

LEADERSHIP, STABILITY, AND SOCIAL RESPONSIBILITY

This year's survey of top employers features a familiar winner. The survey also points out the critical importance of flexible, innovative leadership and responsible behavior toward employees, customers, and potential customers in maintaining a company's high reputation. By Peter Gwynne

In this year's *Science* survey of top employers the industry sees the return of a past winner. For the sixth time in the survey's seven years, respondents have judged Genentech to be the best of the best. After taking top position in the first five surveys, the South San Francisco biotechnology company placed second last year, but this year is back at No. 1.

The survey reveals two other interesting developments. For the first time a company outside the mainstream pharmaceutical and biopharmaceutical business has reached the pinnacle of top employers. Survey respondents voted into second place Monsanto Company, a company that applies biotechnology as well as traditional chemistry to create and manufacture its agricultural products. In addition, this year's list of top employers has a strong international flavor. Four of the top 10—Boehringer Ingelheim, Roche Pharmaceuticals, EMD Serono, and Millennium: The Takeda Oncology Company—and eight of the top 20 are headquartered outside the United States. Firms based in the United States—Genzyme Corp., Schering-Plough Corp., Gilead Sciences, and Eli Lilly and Company—round out the top 10.

The survey also revealed greater emphasis on the leadership qualities of companies judged to be the best employers. While *being an innovative leader in the industry* remains the major driving characteristic of top employers (see figure on p. 288), respondents nominated *having top leadership that successfully makes changes needed to keep the organization moving in the right direction* as one of the half-dozen most important drivers; that driver did not make last year's top six. Respondents also use social criteria in judging the top employers. *Being socially responsible, having loyal employees, treating employees with respect, and having work culture values aligned with employees' personal values* make up the rest of the six most important drivers.

Interviews with representatives of highly ranked companies reveal the basic ingredient that marks a top employer: leadership that ensures an atmosphere of stability for employees and customers in a rapidly changing business environment. In most cases, that approach stems from the corporation's basic values (see p. 292).

"We have a core of values that we use to run the company," says **Richard Scheller**, Genentech's executive vice president of research and chief scientific officer. "We don't deviate from these values when it might be better for the bottom line or opportunistic." **Steve Padgette**, vice president of biotechnology at Monsanto, regards the consistent relationship between R&D and commercial products as the key to success. "At the core, it's the company we are, being leaders in innovation," he says.

Continuity and Change

Richard Gregory, senior vice president and head of research at Genzyme, sees maintaining a corporate culture rooted in consistent values as the basis of his company's third-place ranking. "We have maintained the values of commitment to innovation and focus on unmet needs, even as we have doubled in size over the past six or seven years," he says. And fourth-placed **Boehringer Ingelheim**, founded in 1865, has successfully negotiated the chasm between continuity and change. "We work very hard to be ahead of the change and **continued** »



“Science drives what we do here. We follow what the science shows us will be the best for the patients.”

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Top Twenty Employers

1	2	Genentech (South San Francisco, CA)	Innovative leader in the industry	Loyal employees	Treats employees with respect
2	8	Monsanto Company (Creve Coeur, MO)	Innovative leader in the industry	Loyal employees	Leadership moving company in right direction
3	5	Genzyme Corp. (Cambridge, MA)	Innovative leader in the industry	Socially responsible	Loyal employees
4	1	Boehringer Ingelheim (Ingelheim, Germany)	Loyal employees	Treats employees with respect	Work and personal values are aligned
5	4	Schering-Plough Corporation (Kenilworth, NJ)	Socially responsible	Loyal employees	Innovative leader in the industry
6	18	Roche (Basel, Switzerland)	Innovative leader in the industry	Loyal employees	Leadership moving company in right direction
7	-	EMD Serono, Inc. (Rockland, MA)	Socially responsible	Work and personal values are aligned	Loyal employees
8	13	Millennium: The Takeda Oncology Co. (Cambridge, MA)	Innovative leader in the industry	Treats employees with respect	Socially responsible
9	16	Gilead Sciences (Foster City, CA)	Innovative leader in the industry	Leadership moving company in right direction	Socially responsible
10	11	Eli Lilly and Company (Indianapolis, IN)	Socially responsible	Loyal employees	Innovative leader in the industry
11	6	Novartis (Basel, Switzerland)	Innovative leader in the industry	Socially responsible	Leadership moving company in right direction
12	9	AstraZeneca PLC (London, UK)	Innovative leader in the industry	Socially responsible	Loyal employees
13	15	Wyeth (Madison, NJ)	Innovative leader in the industry	Loyal employees	Socially responsible
14	14	Merck & Co., Inc. (Whitehouse Station, NJ)	Innovative leader in the industry	Loyal employees	Socially responsible
15	10	Johnson & Johnson (New Brunswick, NJ)	Socially responsible	Loyal employees	Innovative leader in the industry
16	-	sanofi-aventis (Paris, France)	Loyal employees	Treats employees with respect	Socially responsible
17	7	DuPont (Wilmington, DE)	Socially responsible	Loyal employees	Innovative leader in the industry
18	17	Biogen Idec (Cambridge, MA)	Innovative leader in the industry	Socially responsible	Treats employees with respect
19	12	GlaxoSmithKline (London, UK)	Innovative leader in the industry	Socially responsible	Loyal employees
20	3	Amgen (Thousand Oaks, CA)	Innovative leader in the industry	Socially responsible	Treats employees with respect

The 20 companies with the best reputations as employers, according to respondents in the 2008 survey undertaken for the Science Business Office, and their three highest-scoring drivers. The companies without a 2007 rank did not receive enough mentions to qualify during the 2007 survey.

to have the flexibility and willingness to look at things differently as time passes,” says **David Nurnberger**, senior vice president for human resources.

The top companies have proved successful in two other respects. They have avoided the negative perceptions that, according to survey respondents, affect much of the life science industry. “If you live by fundamental core values and apply them to every aspect of your mission,” Scheller says, “you tend not to have those problems.” At the same time, top employers have emphasized and benefited from the types of achievement that provide positive views of the field. “We are flexible enough to apply new technologies, an example being our investment a few years ago in biopharmaceutical production,” says **Gerd Schnorrenberg**, vice president in research at Boehringer Ingelheim in Germany. **Steve Gansler**, senior vice president, human resources at Millennium, echoes that view. “Millennium was founded based on innovation,” he explains. “That’s something that has continued.”

Science’s Business Office commissioned Senn-Delaney Culture Diagnostics & Measurement to conduct the web-based survey. As it did last year, Senn-Delaney used two approaches to solicit respondents. In one, e-mail invitations went out to members of AAAS, registrants with Science Careers, and visitors to Science’s website who had registered with AAAS. In addition, Senn-Delaney sent an e-mail blast to human resource contacts at industry firms pulled from the AAAS/Science Careers sales database. A total of 3,990 respondents completed the survey between April 17 and May 11 of this year. The table on page 286 shows the sample’s demographics.

Best, Average, and Worst

Respondents were asked to list companies, including their own, that they regarded as the best, average, and worst employers. Sixty-two percent chose as best the company that employed them and 13 percent had past connections with that company. Survey takers then rated the companies they had chosen on 23 driving [continued »](#)

Demographics

**Gender:**

54% male, 46% female

Experience:

62% have 10 or more years work experience

Career Status:

74% report that they have not yet reached the peaks of their careers

Company Type:

38% biotech, 34% pharma, 14% biopharma; more than four out of five work in private industry

Geography:

12% in continental Europe; 80% from North America

characteristics. Senn-Delaney applied a statistical process to those ratings to create a unique ranking score for each company rated by at least 30 respondents.

This year's top 10 employers fall naturally into three groups. Genentech, Monsanto, Genzyme, and Boehringer Ingelheim occupy the top tier, with ranking scores over 90 out of 100. Next in order come Schering-Plough, Roche, and EMD Serono, garnering between 71 and 89 ranking scores. And Millennium, Gilead, and Eli Lilly complete the top 10 list with scores up to 70.

Not surprisingly, the top 10 employers scored well on several of the top six drivers. Genentech, for example, earned top grades or close to top grades on all six. Scheller puts that down to the company's dedication to doing excellent research. "Science drives what we do here," he explains. "Decisions are made by scientific process and based on scientific data. We follow what the science shows us will be the best for the patients."

Sherri Brown, Monsanto's vice president of chemistry, attributes her company's high grades to leadership in a similar way. "We are a technology-driven company," she says. "Our products come from innovation. So it's important for our scientists to do cutting-edge work." Genzyme also cites innovation to explain its high scores in innovative leadership, social responsibility, and loyal employees. "Innovation is risky," Gregory says. "We're a company with a relatively high tolerance for risk."

Innovation and Cultural Comfort

Innovation emerges as the major theme of almost every company in the top 10. "We continually strive to create an environment where our scientists have the freedom and flexibility to innovate," says **Bernhard Kirschbaum**, executive vice president for research at Merck Serono, which operates in North America as EMD Serono. "We place tremendous value on integrity and innovation," says Millennium's Gansler. "Innovation is fundamental to all aspects of our business," adds **Norbert Bischofberger**, Gilead's executive vice president, research and development, and chief scientific officer.

Cultural comfort between company and employees provides the other main set of drivers evident in top employers. Boehringer Ingelheim, for example, sees stability as the key to its high rating in employee-related drivers. "It's really important that we are privately held and don't have to worry about the stock price," Nurnberger says. "It enables us to provide a more stable environment for our

employees for building strong teamwork within the organization."

Steven Paul, executive vice president of science and technology and head of R&D, explains the importance of employee loyalty to Lilly. "We like to say we hire people to work for their entire career," he says. "This is increasingly challenging as priorities and programs change and as we restructure the way we pursue biopharmaceutical R&D. However, we believe we've done it in a way that values our scientists and their critical contributions to the success of our company." Much the same applies to sanofi-aventis, a company that has

consistently ranked highly, often in the top 20. "Respect and solidarity are part of our defined values," explains global head of R&D **Marc Cluzel**. "Working in R&D needs motivation as well as excellent science. It's really critical to ensure that your people are motivated."

A critical part of motivating scientists involves exposing them to tough problems. "Our scientists want challenging, innovative work," Brown says. Paul sees the existence of high-quality science as a key recruiting tool for Lilly. "I think that scientific reputation is the most likely driver of the top employer ratings," he says. "Scientists from the outside recognize the excellence of Lilly's basic scientific, as well as clinical, research." Scientific excellence can also facilitate collaborations with universities and other organizations. "If you want to attract employees and collaborate with researchers outside, you need to be attractive scientifically," Cluzel explains.

Tailoring Treatments

A particularly attractive, and demanding, area of research focuses on tailoring treatments to individual patients. "The thing we're particularly proud of is our innovation in personalized medicine," Genentech's Scheller says. "We're developing diagnostics for every drug in our pipeline." EMD Serono, Kirschbaum says, "focuses on the development of targeted cancer therapies on three therapeutic platforms: targeting the tumor cell, the tumor environment, and the immune system." At Lilly, adds Paul, "We have the overriding mantra of tailored therapies—the right drug for the right patient at the right time for the right duration. We try very early on to identify subgroups that will do best on specific drugs."

One member of the top 10 employers shows that challenging research in biotechnology is not restricted to the pharma and biopharma industries. "No longer is agricultural research following behind what happens in pharma," Monsanto's Brown declares. "The convergence of technologies applying to agriculture is fabulous," adds her colleague Padgett. "You can walk into a lot of our laboratories and the work is the same as in a pharmaceutical company."

Several other themes emerged within the contexts of the key drivers of leadership, social responsibility, and respect for employees. "It's my job to keep science as a fun enterprise for people here at Genentech," says Scheller. "Scientists love getting up in the morning, thinking about data, and trying to solve scientific problems that help patients." At EMD Serono, says Kirschbaum, "We strive to create an environment that fosters growth and professional development **continued** »

Driving Characteristics of Top Employers



2008

2007

- | 2008 | 2007 |
|---|---|
| 1. Innovative leader in the industry | 1. Innovative leader in the industry |
| 2. Leadership moving company in right direction | 2. Treats employees with respect |
| 3. Treats employees with respect | 3. Work and personal values are aligned |
| 4. Loyal employees | 4. Loyal employees |
| 5. Socially responsible | 5. Socially responsible |
| 6. Work and personal values are aligned | 6. Does important quality research |

Black type indicates the characteristics in common for the past two years.

and a place where intellectually curious people can thrive and grow in new experiences." Lilly also puts high value on its scientific tasks. "If you're doing innovative R&D, a lot of great science will come out of it," Paul says. "Our job is to create medications. But the science is absolutely essential."

Tangible Results

Scientists also like to see the tangible results of their endeavors. "When scientists face the choice of an academic career or industry, many of those choosing industry do so because they want to make a difference that will improve people's lives," Gregory says. "That is a powerful incentive to move to industry and stay there." Gansler agrees. "Everybody wants to have the opportunity to make a difference and have an impact," he says. That mode of thinking applies beyond medical products. "We have an innovation and scientific excellence focus, but also a product focus," Monsanto's Padgett says. "There's a connection between our science and our products—between R&D and our commercial plans—that makes a very large difference."

Equally intriguing to scientists is the opportunity to break new ground. "We are looking for unmet therapeutic needs," says Boehringer Ingelheim's Schnorrenberg. "In an interdisciplinary approach, we look at how we can address them. We recently introduced the first oral thrombolytic drug on the market in more than two decades. And we have several cancer and metabolic projects in advanced clinical investigation." Gilead takes a similar approach. "We ensure our continued success as a top employer by remaining focused on what we do best—developing innovative new medications for life-threatening diseases and getting them to patients who need them," Bischofberger says.

Humanitarian work plays a strong role in the perception that companies act in a socially responsible way. Genzyme, for example, is committed to developing innovative therapies for diseases such as malaria and sleeping sickness that have largely disappeared in the industrial nations but affect millions in Third World countries. "We do not intend these as future profit makers, but we still work on them," Gregory says. "Our employees are tremendously excited by this." Social responsibility is part of the culture at other companies, too. "One reason for the industry's bad image is the feeling that we are interested only in people able to pay a lot of money for our products," Cluzel points out. "Here at sanofi-aventis, we are working to find ways to provide drugs to patients who can't afford them."

The International Perspective

The number of top employers headquartered outside North America raises the issue of the importance of a worldwide presence for modern life science companies. "It is extremely important for a pharmaceutical company to be global, mainly to be able to access markets and attract skilled employees," Schnorrenberg says. "At Boehringer Ingelheim we operate globally for both marketing operations and research centers." The company also recruits worldwide, as evidenced by the 17 different nationalities represented at its headquarters.

Life science companies based in the United States have their own positive take

on a global perspective. "Ours is a business that requires maximum scientific and intellectual input to be successful," Paul says. "Lilly has been on the cutting edge of establishing research centers outside the United States, particularly in Asia." Adds Bischofberger: "At Gilead we saw value in retaining control of our products outside of North America. We have invested in setting up or expanding existing operations in Canada, Europe, and Australia."

Two of the top 10 companies have a particular interest in globalism, having been involved in recent international acquisitions. Merck KGaA, a Darmstadt, Germany, company founded in 1668 by the family that makes up a majority of its present ownership, acquired Serono SA in January 2007, creating a division of the parent company named Merck Serono. Due to trademark restrictions, this division operates in the United States and Canada as EMD Serono (ranked 7th) to distinguish it from Merck & Co. (ranked 14th), a separate and independent company. "Our centers of excellence located in the United States, Switzerland, Germany, and Italy provide greater synergy and collaboration in effective networks," Kirschbaum says. Meanwhile, Millennium was acquired by Japanese pharma Takeda Pharmaceutical Company in May of this year. "It's very attractive to be part of an organization that is global in nature," Gansler says. "We have ready-made markets and a ready-made structure to sell our products on a worldwide basis."

Negatives and Positives

The life science industry has had its share of problems in recent years. In many cases, negative perceptions of the industry exceed the positive characterizations. Respondents in this year's survey pointed to five main causes of the field's less than favorable reputation: drug and product recalls such as the withdrawal of Avandia; safety issues such as the discovery of problems with raw material from China used in medical products; scandals, including evidence that pharmaceutical companies have failed to release data from trials whose results cast doubts on their drugs' safety and efficacy; lawsuits brought against companies that failed to warn patients of problems with their products; and ethical issues such as kickbacks for physicians promoting specific medications. "A lot of people appreciate what the industry is doing for patients," Scheller says. "But the industry has got itself into a little bit of a difficult situation because of those issues." **continued »**

You can find an expanded version of this feature by going to: dx.doi.org/10.1126/science.opms.r0800061

Survey respondents had no doubt about the treatment for the industry's problems: information sharing. "Be open and transparent," one recommended. "Communicate to the public the worth of what companies are doing without overhyping and driving up expectations," another suggested. That message has plainly got through to the top employers, exemplified by sanofi-aventis: "We understand that we have to fully articulate the economic and social value of our products," says Cluzel.

Perceptions of the industry aren't entirely negative. Respondents noted the positive impact of general advances in health care. These include the ability to bring new, innovative products to the market; progress in oncology, such as the approval of Genentech's drug Avastin for breast cancer and advances in the use of gene therapy, despite some setbacks; continuing progress in research on stem cells; the emergence of treatments for previously untreated diseases; and solutions for food and fuel shortages, such as biocrops and biofuels.

Putting the Patient First

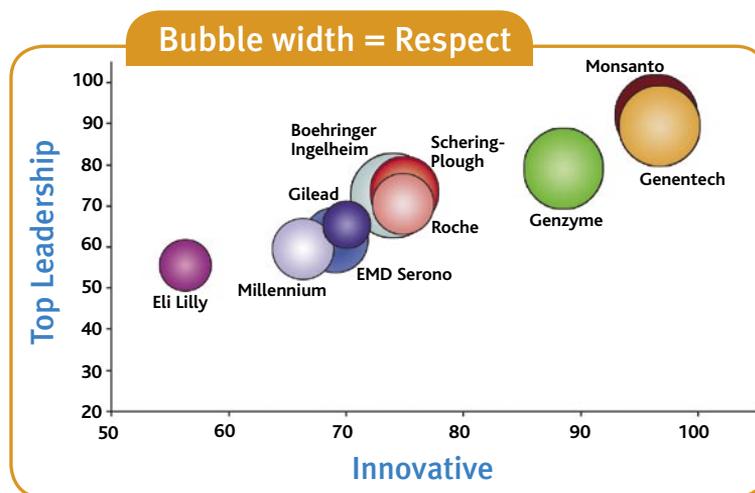
Bischofberger points to the impact of successful research on one key disease. "The antiretroviral treatments now available mean it is possible for a young person diagnosed with HIV today to have an estimated survival rate of approximately 35 years," he says. Like Gilead, other top employers accentuate the positive aspects of the life science industry by performing their R&D in entirely new areas. "We're very progressive in terms of our innovative approach to health care," Gregory of Genzyme says. "We're definitely trying not to be a me-too company."

Lilly's Paul points out the fundamental philosophy that garners a positive perception of the industry. "Put the patient first across the entire value chain, from R&D to marketing," he advises. "If you come to work every day to do what's right for patients and to develop drugs with that in mind, you'll be successful."

That approach reflects the attitude of survey takers to another aspect of the industry: the field's attraction to scientists. The main advantage of working in the life science industry, respondents reported, is the chance to make a difference, by performing work that brings the reward of helping people. "One of the most important driving forces for individuals is being empowered to take responsibility for projects on an individual basis as part of a team," Boehringer Ingelheim's Schnorrenberg says. "We are striving to encourage scientists and coach them."

Working in the life science industry is not without drawbacks. More than a quarter of the survey's respondents reported that they are fairly likely, very likely, or extremely likely to seek a different job. Most quoted job insecurity as their reason. That stems in large part from corporate mergers and acquisitions, restructuring, and outsourcing.

Several top employers have a policy of minimizing those causes of uncertainty. "We are very conservative in our hiring," Genentech's



Comparison of the top 10 companies on the basis of 3 of the top drivers (scored out of 100): *Is an innovative leader in the industry* (x-axis), *Has top leadership that successfully makes changes needed to keep the organization moving in the right direction* (y-axis), and *Treats employees with respect* (bubble width).

Scheller says. "The good part is that we won't have large layoffs. The downside is that, when a clinical trial works and promises large revenues, we have to stimulate our research very quickly." Lilly has purposely avoided major mergers and acquisitions. "We decided that we didn't need to become too much larger through merging with a large company," Paul says. "We will continue to grow organically through small mergers and acquisitions."

A Stable Environment

Boehringer Ingelheim points out that its private owner-

ship allows it to make long-term decisions without worrying about the next-quarter impact. "Many candidates I interview for jobs have been part of companies that have gone through mergers and acquisitions," Nurnberger says. "They are always interested in Boehringer Ingelheim because they see a stable environment."

Life science companies can't always avoid some insecurity stimulated by change. For them, the guiding principle is to minimize personnel dislocations. "Our executive team has articulated a company strategy that puts acquisitions into the context of our mission," Monsanto's Padgett says. At Genzyme, Gregory adds, "We have done a number of mergers and acquisitions, but we have maintained our culture of innovation and collaboration. As we add new talent to our work force, we allow our people to stay with projects or to move on to suitable new projects. We are all working together toward the larger goal of making sure every patient who needs therapy is treated."

EMD Serono and Millennium have the most recent experience of change, having undergone acquisition early in 2007 and in May 2008, respectively. "The acquisition [of Serono] allowed us to redefine processes, examine our pipeline and research initiatives, and define our core therapeutic areas," Kirschbaum says. "As a result, we have a strong, attractive pipeline strategically aligned within the organization's core objectives." Before Takeda acquired Millennium, both companies made sure that they were, in Gansler's words, "a great cultural fit." Beyond that, he continues, "Takeda made it clear that the transaction was about growth and not synergies. They also made it clear how they valued Millennium's employees, putting retention bonuses in place. So the issue of job security didn't arise."

Gilead's Bischofberger defines the tightrope that corporate executives must negotiate as they plan the future. "This is certainly a dynamic and competitive industry, and change—good, bad, and in between—is constantly taking place and always will be taking place," he says. "What is a constant for us is our focus on developing and delivering innovative treatments for unmet medical needs and making sure that our employees have a work environment that inspires a commitment to this mission."

A former science editor of Newsweek, Peter Gwynne writes about science and technology from his base on Cape Cod, Massachusetts, USA.