a couple of years, once you have gotten to understand the business well, you understand how the marketing and sales work. Then at some time, it makes sense to consolidate some or all of those functions. So we have done that over the last two or three years. We have made probably three or four restructurings over the last few years to reduce our cost-of-goods sold and reduce our expenses. Essentially, we have taken that increase and reinvested it in this new area of regenerative medicine.

CEOCFO: What is the financial picture like for Harvard Bioscience today?

Mr. Green: We have a very strong balance sheet; we have a net cash position today, even though we made a major acquisition last year of a company called Denville Scientific. We made that acquisition with cash we had and borrowing under a credit facility. Even so, we have repaid some of that and we are now in a net cash position. We have very strong cash flow and a very profitable business; we make about 16% operating profit. We have been able to show nice growth over the last fourteen years in its entirety. In fact, our compound annual growth rate of revenue growth over the last 13 years if you take the mid-point of our 2010 guidance is 19%. That is a pretty good track record I think given there are two major recessions in that period in 2009 and the bursting of the dot-com bubble in 2001.

CEOCFO: What do potential investors miss when they look at Harvard Bioscience?

Mr. Green: Mostly they just don't see us. Investors who do actually see us, understand a lot of what I just described. They see the strong profitable base business, with a long track record of growth; a very profitable business. They see us trading at a very low multiple of Earnings Per Share or EBITDA or revenue or whatever your favorite valuation metric is. So once people take a look at us I think they very much like what they see, when they see the company trading at a very modest valuation given our track record. Then they see the regenerative medicine business and they say, "Well look that sounds like a good business, it could be a real home-run in the future. It is not dragging down earnings per share growth in the short-term, so it sounds like even a better proposition". I think our biggest issue is a lack of visibility. We are a fairly small company in public company terms; we are just over $100 million in revenue, just over $100 million in market cap. Small cap companies as you know really have very little research coverage these days and we don't have a lot of visibility. So that is our biggest concern. We have tried to address that this year, as we did hire an investor relations company and we have been doing more road shows to get the message out there a bit more.

CEOCFO: What should people remember most when they read about Harvard Bioscience?

Mr. Green: People should remember our strong track record of revenue and earnings per share growth. I think they should look to the future of regenerative medicine and our strong position in that emerging market.

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