



***2009 CVG Convention***

**YC Lee, Ph.D. CEO**

# Economic downturn - How does it affect pharmaceutical industry and you?

- 1. Impact on pharma/ biotech industry**
- 2. Future trend**
- 3. What does it mean to you?**



*Impacts on the industry*

YC Lee, Ph.D. CEO

# Merger

## The New York Times

Published: March 9, 2009 By [PATRICK McGEEHAN](#)

### With Merck Deal, New Jersey Braces for Big Drug Industry Job Cuts

On Monday, two of the biggest pharmaceutical companies with headquarters in New Jersey, [Merck](#) and [Schering-Plough](#), announced plans to merge and eliminate about 16,000 jobs. That announcement came just six weeks after [Pfizer](#), based in Manhattan, said it would buy [Wyeth](#), which is based in Madison, N.J.

# Job cuts across all levels



April 6, 2009 | By [John Carroll](#)

## M&A trend eliminating scientists from top jobs

"The percentage of scientists who have the capability and inclination to run companies is limited," Jacques Bouwens, from Russell Reynolds Associates, tells the *Financial Times*. The rapid consolidation of drug development also spells an unstable time for scientists, he adds. A new survey indicates that [pharma execs expect a big shakeup in R&D, with top research jobs at risk](#) as demands grow for fresh alliances and marketing integration.

# Job cuts beyond R&D

**TRIANGLE BUSINESS JOURNAL**

Monday, September 14, 2009

## Pharma jobs falling at rapid clip, study concludes

The nation's pharmaceutical industry has announced more than twice as many job cuts through August of 2009 as it did during the same period in 2008, according to a study from outplacement firm Challenger, Gray and Christmas.

More than 53,000 jobs have been eliminated in 2009 compared to 24,880 in 2008.

Major buyouts--and the inevitable elimination of redundant positions--have had a lot to do with the jump in job loss numbers...Across the industry, pharma sales reps have been particularly hard hit by the cuts as most pharma companies have elected to reduce sales jobs.

# Are biotech/pharma's tough times over?

**FierceBiotech**  
THE BIOTECH INDUSTRY'S DAILY MONITOR

August 28, 2009 | By [John Carroll](#)

## Are biotech's tough times over?

....I've been writing about business and the economy now for more than 25 years, and I've seen plenty of ups and downs along the way...But I've never seen anything quite as [gut wrenching as the economic meltdown that occurred last year](#) and the day-by-day death watch that started at the beginning of this year.

Any industry is affected by a recession, but biotech is a particularly fragile affair...

By the spring, though, I had the sense that most of the execs in this business had checked their pulse, found they were still alive and kicking, and got on with it...And over the past few weeks we've been treated to the [first sustained signs that the Great Recession is loosening its grip](#). The market has staged a rally, and some dramatic successes in the clinic have been rewarded with breathtaking increases in stock values...Human Genome Sciences, which had been struggling with lupus for years only to take the market by storm with an unprecedented success in Phase III.

# Are biotech/pharma's tough times over?

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THE BIOTECH INDUSTRY'S DAILY MONITOR

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## Are biotech's tough times over? - continue

Takeover rumors are starting to proliferate... Higher stock prices are giving some of the public developers a chance to raise fresh funds. And the IPO window, virtually welded shut for two years, has creaked open with a successful public offering from Cumberland Pharmaceuticals...

*Signals Magazine*, an online pub which tracks biotech trends, concluded that in the first half of this year, "biotech and specialty pharma firms raised more than \$8.3 billion from all sources (excluding revenues and payments from corporate partners)." In the first half of 2008, that figure was \$5.9 billion. Public offerings gained \$1.2 billion, up 78 percent. Alternate financing routes, which includes private placements, soared 75 percent to \$4.8 billion...when I see more billions flowing into the industry, it's reasonable to conclude that the worst may well be over.



*Future trend*

YC Lee, Ph.D. CEO

# Pharma and biotech to complement each other

MONDAY  
AUGUST 31, 2009

## BioWorld<sup>®</sup> Insight

Your Weekly Source for Market and Financial Views

## Big Pharma Moves Out of CVD, Big Biotech Moves In

By Trista Morrison  
Staff Writer

Big pharma pioneered the treatment of heart disease and continues to rule the cardiovascular kingdom today, thanks to cholesterol-lowering drugs like Pfizer Inc.'s Lipitor (atorvastatin) and blood thinners like Bristol-Myers Squibb Co.'s Plavix (clopidogrel bisulfate).

But there are plenty of challenges to cardiovascular drug development: The clinical trials are big and expensive, drugs usually have to prove benefit above and beyond a well-established standard of care, market penetration requires a large sales force, and prices aren't as high as in biologics-dominated fields like cancer.

And so, with patent expirations looming, some big pharmas have turned toward greener pastures. Pfizer Inc. said last fall that it was moving away from cardiovascular disease to focus on oncology, immunology and inflammation, among other areas – a move furthered by its \$68 billion acquisition of non-cardio-centric Wyeth in January.

But while big pharma has diversified out of cardiovascular, big biotechs Amgen Inc. and Gilead Sciences Inc. are diversifying into the space.

Amgen is looking to pick up the slack from its erythropoietin-stimulating agents Aranesp (darbepoetin alfa) and Epogen (epoetin alfa), which have been pummeled by regulatory and reimbursement issues. Its pipeline star is osteoporosis and bone cancer drug denosumab, but the company also has placed a few bets in the cardiovascular space.

A few years ago, Gilead ponied up \$2.5 billion to acquire Myogen Inc., gaining access to two endothelin receptor antagonists: Letairis (ambrisentan) for pulmonary arterial hypertension and darusentan for resistant hypertension. Letairis sales are growing but have been slower than expected, while darusentan met its endpoints in its first Phase III trial this spring. (See *BioWorld Insight*, April 13, 2009.)

Gilead took its cardiovascular play even further in March, outbidding Astellas Pharma Inc. to acquire CV Therapeutics Inc. for \$1.4 billion. That buy-out added the marketed chronic angina drug Ranexa (ranolazine extended-release tablets) and pharmacologic stress agent for cardiac imaging Lexiscan (regadenoson).

# The future of biotech industry



Posted on September 17, 2009 - 9:47pm in [BioPharm America 2009](#)

## Industry leaders predict the future of biotech

... “Where Have all the Good Times Gone.”

Today, it’s not enough to be [innovative](#), a new drug also has to be [cost-effective](#); it’s not enough to get Food and Drug Administration approval for your new molecule, you also have to make sure that insurance companies, governments and other payers will reimburse it; and it’s not enough to meet scientific and regulatory hurdles, you also have to keep increasingly impatient shareholders on board through the repeated financing rounds needed to meet your goals.

One aspect of today’s environment that is more favorable is that big pharma is totally engaged [and more knowledgeable of biologics](#). The opportunistic hook-ups of the early 1980s have given way to strategic alliances and acquisitions. Nearly all pharmaceutical companies now have [in-house biotech programs or bioventure units](#) to seek out and finance promising start-ups. About 75 percent of liquidity events for privately held biotechs in the last 10 years were through acquisition by larger firms, not IPOs.

# Biotech strategy



Posted on August 31, 2009 in [BioPharm America 2009](#)

## Focus efforts and move quickly to 'proof of relevancy' milestone

In this exclusive interview with **partneringNEWS**, Mr. Jack M. Anthony, CEO of [Osprey Pharmaceuticals USA](#) ...sharing insights on the challenges facing business developers in the shifting landscape of biotechnology.

...Biotech now needs to aggressively take on the big problems like Alzheimer's disease, or diabetes, or all the cancers out there. And big pharma needs to follow them, to be involved earlier with the biotech development.”

“More and more there will be a coming together, a gathering around the table of venture capitalists, big pharma and biotechs to discuss what is important, what is funded and to decide what needs to be done next.

“Earlier I talked about relevancy, and I would suggest that for biotechs today [the milestone to reach is a proof of relevancy rather than a proof of concept.](#)”

# R&D budget to increase in 2010

**BusinessWeek**

Research August 27, 2009

## Drug, Biotech Research Spending Hangs Tough

Overall U.S. corporate R&D spending is down 4% since the end of 2007, but some companies have chosen to buck the trend

By [Emily Thornton](#) and [Frederick Jespersen](#)

The main reason pharmaceutical and [biotech research budgets are expanding](#) is that companies want to offer a wider range of products. With billions of dollars' worth of branded drugs losing their patent protection, the pharmaceutical industry is under pressure to boost its pipeline of innovative new drugs.

In some cases, research budgets are rising because pharma and biotech companies are [buying each other entirely](#).

Lately, some big drugmakers are [turning to partnerships](#) with labs in India and China to boost their return on R&D investment.

# Biotech and IP are cheap



Posted on August 31, 2009 in [BioPharm America 2009](#)

## Pharma will use its cash to buy while biotech is cheap

...Now the real work begins as pharma embarks upon its destiny which is to incorporate biotechnology into its mainstream pipeline—this time, for real.

There hasn't been a better time in recent history for [cash-rich pharmas to acquire products and companies that have been devalued](#) in an unprecedented and sustained period of faltering confidence by institutional investors.

# Look beyond North America

## Health Blog

WSJ's blog on health and the business of health.

August 25, 2009 By Shirley S. Wang

### European Drug Makers: More Innovative Than U.S. Companies?

Are U.S. drug makers more innovative than their European counterparts? The answer is yes, according to a 2006 paper published in the journal Health Affairs that examined the number of first-in-class medicines that were brought to market by U.S., European and Japanese pharma and biotech companies from 1982 to 2003.

The author of the study, Donald Light, an academic doc reanalyzed the data from the 2006 paper by controlling for the size of companies' investment in research and development. All other assumptions remained unchanged from the original study...found that U.S. companies actually discovered fewer new drugs than you'd expect, given their proportion of R&D spending. Europe brought more new treatments to market than would have been expected from its proportion of R&D dollars. And Japanese drug makers were the most productive, according to the reanalysis.

# Developing country - China and India



Posted on June 9, 2009 [ChinaBio Partnering Forum 2009](#)

## Interview: China Looms Large for Bayer Growth Strategy

### How do you see Bayer's presence in China five years from now?

From a sales point of view, Bayer aspires to be a leading player in the market and short term we should be able to achieve sales of over USD 1 billion this year. Our goal is to consistently grow above market, which means a growth of approx. 20% per year from our current high base. Secondly, our goal is to bring a significant number of new products to the Chinese market. Bayer aims to launch 20 truly innovative drugs within a 5 year period. The third key objective is to make a real contribution to the development of healthcare in China, particularly in rural areas. And finally, the fourth dimension is our desire to be perceived as the best partner for our core target group in China: physicians.

# New China and the world



Posted on May 14, 2009 [ChinaBio Partnering Forum 2009](#)

## ChinaBio® Partnering Forum 2009 Builds Biotech Bridges to China

The [New China meets big pharma face-to-face](#) in the first-ever ChinaBio® Partnering Forum, set for June 23, 2009 at the Riverfront Business Hotel in Shanghai.

Leading Chinese institutes, the country's emerging pharmaceutical companies and a burgeoning community of biotech start-ups will be exchanging profiles and setting one-to-one meetings with international pharmaceutical, biotechnology and academic leaders converging in Shanghai for this one-of-a-kind moment.

# China gets serious on biotech



Posted on May 6, 2009 [ChinaBio Partnering Forum 2009](#)

## China gets Serious about Biotech

...China continues to [pour government funds and resources](#) into the biotechnology sector even as an incoming tide of overseas returnees bring their knowledge, and in many cases entrepreneurial skills, back to the Middle Kingdom. The number of home-grown drug discovery companies is increasing, and a larger than ever number of innovative drug candidates are currently in various stages of preclinical and clinical development.

A number of [multinational pharmaceutical companies have begun construction](#) or opened R&D centers in China, ...Perhaps more interestingly, a few big pharmas have finally detailed business development staff to China on a full-time basis to [seek innovation](#).



*What does it mean?*

YC Lee, Ph.D. CEO

# Your salary and compensation



## Salary Increase Budgets for 2009 and 2010

September 2, 2009

Salary Freezes: The number of companies freezing salaries is projected to decline from 37 percent in 2009 to 13 percent in 2010. For companies with frozen salaries, **23 percent plan to unfreeze** them by the end of 2009.

Salary Reductions: Thirteen percent of companies reported that they cut salaries in the last 12 months. For companies that reduced salaries, **one-third plan to reverse reductions by the end of 2009.**

United States: Base salary increases for the U.S. are projected to rise from 1.66% in 2009 to 2.68% in 2010. Excluding salary freezes, base salary increases for the U.S. are projected to **rise slightly from 3.05% in 2009 to 3.08% in 2010.**

Canada: Base salary increases for Canada are projected to increase from 1.07% in 2009 to 2.39% in 2010. Excluding salary freezes, base salary increases for Canada are projected to **increase from 2.87% in 2009 to 3.01% in 2010.**

# Salary trend

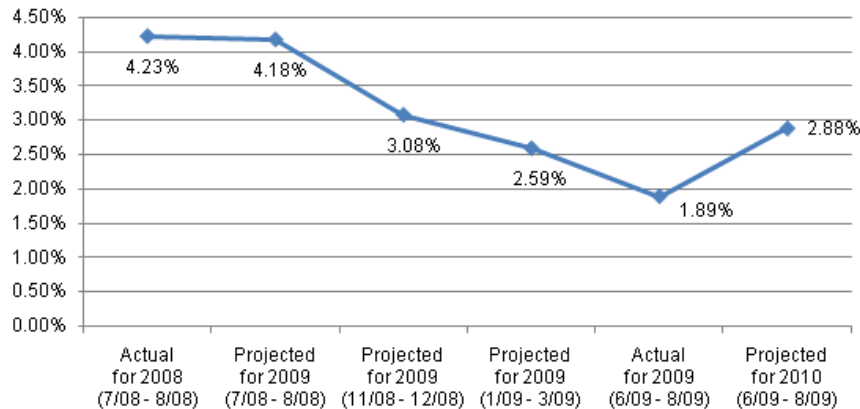


## Salary Increase Budgets for 2009 and 2010

September 2, 2009

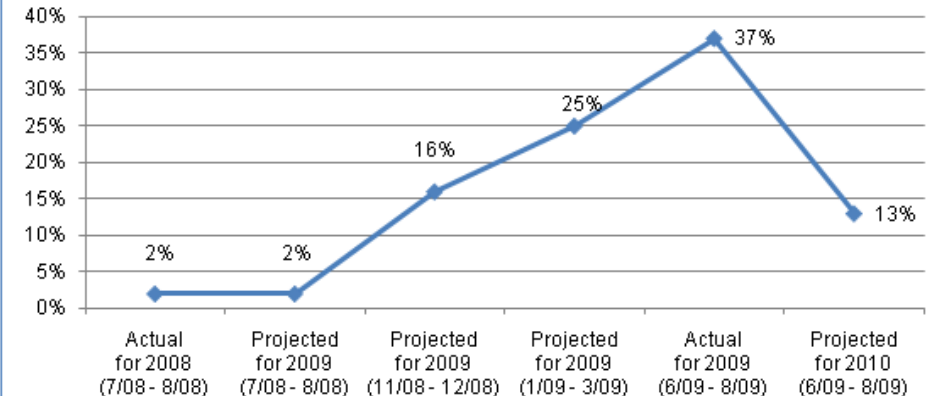
### Changes Since 2008

**Figure 1: Average Global Base Salary Increases by Year and Survey Date**



The data collection time period for each data point is provided in parentheses. Averages include salary freezes (zeros).

**Figure 2: Percent of Companies Freezing Salaries Across All Jobs and Locations by Year and Survey Date**



The data collection time period for each data point is provided in parentheses.

# Salary trend



## Salary Increase Budgets for 2009 and 2010

September 2, 2009

### Changes Since 2008

...before the global economic crisis unfolded, average base salary increases exceeded four percent (Figure 1) and only two percent of companies were freezing salaries (Figure 2). From late 2008 through mid-2009, the number of companies freezing salaries increased to 37 percent, which drove average base salary increases below two percent.

Overall, projections for 2010 have improved significantly compared to 2009. However, a relatively high number of companies plan to freeze salaries in 2010, and average projected base salary increases are still much lower than recent years.

# Jobs related to international collaborations

nature  
biotechnology



*Nature Biotechnology* **27**, 806 - 814 (2009)

## **Globetrotting firms: Canada's health biotechnology collaborations with developing countries**

Monali Ray, Abdallah S Daar, Peter A Singer & Halla Thorsteinsdóttir

.....A survey of Canadian biotech firms reveals that their biotech collaborations with developing countries are **not only significant but also increasingly reciprocal** in terms of the exchange of financial resources and technological know-how....

# Jobs related to international collaborations - continue

nature  
biotechnology



*Nature Biotechnology* 27, 806 - 814 (2009)

....Emerging economies, such as China, India and Brazil, have large populations, with increasing spending power and high demand for health biotech products. Collaborating with local partners is a first step in being able to access these vast markets.

....North–South collaboration can help mitigate the high risks and costs faced in health biotech product development. For example, the costs of manufacturing, clinical trials and R&D can be lower in developing countries, and thus North–South collaboration may reduce the cost of the overall drug development process.

....North–South collaboration can help firms access complementary assets. The multiplicity of scientific and technical expertise needed to enable health biotech product development can be found worldwide, including within firms and institutions in developing countries.

# Multi-national collaboration opportunities among CROs



Posted on May 6, 2009 [ChinaBio Partnering Forum 2009](#)

## China gets Serious about Biotech (con't)

The outsourcing and services sector has seen significant growth over the past year. As big pharma struggles to fill its pipelines and reduce costs, the global outsourcing industry has reaped a windfall of rapidly rising demand. Seeking to reduce their own overheads and also following their clients, multinational CROs have stormed China's beaches in force.

[Collaborations between local and foreign CROs are increasingly common](#), with both top-tier and mid-size foreign service providers alike teaming up with local counterparts. More than just on-paper agreements, many CROs have chosen to build capacity in China, erecting greenfield facilities built to international cGXP specifications.

# New job opportunities - smaller companies



Posted on September 17, 2009 [BioPharm America 2009](#)

## Does the industry need an entirely new R&D strategy?

...As the financial crisis of 2008 showed all too painfully, unsustainable models will not be sustained. The days of swing-for-the-fences, multi-billion programs with uncertain pay-offs are clearly over. Panelists said the new reality means innovations will be smaller, and the [organizations that pursue them will be smaller](#), so they will have to partner sooner.

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## Thank you

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