

BY KIM RIBBINK

A MAN



FOR ALL SEASONS



**FROM AN AMBITIOUS IDEA TO A SAVVY
BUSINESS PLAN**, Frank Baldino Jr., Ph.D.,
CEO, Chairman, and Founder of Cephalon,
**HAS CREATED ONE OF THE
FASTEST-GROWING BIOTECH
COMPANIES IN THE WORLD.**

Like scientists the world over, Frank Baldino Jr., Ph.D., is driven by a straightforward philosophy: wanting to know how things work to fix what doesn't work. But unlike many others in the biotech/biopharmaceutical arena, Dr. Baldino also possesses business acumen, which has enabled him to guide Cephalon through its life cycle and become one of the few biopharmaceutical companies to not only survive the 1990s but, indeed, to thrive.

For Dr. Baldino, that drive is so overarching that it led him to create a business predicated on the research and discovery of treatments for one of the most complicated fields in medicine: neurodegenerative disease.

Though idealistic, Dr. Baldino is by no means unrealistic, and right from the start he understood that to achieve those ambitious goals he must first ensure success for his company.

"We started the company with a tough quest, which is to understand why neurons in the brain are dying and to find ways to slow that process down," he notes. "What we realized is that we were faced with really tough questions and that we had better build a company that is successful so we can continue to fund our quest."

That company is Cephalon Inc. With headquarters in West Chester, Pa., the international company specializes in drugs to treat and manage neurological diseases, sleep disorders, cancer, and pain.

Cephalon is one of the fastest growing biotech-based pharmaceutical companies. Sales grew by 47% in 2003 over the previous year, and company leaders expect top-line growth to occur at a similar rate in 2004 and for earnings per share to grow by 30%. Dr. Baldino notes that of the 480 publicly traded biotech companies, only about 20 are profitable, and Cephalon is one of those 20.

Cephalon was founded in August 1987 by Dr.

Baldino, who is CEO and chairman of the company, with the vision of building an integrated company with a presence in major pharmaceutical markets around the world. Today, the company currently markets more than 20 products internationally, including three proprietary products in the United States: Provigil, Actiq, and Gabitril.

The foundation of Cephalon's research initiatives are a broad platform of technologies. From molecular and cell biology and proteomics, to biochemistry, pharmacology, transgenic animal models, and medicinal chemistry, the company's approach is designed to improve patients lives through better, more targeted therapies. Backed by a dedicated, powerful, and fully-integrated development organization working closely with an efficient, innovative clinical research team, Cephalon's

goal is to bring an elite group of the strongest compounds through the pipeline with unmatched speed and efficiency.

The company employs about 2,000 people in the United States and Europe and has offices and manufacturing facilities in Salt Lake City and at CIMA Labs in Eden Prairie, Minn. Cephalon's major European offices are in Guildford, United Kingdom; Martinsried, Germany; and Maisons-Alfort, France.

DESTINED FOR DISCOVERY

"I was born to be a biologist," Dr. Baldino says. "When I was 12, my Christmas present was a microscope so I could look at all the lit-

tle bugs I'd collected. I always figured I'd do something in that area. Most people have a hard time determining why or how they became interested in what they're doing; I was always interested in what I'm doing."

For a young Frank Baldino, that passion was innate rather than familial considering neither of his parents were scientists. But it was helped along by some early opportunities. He received his first real taste of the industry at the age of 14, when his scouting group had a career day.

Ahead of the Crowd

IN AN EXCLUSIVE INTERVIEW WITH PHARMAVOICE, FRANK BALDINO JR., PH.D., CHAIRMAN, CEO, AND FOUNDER OF CEPHALON, TALKS ABOUT WHAT MOTIVATES HIM, BIOTECHNOLOGY INDUSTRY CHALLENGES AND SOLUTIONS, AND HIS LEADERSHIP STYLE.

WHAT IS IT ABOUT THE BIOTECHNOLOGY INDUSTRY THAT EXCITES YOU?

This is an exciting industry for many reasons. First, the end product helps treat diseases. How many jobs can you have in life where you can work hard and at the end of the day help some very sick people? That's a great reward. The other thing that inspires me are the young people who have joined the company along the way, especially in the early days when the company had no money, future, or security, and yet they were willing to jump in with two feet. Watching those careers grow and develop — some stay with the company and end up running divisions, and others leave and become leaders of other companies — is wonderful to watch. Both are successful ends, in my opinion.

WHAT ARE THE MOST PRESSING CONCERNS FOR THE BIOTECH INDUSTRY?

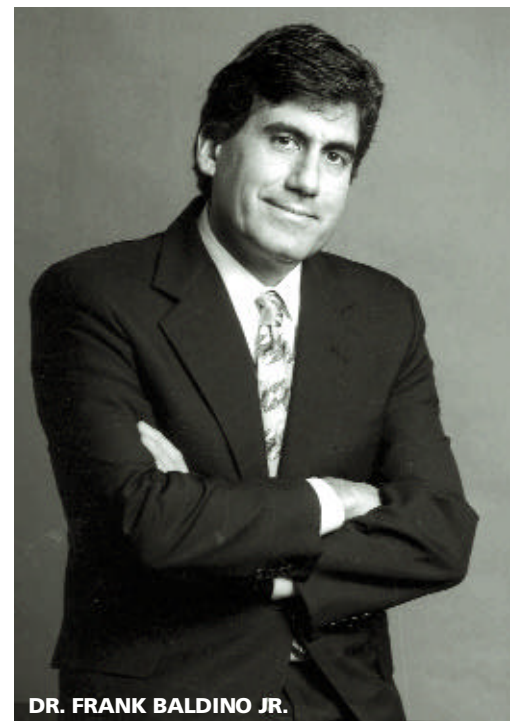
The biggest issue for both the pharma and biotech industries is the sentiment that our

products cost too much. The problem is that the cost of R&D is going through the roof. Other countries are fixing their pharmaceutical pricing to prevent us from recovering our R&D investment. But somebody has to pay for this innovation, and right now Americans are paying for it. The answer isn't to lower prices in America; the answer is to spread the R&D cost throughout the other countries as well and then the prices in America will come down.

HOW, THEN, DOES THE INDUSTRY GO ABOUT ALTERING THIS PERCEPTION?

People need to understand that the problem in healthcare isn't the pharmaceutical drug cost; it's the overall cost of healthcare. There are only two ways I know to reduce the cost of healthcare. One is a lifestyle change; people need to stop smoking, stop drinking, stop having unprotected sex, eat better, sleep better, and exercise more. The odds of that happening are slim to none.

The only other alternative is pharmaceuticals. People need take their medications, and if they



DR. FRANK BALDINO JR.

do, their chances of staying out of the hospital increase, and that costs less. The problem is that people disconnect the cost of their medications from the really costly treatments they receive. Bypass surgery costs \$100,000, which the government or private insurance pays for. But patients never see those bills. Then people complain about the cost of \$100 a month for medications that most likely would keep them out of the hospital in the first place. People need to understand that investment in innovative drugs will decrease their healthcare expenditures overall.

“I chose the pharmaceutical industry as a career, knowing absolutely nothing about it,” he says. “The way that worked was a volunteer professional in that program would take a scout to work for a day, and I was taken to work by a scientist at Hoffmann-La Roche in North Jersey, and I was fascinated.”

After receiving a degree in biology from Muhlenberg College in Pennsylvania and a Ph.D. in pharmacology from Temple University, Dr. Baldino spent several years in academia in what he refers to as “the pursuit of knowledge.” He spent a year focusing on *in vivo* electrophysiological studies of hypothalamic neurons.

“I was pretty excited about trying to figure out at that time how the brain was able to interpret temperature signals,” he says. “It was an emerging field and I worked with some great guys, such as Dr. Alex Beckman, who was at the University of Pennsylvania and is

now at California State University, Long Beach. He had a lab studying hibernation, and that was the perfect laboratory for me to answer some of the questions I was interested in.”

But while the pursuit of knowledge fascinated Dr. Baldino, being able to follow that through to possible treatments and cures was a bigger lure, and he joined DuPont as a research biologist in neuroscience.

It was this experience at DuPont, he says, that made it possible to establish a company.

“I was assigned to oversee a group of people in a laboratory in CNS discovery at DuPont,” Dr. Baldino explains. “Not only did I have the opportunity to learn how big companies operate and to publish papers, but I was also regularly asked to make presentations to the company’s executive committee and board on biotech and the future of neuroscience. In hindsight, DuPont was teaching me to speak to an audience of very bright folks who knew

nothing about the science we were performing and the industry we were creating. That gave me the experience to speak to intelligent people on Wall Street and other business executives at a very young age. And that was invaluable experience for someone starting a company.”

According to Dr. Baldino, the biotechnology industry, and hence companies such as Cephalon, was made possible by The Patent and Trademark Law Amendments Act, better known as the Bayh-Dole Act of 1980. The legislation allowed the transfer of ownership of government-funded inventions to universities and businesses for the purpose of further development and commercialization.

That link between academia and the biotechnology industry remains fundamental, Dr. Baldino says.

“That has led to the industry developing some very exciting new products,” he says.

HOW WOULD YOU DEFINE YOUR LEADERSHIP STYLE?

I’m an opinionated guy, but I’m also a consensus builder, which is critical for running a big and successful company. After all, I’m surrounded by people who are a lot smarter than I am, and I might as well take into account what they’re saying otherwise why pay them the high salaries.

The other thing is those good people won’t stay if everything they say is ignored. So for self-interest and shareholder interest, I’m a consensus guy. The way I view it is all my senior staff are entrepreneurs. If they’re running a division, and some of them actually built divisions, they’re entrepreneurs as well.

I think what has helped Cephalon is that I’ve given people the freedom to build and grow and develop. My job has evolved into drawing the box that they work in, and they do whatever they want in that box as long as they achieve their objectives.

YOU PLAY AN ACTIVE PART IN BUILDING THE GREATER PHILADELPHIA REGION AS A TOP LOCATION FOR LIFE-SCIENCES COMPANIES.

WHY DO YOU BELIEVE IT IS IMPORTANT FOR YOU TO BE INVOLVED AT A LOCAL LEVEL?

This region has been very good to me and my employees. It’s a great place to live and we want to make it better. Because this region has helped Cephalon to be successful, I believe I owe it to the next generation of companies to help improve the environment and make it an even better place to live. We want to bring more companies of our type here, more technology companies because there’s a great promise of good quality, high paying jobs, which in turn will increase the tax base of the region. For example, I chair the board of BioAdvance, the Biotechnology Greenhouse of South-eastern Pennsylvania. It’s an excellent example of regional collaboration in the life sciences. BioAdvance has allocated more than \$20 million to invest in promising proof-of-concept projects related to biotherapeutics, biomedical devices, and platform technologies. It plans to fund up to \$500,000 per project in the initial funding cycles. I’m also on the board of the Franklin Institute, a science-education center for children. I can’t think of a better way to spend my spare time than to raise money and to help shape an institution like

Franklin Institute, to which our employees take their children. I believe that anytime someone has success in life — professionally and individually — he or she owes it to that region to keep improving it.

ARE THERE PARTICULAR INDIVIDUALS WHO HAVE INFLUENCED YOU AND LED YOU TO WHERE YOU ARE TODAY?

It’s impossible not to be inspired by a man like Bob Swanson who, with Herb Boyer, founded Genentech and set in motion this whole notion of a biotech industry. Bob passed away a few years ago, but he was a remarkable man and a huge influence on me.

I was starting my company in 1987 and Genentech was already 11 years old and doing incredible science and was truly successful and profitable. I would call him and he would answer the phone himself and spend an hour on the phone with me. He didn’t know who I was the first 15 minutes of the phone call — but that’s the kind of guy he was. Bob was inspirational because he created an industry; I only created a company.

FOUNDATIONS FOR SUCCESS

Cephalon's formation was made possible

thanks, in part, to some funding from two venture capitalist firms: Burr, Egan, Deleage & Co. and Hambrecht & Quist Capital Management LLC, which is the investment adviser for two equity funds, H&Q Healthcare Investors and H&Q Life Sciences Investors.

These companies were keen to invest in the neurosciences and were putting together a business plan when Dr. Baldino suggested he write the plan based on his knowledge and ideas for forming a company. The companies agreed, and Dr. Baldino began putting the company together. In January 1988, five months after founding the company, he hired his first two employees.

"We began our business doing experiments in the bathroom at the home of Michael Lewis, the first person I hired," the company leader says. "The problem was getting the deliveries from the prime chemicals companies. While they were used to making deliveries to corporations, they were a little uncomfortable making deliveries to residences, and I'm convinced the neighbors thought we were running an illicit drug lab. But we were anxious to get started. We only had a little bit of money, and the labs weren't available to us yet, so we just jumped into it there. It's a bit different now."

Today, Cephalon is a highly profitable biotech company. For the year ended December 31, 2003, the company had revenue of \$714.8 million and net income of \$83.9 million. Dr. Baldino says the company expects to reach \$1 billion in sales this year.

Those achievements can be attributed, in part, to Dr. Baldino's success in raising funds in the early days.

"We raised more than \$3 billion before we became a profitable entity," he says. "And that's one of the big reasons why we're so successful, because it takes considerable amounts of cash to weather the storms of building a company."

Beyond financing, Dr. Baldino believes an early strategy the company took — to develop two drugs rather than just one — ensured Cephalon's success.

"Most companies that start out in biotech might have multiple projects in the pipeline, but they choose one and advance one because it's all they can afford," he explains. "But because we were prodigious fundraisers, we were able to develop two drugs and that was probably the decision that ensured our success. The fact is that in this industry one out of 11 pipeline products don't make it. Our first one didn't reach the market, but the second did; that product was Provigil."

Dr. Baldino has described the day in 1996 when it became clear that the FDA would not approve the company's first drug as the first time he was truly scared.

"Facing the prospects of hundreds of disap-

A FRANK APPROACH

DR. FRANK BALDINO JR. — RESUME

1987 — PRESENT. Chairman, CEO, and Founder, Cephalon Inc., West Chester, Pa.

1998 — PRESENT. Adjunct Associate Professor, Department of Neurology, Hahnemann University, Philadelphia.

1988 — PRESENT. Adjunct Associate Professor, Department Physiology and Biophysics, Hahnemann University, Philadelphia.

1985 — PRESENT. Adjunct Associate Professor, Department of Pharmacology, Temple University School of Medicine, Philadelphia.

1982 — 1987. Senior Research Biologist, Neuroscience, Medical Products Department, E. I. DuPont de Nemours & Company, Wilmington, Del.

1982 — 1985. Adjunct Assistant Professor, Department of Pharmacology, Temple University School of Medicine, Philadelphia.

1981 — 1982. Instructor, Department of Pharmacology, UMDNJ-Rutgers Medical School, Piscataway, N.J. Study of *in vitro* electrophysiological techniques in the hypothalamus.

1979 — 1981. Postdoctoral Fellow, Department of Pharmacology, UMDNJ-Rutgers Medical School.

1978 — 1979. Research Assistant, Department of Physiology, A.I. Du Pont Institute, Wilmington, Del. *In vivo* electrophysiological studies of hypothalamic neurons with special emphasis on the analysis of thermosensitive neurons.

1978 — 1979. Predoctoral Fellow, Department of Pharmacology, Temple University School of Medicine, Philadelphia. Characterized animal behavior associated with narcotic psychotropic agents.

EDUCATION:

1979. Ph.D. Temple University, Philadelphia

1975. B.S. Muhlenberg College, Allentown, Pa.

HONORS AND AWARDS:

1996. Enterprise Award Eastern Technology Council of Greater Philadelphia for CEO of the Year Award

1993. Enterprise Award Eastern Technology Council of Greater Philadelphia for Outstanding CEO Under 40

1991. Ernst & Young Entrepreneur of the Year Award

1989. Delaware Valley Venture Capital Association Entrepreneur of the Year Award

1979. NIDA Predoctoral Fellow

1979. Institute for Behavioral Genetics (Fellow)

**I WAKE UP IN THE MORNING RARING
TO GET TO WORK. I FELT THAT WAY
20 YEARS AGO WHEN I STARTED WORKING,
AND I FEEL THAT WAY TODAY.**

It's motivating to come to work in the morning.

pointed shareholders, the livelihoods of a few hundred employees, and thousands of disappointed patients was not great fun," he says. "For the first time in the company's life, we actually felt vulnerable."

Cephalon also struggled through a difficult time in 1997 when the company's stock collapsed to an all-time low.

"We had no ability to raise funds from the sale of equity, and we had insufficient capital to continue the development of our second drug, Provigil," Dr. Baldino comments. "We had to invent a novel financial vehicle to raise the funds and complete its development."

The rough times came to an end when the FDA approved Provigil in December 1998 to improve wakefulness in patients with excessive daytime sleepiness associated with narcolepsy. The product was launched in the United States in February 1999. Provigil (modafinil) was the first in a new class of wakefulness-promoting agents. In January 2004, the company announced it received approval from the FDA to market Provigil to improve wakefulness in patients with excessive sleepiness (ES) associated with obstructive sleep apnea/hypopnea syndrome (OSAHS) and shift work sleep disorder (SWSD). For patients with OSAHS, Provigil is approved as an adjunct to standard treatment for the underlying airway obstruction.

Aside from its success with Provigil, Cephalon also was fortunate to have on its board of directors someone who knew how to run a profitable business.

"A director of the company, Bill Egan, was pondering the huge amounts of money being spent and the massive risk involved in drug development, and he said to me, 'I don't know how to spell DNA, but I do know how to make money ... and you're not doing it,'" Dr. Baldino says.

That comment transformed the company. Dr. Baldino understood that if the company was to enjoy real success it would need to move away from the traditional biotech business plan and look for other ways to build the company rather than discovering products from scratch.

On that basis, Cephalon pioneered a business model that was new to the biotechnology sector, a balanced risk business model, which combines acquiring and marketing innovative, high-growth products with strong in-house research and development capabilities.

"We were able to start acquiring companies and products for two reasons: one, we'd raised a lot of money and two, our stock was doing well because our first drug was getting approved," Dr. Baldino notes.

In October 2000, Cephalon acquired Anesta Corp., and with it Actiq, which had been approved by the FDA in November 1998 for the management of breakthrough pain in opioid tolerant cancer patients. Actiq was relaunched in February 2001, and in October 2002, Cephalon reacquired rights to Actiq in 12 countries — mostly in Europe — from Elan Pharma International Ltd.

In late 2000, Cephalon acquired the U.S. rights to Gabitril from Abbott in exchange for payments totaling \$100 million over five years. Worldwide rights to Gabitril, excluding Canada, Latin America, and Japan, were acquired from Sanofi-Synthelabo and Novo Nordisk in December 2001. Gabitril is a selective GABA (gamma-aminobutyric) acid reuptake inhibitor approved for use as adjunctive therapy in the treatment of partial seizures in epileptic patients.

The French pharmaceutical company Group Lafon was acquired by Cephalon in December 2001, giving the company the entire portfolio of Lafon products sold in France and the commercial operations of Laboratoire L. Lafon, as well as manufacturing facilities in Mitry-Mory where the active drug substance found in Provigil is produced.

In August 2004, Cephalon is poised to close a transaction to acquire Minnesota-based CIMA Labs Inc., a leader in drug-delivery technologies. CIMA adds an exciting new product candidate, OraVescent fentanyl, to Cephalon's pain-care franchise and brings an established and profitable drug-delivery busi-



ness to Cephalon. CIMA develops and manufactures prescription and over-the-counter products based upon its proprietary, orally disintegrating drug-delivery technologies, OraSolv and DuraSolv. Based on these technologies, an active drug ingredient, which the company frequently taste-masks, is formulated into a new, orally disintegrating dosage form that dissolves quickly in the mouth without chewing or the need for water.

"The success we enjoy today can be attributed to the early enthusiasm of all those involved with Cephalon, the practical senior established management we put in place over the years, and a very proactive and insightful board of directors," Dr. Baldino says.

SETTING HIGH GOALS

The company plans to continue to pursue a path of balanced risk, which has helped it enjoy so much success to date. Mr. Baldino notes that Cephalon is among the top performers in the life-sciences industry in top-line growth as well as in bottom-line earnings growth. Other companies, recognizing Cephalon's success, have started to adopt similar models.

"I'm starting to notice other companies approach our balanced model of risk by developing a drug on their own and then buying or licensing another product in case the product in development doesn't work; in other words,

AN INNOVATIVE PIPELINE

CEPHALON'S 2004 R&D BUDGET WILL APPROACH ALMOST \$300 MILLION, OR ALMOST 30% OF SALES REVENUE. THIS IS ONE OF THE HIGHEST REINVESTMENT RATES IN THE BIOTECH AND PHARMACEUTICAL INDUSTRIES. IN 2004 ALONE, CEPHALON WILL CONDUCT CLINICAL TRIALS INVOLVING MORE THAN 3,000 PATIENTS.

Cephalon's R&D pipeline involves a two-pronged strategy: researching new indications for its marketed products, while at the same time developing new products primarily in the areas of neurodegenerative disorders and cancers. Cephalon's research is focused on understanding and directing the molecular mechanisms of cell survival. By uncovering the cell signaling pathways that command a cell to survive and divide — or, conversely, to die — Cephalon is paving the way for novel therapeutics.

"We're going to continue to develop products we have in the market because they have tremendous potential in other indications," says Frank Baldino Jr., Ph.D., CEO, chairman, and founder of Cephalon.

For example, the company is investigating Gabitril for the treatment of anxiety, neuropathic pain, and insomnia. In the second quarter of 2003, the company initiated two, 200-plus patient Phase II studies of Gabitril in generalized anxiety disorder and post-traumatic stress disorder. In early 2004, Cephalon initiated a Phase II study of Gabitril in insomnia.

"We acquired Gabitril for epilepsy, but through our own research we have discovered that it's a very promising candidate for the treatment of anxiety and has the potential to treat insomnia and could be the only drug available that improves all aspects of sleep, not just enabling patients to fall asleep, but ensuring a better quality sleep," Dr. Baldino says.

With Provigil, ongoing clinical programs are focused on exploring the drug's potential in treating excessive sleepiness, as well as the potential use for treating ADHD in children.

Another focus of Cephalon's Provigil (modafinil) strategy is the development of follow-on compounds. Last December, the company commenced Phase III clinical trials with Nuvigil, the single R-isomer version of modafinil, which the company believes has many advantages, including a longer duration of action than the current racemic Provigil formulation.

Elsewhere in the pipeline, Dr. Baldino says he is particularly excited about a discovery that has huge potential for treating Parkinson's disease, CEP-1347, which is a mixed lineage kinase (MLK) inhibitor in Phase III trials. In a variety of preclinical models of Parkinson's disease, CEP-1347 demonstrated therapeutic potential in inhibiting the progression of the disease.

"Cells die in the body all the time, some for beneficial reasons and some for disease reasons, and that process of naturally occurring cell death is called apoptosis," Dr. Baldino explains. "If we can inhibit that process in specific neurons in the brain that are compromised by disease we might be able to treat the disease; to date no one has been able to slow this progression. It's a high-risk project and we can only afford to pursue projects such as these because we're a successful company. If it works, it will be the first drug to slow the progression of a neurodegenerative disease."

In oncology, Cephalon has synthesized a class of small, orally active molecules that are selective inhibitors of the nerve growth factor receptor tyrosine kinase (trk). Trk may play an important role in the development and propagation of prostate and pancreatic cancers; inhibiting trk antagonizes the survival signal elicited by the receptor in such tumors. The company's lead compound in this area is CEP-701.

"One of the founding companies of our industry, Genentech, developed the drug Avastin, which inhibits the development of tumors in colon cancer," Dr. Baldino says. "At Cephalon, we've discovered a pathway that allows a small molecule that can be taken orally to have the same type of effect. We're excited about this because patients with cancer have very few options. Avastin is a great drug, but we think we could develop something that could be even better."

they are ensuring they have something to sell at the end of the day," he says. "That seems logical, and it's an approach many industries have taken, but in the life-sciences industry the exorbitant cost of drug development has limited that approach. Nevertheless, our model has shown that it can be done."

Dr. Baldino says the company will continue to pursue an aggressive mergers and acquisitions strategy, as well as in-licensing.

"The merger of big pharma has opened many possibilities for us, since every time a big acquisition happens, a few things fall off the truck," he says. "We'd like to pick up a few things that fall off the truck because we can make the most of those forgotten products."

Going forward, the company plans to continue to expand sales and earnings and develop new and innovative products.

"I have a five-year goal of \$3 billion in sales," Dr. Baldino says. "To achieve that, we need to expand our European business a bit. Currently, about 20% of our sales come from Europe, and I'd like that to increase to about 40%. That's part of our balanced-risk model; it's wiser not to be dependent upon a single market. Additionally, creating as many distribution points in world markets as possible will help us to gain greater incremental returns for shareholders."

Over the years, Dr. Baldino's role in raising Cephalon's profile and ensuring its success has changed as the company has grown.

"In the early days of Cephalon I used to write every document that left the building," Dr. Baldino says. "Now I'm like the conductor of a big orchestra. I have a lot of people who know how to play their instruments a lot better than I do, and they're doing a great job. My job is to make sure they're all playing the same piece of music."

Though Cephalon has grown significantly since its humble beginnings, and his role has changed, Dr. Baldino says he never loses his enthusiasm for what he does.

"I wake up in the morning raring to get to work," he says. "I felt that way 20 years ago when I started working, and I feel that way today. It's an exciting place to be, there are so many things going on, so many incredible people. It's fun here, we laugh a lot, but we take what we do very seriously. It's motivating to come to work in the morning." ♦

PharmaVoice welcomes comments about this article. E-mail us at feedback@pharmavoice.com.