

# **Beyond Borders** *A Global Perspective*





## Building Bridges, Bridging Gaps

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As the modern biotechnology industry turns 30, biotech companies are leveraging resources and competitive strengths to fill critical gaps and meet strategic needs. The sector is bringing together the various worlds we inhabit—the developing world and the developed world, the worlds of research and of commercial development, the world of science and the world of finance—to give us the vibrant, *global* biotechnology industry of today.

### Building bridges

The role is a familiar one. Indeed, the sector has been building bridges since its inception. The industry was made possible by key scientific breakthroughs, but it took the vision of entrepreneurial scientists to make the connection between advances in the lab and the potential for commercial applications. Many of these breakthroughs, and the founders of the sector's earliest companies, came from academia. Others left jobs at big pharma, willing to mortgage their futures on the growth prospects of fledgling companies that were pursuing cutting-edge ideas with dreams of reinventing medicine.

Of course, drug development is an expensive and time-consuming proposition, and the industry could not have gone far without funding. Farsighted venture capitalists (VCs) like Bob Swanson played an instrumental role in recognizing the commercial potential of scientific advances and pairing the science with financial backing to seed a brand new industry. VCs have been at it ever since, closing successive waves of funds targeted at the industry—and bringing together financial backing and emerging biotechnology companies.

Governments have played a role, too, through supportive public policy that helped bridge crucial gaps. Laws like the U.S. Bayh-Dole Act and Prescription Drug User Fee Act (PDUFA) unshackled biotech companies, giving them incentives to innovate and enabling them to bring drugs to the clinic more quickly. Recently, governments across Asia-Pacific have made the biotechnology sector a strategic priority and are enacting measures to bridge gaps in funding, education, infrastructure, and regulatory standards.

Even as it has come of age, the biotech industry has retained its youthful spirit. Partly out of necessity and partly because of their entrepreneurial roots, biotech companies have, over time, remained remarkably nimble and resourceful. To survive, firms have learned to adapt quickly to rapidly changing market conditions. In the process, they have built countless bridges across new technologies, platforms, business models, industry segments, investor sentiment, laws, and regulations. In doing so, they have given us the tremendously diverse and innovative biotechnology industry we have today, spanning several continents and encompassing the best of cutting-edge science and technology.

### Best of both worlds

As we look at today's biotechnology sector, companies are clearly building even bigger and stronger bridges to find creative solutions to their most pressing challenges. The industry is truly global, and while biotechnology companies face significant issues, they can address those needs by drawing on the different strengths and resources of the developed and developing worlds.

One of the biggest challenges facing biotechnology companies is drug pricing. While the subject manifests itself in different ways in various parts of the world—price controls, drug reimportation, intellectual property (IP) protection, “fourth hurdle” requirements—all of these trends are in fact part of a single, overarching question: How do we pay for the cost of developing new drugs? The time and cost of bringing a new drug to market have been increasing steadily in recent years,

with costs now estimated at over \$1 billion. With greater scrutiny of safety, rising health care costs, and mounting fiscal challenges, pressures are only increasing over time. In Europe, some countries have added a fourth hurdle of value to the approval process, and the United States appears to be moving in the same direction over time.

Against the backdrop of these trends, the emergence of a thriving biotechnology industry in Asia-Pacific in recent years is good news for two key reasons. First, the development is giving biotech companies increasing options for sourcing activities like research and development (R&D) and manufacturing. The combination of well-educated scientists and other workers at wage rates that are a fraction of Western salaries can lead to significant cost reductions. Western companies remain wary of investing in a more significant way because of concerns about expropriation of their IP, but as IP protections and enforcement improve, their reluctance should change.

The emergence of Asia also gives Western companies access to some of the largest and most rapidly growing drug markets in the world. Over time, this will give firms the ability to recover the sunk costs of drug development over a larger pool of patients, which should lower average costs and alleviate some pricing pressures. India's enactment of the Patents Act in 2005 increases the potential for Western companies to sell in a market where the laws had formerly allowed domestic companies to sell copies of Western-patented products. China's enactment of provisions to facilitate foreign investment led to a series of mergers and acquisitions (M&As) and alliances in 2005, often driven by the goal of increased access to the country's large and growing drug market. In Japan, the government has introduced sweeping regulatory reforms to increase foreign competition and shake up the domestic industry.

### From scarce resources to sustainable futures

In January 2006, President Bush gave the annual State of the Union address to the U.S. Congress. While most of his speech tackled issues ranging from homeland security

to Hurricane Katrina, much of the ensuing media coverage focused on the dozen sentences that were devoted to energy policy and alternative energy sources. The fact that the president's bold statement—"America is addicted to oil"—resonated as widely as it did is, in part, the result of contemporary trends that have drawn increased attention to alternative fuels.

The problem, of course, is a global one. Given high energy consumption in industrialized countries, rapidly growing demand in the developing world, and potential instability in many oil-producing countries, renewable, environmentally friendly biofuels like ethanol are an idea whose time has come. Brazil is well ahead of the curve, having converted nearly all its cars and gas pumps to run on ethanol derived from sugarcane. The conversion to ethanol has lowered gas prices in the nation by half compared to imported gasoline and also has lowered greenhouse gas emissions.

In early 2006, a new study in *Science* reported that ethanol production is far more energy-efficient than previously reported. The study found that producing a gallon of ethanol uses 95 percent less petroleum than producing a gallon of gasoline from fossil fuels. In August 2005, the Energy Policy Act of 2005 was signed into law in the United States. Among other things, the law provides increased funding for R&D related to biofuels. While critics have assailed the law for not going far enough, biofuels clearly present an increasingly attractive picture by lowering dependence on precious fossil fuels and reducing environmental emissions. (See Ellyn Kerr's guest article for a more complete overview of the achievements of industrial biotech companies in this area and in other key segments.)

No discussion of biotechnology's contribution to a sustainable future would be complete without some acknowledgment of agricultural biotech. Along with marking a significant milestone for the health biotechnology industry and Ernst & Young's industry reports, this year also marks the 10<sup>th</sup> anniversary of the commercialization of genetically modified (GM) crops, which were first grown in the 1995–6 season. Since then, these crops have been rapidly adopted

by farmers. In the first decade, global biotech crop area increased more than 50-fold, and in 2005, the billionth acre of biotech crops was planted.

So far, most market penetration has occurred in the Americas, with four countries—the United States, Argentina, Brazil, and Canada—accounting for about 90 percent of global cultivation. But the greatest potential for agricultural biotech, of course, is in Asia, where these improved strains could help meet the food needs of the massive populations of China and India, and in Africa, where biotech crops could significantly reduce hunger and malnutrition.

The industry continues to make headway on this front. The approval of GM rice is a key milestone, since rice is the staple food for two-thirds of the world's population and a key food source in Asia. China was expected to approve the Xa21 GM rice strain in 2005, but the government's biosafety committee failed to reach consensus, postponing the approval decision to 2006. China is already the world's largest grower of insect-resistant GM cotton and the world's fifth-largest grower of transgenic crops. But GM rice continued to make progress in 2005, with Iran beginning cultivation of Bt rice during the year.

In 2005, a new variety of "golden rice" was developed. Genetically engineered to boost vitamin A, golden rice can help prevent childhood blindness, which affects about 500,000 children each year. Compared to the original version developed in 2000, Syngenta Golden Rice 2 contains about 23 times more provitamin A (beta carotene), using a gene borrowed from maize. In April 2005, the new strain was approved for field trials in India and the Philippines.

Industrial biotech and agricultural biotech, biotechnology's next "waves," can make significant contributions to building a bridge between the world's limited resources and the growing needs of its people. In both segments, supportive government policies would help, just as the actions of farsighted policymakers helped unleash a revolution in the health biotech sector. But scientists and companies are already making headway, taking us to a more sustainable future.

### **Bridging gaps**

For an industry that has thrived by being creative and flexible, it is not surprising that biotechnology companies have been building bridges for the last three decades. But what about the future? What critical gaps does the industry face that constrain its future growth, and how will it bridge them?

### **The funding gap**

Ever since the bubble of 2000, biotechnology investors have focused on products. In the bubble's aftermath, VCs became more risk averse and moved to later-stage, product-focused companies. A similar trend has occurred in alliances, as partners have looked for surer bets and quicker payoffs. Since 2001, early-stage deals have declined, and later-stage alliances as a share of total deals have decreased. When the market for initial public offerings (IPOs) finally returned, it was clear that the same sentiment had spread to public equity investors as well, and companies with little clinical success and no demonstrable near-term path to products achieved disappointing valuations. The message for biotech companies has become remarkably similar from the three major sources of capital—private equity investors, public equity investors, and strategic alliance partners.

Biotech companies responded to the new investment climate by accelerating product development through alliances and new business models. Some companies, with no quick way to jump-start their early-stage pipelines, struggled for funding—and survival. The increased focus certainly led to good news on the product front, and the increase in product approvals in recent years can be attributed in part to the change in investor focus.

Of course, all of this makes sense from the perspective of individual investors. In last year's report, we highlighted the emergence of efficient capital markets, as investors demonstrated a greater proclivity for investing in companies based on expected returns within their investment horizons, rather than on excitement about scientific potential. But, while it was healthy for the markets to develop some focus on returns, these trends have persisted for several years now, and it is worth considering their long-term implications.

For the industry's long-term viability,

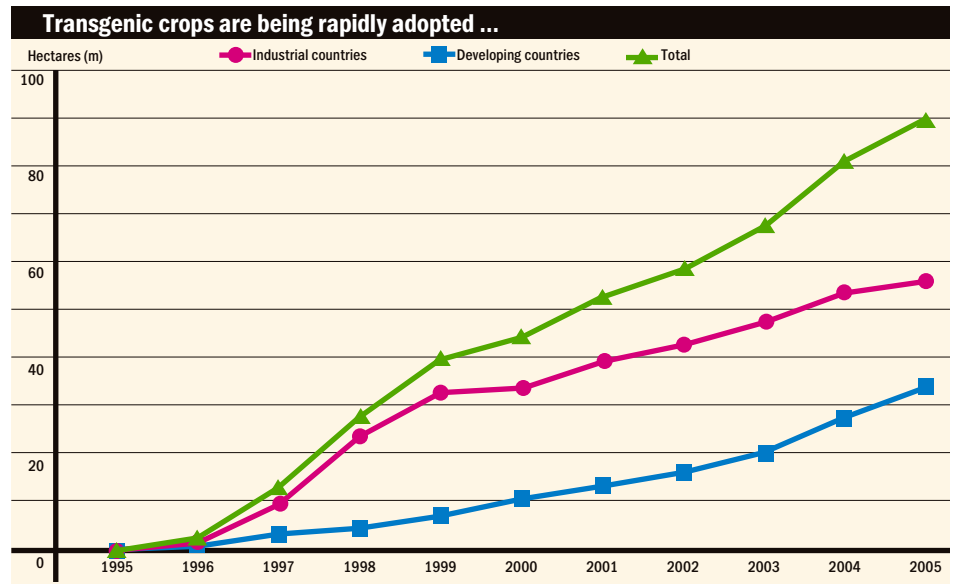
all stages of development must be adequately funded. Curtailing investment in early-stage development is analogous to a university that declares it will stop admitting first-year students—in a few years, the university would have no students. For the biotechnology industry to produce future generations of successful companies, promising candidates must be funded—regardless of their stage of development.

The funding gap for early-stage development stems from a fundamental timing mismatch. Taking a drug candidate from early-stage discovery through product launch can take as much as two decades, yet the life of a typical venture fund is about 10 years, as dictated by agreements with limited partners. While the first few years may be funded by universities, the long road between a private equity investment and an IPO—a popular exit option—often stretches beyond the investment horizon of venture funds. Also, VCs don't always look to liquidate their equity six months after a company goes public, preferring instead to wait for subsequent milestones to boost their returns—a fact that only exacerbates the timing mismatch.

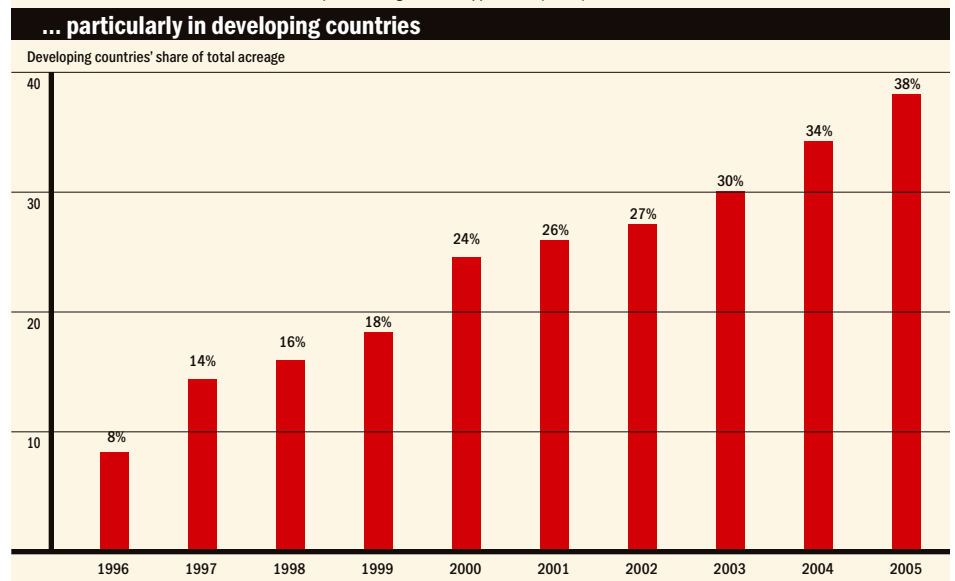
The timing mismatch results in sub-optimal behavior. VCs have been reluctant to place bets on early-stage companies because of their inability to exit within their desired time horizons. And to provide exits for VCs, or simply because they need the capital, firms in many parts of the world have gone public prematurely, achieving disappointing valuations.

To bridge the funding gap, potential solutions must either provide earlier exit options for venture investors, to increase their willingness to fund early-stage development, or find other sources for funding early-stage development, enabling venture investors to enter later and still exit within their time horizons.

The good news is that the industry already is finding solutions on both fronts. The recent emergence of M&As as an exit strategy rather than the traditional IPO helps address the problem, since M&As can enable investors to exit at earlier stages of the pipeline. Alliance partners from big pharma have shown an increasing willingness to move further back in the pipeline, as competition for late-stage products has become more intense. At the same time, other sources of funding are emerging for early-stage development.



Source: Clive Jones, International Service for the Acquisition of Agri-biotech Applications (ISAAA)



Source: Clive Jones, International Service for the Acquisition of Agri-biotech Applications (ISAAA)

Angel investors have started to play a bigger role in recent years. Governments across Asia are developing funding methods targeted at the gap, and state governments in the United States have used tobacco settlements and other monies for the same purpose. The emergence of other nontraditional sources of funding, from hedge funds to the private equity arms of big pharma, are increasing options for biotech companies. The problem is not over, and funding for early stages of development remains challenging for many. But once again, the biotech industry is finding creative solutions to bridge significant gaps.

### The development gap

Biotechnology companies are in the business of saving and improving lives. Since 1982, when recombinant human insulin became the industry's first approved product, biotech companies around the world have brought hundreds of innovative new medicines to the clinic—improving and extending the lives of untold numbers of patients. Along the way, they have invented new technologies and platforms that pioneered truly novel approaches to understanding and treating disease. Molecular medicine and targeted approaches are helping scientists diagnose disease based on methods of action, rather

than simply based on symptoms. Treatments for some of today's biggest challenges, from cancers to AIDS, are expected to come from the same approaches.

Yet for all its remarkable achievements, the industry has made much less headway in addressing the health care needs of the developing world, and commercializing new therapies and vaccines for developing-country diseases is still a challenge.

Once again, the problem is a classic example of market failure, because the underlying economics do not give companies adequate financial incentives. After all, biotechnology firms are commercial entities, and as such are responsible for providing returns to their investors and shareholders. Companies are already operating in an environment characterized by rising drug development costs, and markets in developing countries often are simply not big enough to permit firms to recoup these large investments.

One solution is for companies to cross-subsidize developing countries by using profits earned in the West to compensate for lower margins in the developing world. The goodwill and positive publicity generated by these efforts give companies the incentive to follow this path. Recent years have brought notable successes with AIDS drugs for developing countries. For instance, Gilead Sciences' decision to make Viread, its anti-AIDS drug, available at low cost to clinics in 68 developing countries was widely praised in the media. The price Gilead set was about one-tenth the price in the United States. Other companies that were not as forthcoming were moved to action by publicity campaigns organized by activist groups—an incentive of a different sort.

Yet, this solution works only for diseases such as AIDS, which affect both the developed and the developing world. With diseases unique to developing countries, such as malaria and tuberculosis, the problem is harder to crack.

Once again, solutions are beginning to emerge. Organizations like the Bill and Melinda Gates Foundation and the Institute

for OneWorld Health are finding ways to bring funds to the most pressing health care problems of the developing world. In the last few years, the Gates Foundation has become a driving force in global health. It has awarded over \$5.8 billion in grants to improve global health, including \$1.5 billion for HIV, tuberculosis, and reproductive health, and \$1.4 billion for infectious diseases.

Far more intriguing, though, is a recent Foundation initiative—the awarding, in June 2005, of \$437 million in “Grand Challenges in Global Health” grants. These grants, which include contributions from Britain's Wellcome Trust and the Canadian Institutes of Health Research, gave money to scientists from academia, biotech companies, and government agencies, for 43 research projects in areas where developing countries have critical unmet needs. With an upper limit of \$20 million, and an average size of about \$10 million, the five-year grants are far larger than typical awards from agencies like the National Institutes of Health (NIH). The grants give researchers ownership of the IP they develop, as long as it also is made available to developing countries at low cost or for free. They come with much closer oversight than is typical for government funding, and can be cut off if key milestones are not met.

Financing in the \$10- to \$20-million range. Funds targeted at commercializing specific products or technologies, based on an assessment of market needs and potential. Management oversight and accountability. A high-risk, high-reward business model. To anyone who's been around the biotechnology industry for a while, that sounds remarkably like the VC formula. Interestingly, the foundation has chosen the very model that successfully seeded and built thousands of biotechnology companies. The combination of incentives for risk-taking along with accountability unleashed tremendous innovations in the private sector, and these projects—pursuing everything from vaccines that need no refrigeration to more nutritious crops—could well do the same.

But, as anyone who's heard the adage

about teaching a person to fish and feeding them for a lifetime knows, the most sustainable solutions are those that are not dependent on the charity of others. The rapidly growing strengths of developing countries' domestic biotechnology sectors are critical, and many developing countries are applying their research strengths to some of their most urgent health care problems. Chinese companies have taken the lead in developing a vaccine for SARS. South African researchers are prioritizing therapies for AIDS. Cuba has developed the world's first meningitis B vaccine in response to a national outbreak. And the reemergence of the avian flu in 2005 brought out research strengths across much of Asia, from China to newly emerging Vietnam.

The avian flu also brought home another reality. In a world connected by solid bridges, our problems are as interconnected as our strengths. The spread of the disease in Asia, and the inability of countries to control it, were at least partly related to economic development. And in today's highly mobile world of global trade and international travel, it isn't long before the health problems of the developing world affect everyone.

#### **Outlook: No bridge too far**

Over the last three decades, the biotechnology industry has not just endured—it has thrived. It now is a global powerhouse with over \$60 billion in revenues and hundreds of marketed products. The industry is rapidly maturing and is closer to profitability than at any time in its past. The market valuations of its most successful companies are challenging those of big pharma. The sector has achieved all of this by doing what it does best—bringing its tremendous inventiveness and creativity to cross hurdles, whether they lie in the laboratory, in investor attitudes, or in regulatory requirements. As long as it stays true to its youthful, entrepreneurial spirit, the industry will continue to build bridges to better health care, a better environment, and a more sustainable future. ■

## New Milestones ... and Miles to Go

In virtually every performance indicator, the global biotechnology industry showed robust growth in 2005. In this anniversary year, the industry's performance was strong around the world, with solid year-on-year increases in the United States, Europe, Canada, and Asia-Pacific.

### Financial performance: New milestones

Collective revenues of the world's publicly traded biotech companies grew by 18 percent in 2005, reaching an all-time high of \$63.1 billion, and crossing the \$60 billion threshold for the first time. The overall rate of increase was comparable to the sector's performance in previous years—revenues had increased by 17 percent in 2004. But the industry's development was more evenly distributed this year, as the European sector finally emerged from a lengthy restructuring, and the industry continued to post impressive revenue increases in the Americas and Asia-Pacific. The United States led the way, as companies enjoyed more product approvals, reflected in impressive product sales. But the numbers were no less significant in other parts of the world—revenue growth in Canada and the Asia-Pacific outperformed the United States in percentage terms. Reflecting the brisk expansion of the Asian region, the Asia-Pacific industry reached a new milestone as its share of global revenues narrowly edged that of Canada.

If the industry's performance on the top line was solid, the story on the bottom line was truly remarkable. The global biotech industry achieved an astonishing 30 percent reduction in net loss in 2005. The United States, Canada, and Asia-Pacific collectively improved their bottom line by close to \$3 billion—about half of the global industry's entire net loss in 2004. While net losses grew by about \$1 billion in Europe, much of the

Global biotechnology at a glance in 2005					
	Global	U.S.	Europe	Canada	Asia-Pacific
<b>Public company data</b>					
Revenues (\$m)	63,156	47,790	9,781	2,584	3,002
R&D expense (\$m)	20,415	15,979	3,272	852	312
Net income (loss) (\$m)	(4,388)	(2,128)	(1,943)	(324)	7
<b>Number of companies</b>					
Public companies	671	329	122	81	139
Private companies	3,532	1,086	1,491	378	577
Public and private companies	4,203	1,415	1,613	459	716

Source: Ernst & Young  
Numbers may appear inconsistent because of rounding

increase was attributed to the large number of European initial public offerings (IPOs) and one-time events at a few large companies. In Australia, industry leader CSL's strong performance pushed the country's biotech sector into the black for the first time, and CSL's financial results led to a net profit as well for the entire Asia-Pacific region. The United States came closer to profitability than ever before, thanks to continued product success and relatively lower compliance costs related to the Sarbanes-Oxley Act. For the first time in the industry's history, U.S. public companies' net loss compared to revenues dropped below 5 percent.

### Capital markets

The global biotech industry raised an impressive \$19.7 billion in 2005, down slightly from the \$21.2 billion raised in 2004, but the second-highest total since the bubble of 2000. The initial public offering (IPO) market was one area where performance varied significantly for different regions. The IPO market was disappointing in the United States, as companies failed to achieve the valuations they sought. But the story was different in Europe, where the number of IPOs and

the aggregate capital raised increased significantly. While U.S. IPOs often priced below their IPO ranges, and fell further on subsequent trading, European offerings performed much better on both counts. To some extent, the difference reflects the relative pipeline maturity of Europe's IPO class of 2005. After years of restructuring and product focus, many European companies now have the advanced pipelines that investors seek. Despite the lackluster IPO market in the United States, more established public companies had no shortage of capital, and U.S. follow-on offerings had their second-strongest year in 2005, raising \$3.9 billion—second only to the bubble of 2000. Many of the year's largest follow-on offerings involved companies with strong news on the product front.

Despite the different amounts raised across the globe, investors are sending biotech companies a remarkably consistent message. Products and commercialization are a major focus, and companies with advanced pipelines and accelerated paths to market are rewarded with the highest valuations. IPO performance in 2005 furthered the move to efficient capital markets, where there are no good times or bad times to go public, and

The year in equity financing: U.S., Europe, and Canada 2005 and 2004, (\$m)									
Type	2005			2004			% change		
	U.S.	Europe	Canada	U.S.	Europe	Canada	U.S.	Europe	Canada
IPO	626	691	160	1,618	359	85	-61%	92%	89%
Follow-on and other offerings	10,740	1,577	608	11,810	1,596	435	-9%	-1%	40%
Venture financing	3,328	1,738	242	3,551	1,447	271	-6%	20%	-11%
<b>Total</b>	<b>\$14,694</b>	<b>\$4,006</b>	<b>\$1,010</b>	<b>\$16,979</b>	<b>\$3,402</b>	<b>\$791</b>	<b>-13%</b>	<b>18%</b>	<b>28%</b>

Source: Ernst & Young, BioCentury, and BioWorld  
Numbers may appear inconsistent because of rounding  
Percentage changes for Europe and Canada based on conversion of currency to U.S. dollars

biotechnology companies are evaluated on their ability to deliver near-term returns to investors. Still, the performance of the year's IPOs reduced exit options for private equity investors, and companies increasingly turned to deals instead.

## Deals

Deal activity in 2005 showed a marked upsurge, driven by several factors. The melt-down of IPOs as an exit strategy for U.S. biotech investors drove venture capitalists (VCs) and their portfolio companies to look to deals for exits. Also, big pharma went on a buying spree, with several large acquisitions in the biotech space, driven by the need for new products. Pharma had its biggest patent-expiration year ever in 2005, with an estimated \$23 billion worth of products losing protection, and recent safety-related product withdrawals have only added to big pharma's pressures. The American Jobs Creation Act of 2004 allowed large pharmaceutical companies to repatriate about \$90 billion, at least some of which will likely be used to fuel deals.

The European industry drove sharp increases in strategic alliances and mergers and acquisitions (M&As), with M&As reaching an all-time high of 66. European companies' stronger performance and increased confidence were reflected in an increase in deals where European companies were acquirers, and by the greater willingness of European companies to enter M&As with each other instead of turning to the United States.

Deals were a key driver in the Asia-Pacific, where companies formed partnerships to strategically position themselves in an environment characterized by brisk growth, increasing competition, and sweeping regulatory changes. In Japan, regulatory reform and growing foreign competition drove an unprecedented consolidation wave among the country's largest pharmaceutical companies. Foreign firms entered several noteworthy deals with their counterparts in China and India, motivated by the desire to increase access to these large and growing drug markets, and by the need to lower the costs of drug development.

Hot segments for deals included vaccines—an area reenergized by concerns around the avian flu, SARS, and biodefense threats—and generics, where fast growth and consolidation are driving deals.

Growth in global biotechnology, 2004–2005			
	2005	2004	% change
<b>Public company data:</b>			
Revenues (\$m)	63,156	53,367	18%
R&D expense (\$m)	20,415	19,542	4%
Net loss (\$m)	4,388	6,270	-30%
<b>Number of companies:</b>			
Public companies	671	645	4%
Private companies	3,532	3,522	0.3%
Public and private companies	4,203	4,167	1%

Source: Ernst & Young  
 The 2005 financials largely represent data from January 1, 2005, through December 31, 2005  
 The 2004 financials largely represent data from January 1, 2004, through December 31, 2004  
 Numbers may appear inconsistent because of rounding

## Products

The fundamental driver behind the industry's financial success is still its focus on bringing innovative products to market. In the United States, the industry secured 32 new product approvals in 2005, including 17 first-time approvals. In Europe, the pipelines of publicly traded companies increased by a whopping 28 percent, with strong growth in late stages of development. The industry reached notable milestones as well on the product front, with NitroMed's BiDil becoming the first therapeutic to be approved for a specific race, and Croatia's Pliva securing the first European approval for a biogeneric product.

## Relevant metrics

As the global biotechnology industry matures, the measures used to track its progress also must evolve. When we produced our first biotechnology report 20 years ago, the industry was still young, and more emphasis was put on measuring startup generation. Since then, scientific advances and changing market conditions have produced an industry that is extraordinarily diverse. Companies are constantly pioneering new technologies, platforms, industry segments, and business models. To illuminate the breadth of activity that biotechnology now encompasses, and to analyze key differences in focus across geographies, this year's report includes a more detailed classification of biotech companies into different industry segments. This has involved screening and classifying companies more rigorously. Invariably, some companies have been dropped from our categories, but others have been added in recognition of their growing industry importance.

Overall, the Americas and European sections place less emphasis on simply *counting* companies, and more on analyzing the activities those

companies conduct—their business focus and industry segment, as well as measures of financial and product performance. In the Asia-Pacific region, the metrics still reflect the industry's relative youth, with much discussion of scientific research, government funding, and company formation. While the number of companies is an important measure of the size of the biotechnology industry, undue focus on this measure can become a trap. For instance, Germany has the largest number of biotech companies in Europe, but many of these firms have struggled to survive—necessitating years of painful consolidation. While Canada has a relatively large number of public companies, the average Canadian public company is much smaller than its counterpart in Europe or the United States—and the Canadian biotech industry has struggled as a result. Today, as governments across Asia pour money into growing their biotech industries, they would be well served to focus on developing strong companies, rather than on simply maximizing the number of biotech firms. Ultimately, performance is based not on the number of companies, but on company *output*—from patents to products to profits.

## Looking ahead: Miles to go

The biotech industry's rapid growth has been truly astounding. Consider that in 1996, U.S. industry revenues totaled \$9.1 billion. In 2005—a little under a decade later—the global industry's single-year increase in revenues exceeded that figure, as publicly traded biotech companies added over \$9.7 billion to their top line. The industry achieved significant milestones in 2005—from approaching profitability to breakthrough product approvals. But with strong pipelines and continued product focus, future growth could be every bit as strong, bringing new products to patients and solid returns to investors. ■

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