

## 2011 CALIFORNIA BIOMEDICAL INDUSTRY REPORT HIGHLIGHTS

### California Biomedical Industry Market Snapshot

- **Companies:** California is home to the biggest concentration of biomedical companies (2,224 in total) in the U.S.
- **Employment:** The biomedical industry in California directly employs nearly 268,000 people in California. The biomedical sector supports another 783,000 people – 13.8 percent of the state's total workforce - who hold biomedical industry-related jobs across diverse sectors. Among the state's high-tech industries, biomedical is second only to computer and Internet-related services and computer and peripheral manufacturing, which employed an estimated 406,000 people.
- **Employment by sector:** Broken down by sector, the overall biomedical employment in the state included more than 107,000 people in the medical devices, instruments and diagnostics sectors — for about 40 percent of the overall total jobs. Biopharmaceutical companies employed the next largest segment with just under 81,000 jobs or approximately 30 percent of the total. The state's academic research centers employed nearly 43,000 people in life sciences positions for approximately 16 percent of the total. Wholesale trade accounted for more than 31,000 personnel or about 12 percent of the state's biomedical employees. The remaining 5,500 employees, or just over 2 percent, worked in the laboratory services sector.
- **Employment Trends.** For the first time in five years, in 2009 biomedical employment declined in California by nearly 6,000 jobs. The two sectors where employment has declined are in laboratory services and medical devices. Still, cumulative growth over the past five years remains positive – between 2005 and 2009, the biomedical industry added nearly 12,000 jobs in California.
- **Wages:** California biomedical industry employees earned a total of \$19.4 billion. For the year, the average annual wage for the industry across the state was \$72,000, down slightly from \$75,000 in 2007 and 2008. At an average of \$100,000 in 2009 - a decrease of approximately \$9,000 or 8.3 percent from 2008 and 2007 - biopharmaceutical companies still paid the industry's highest average annual wages.
- **Venture Capital Investment:** In 2009, biomedical companies took the largest share of California's VC investments and through the first nine months of 2010. The state's biotechnology, medical devices and diagnostics sectors secured approximately \$2.6 billion in VC investments in 2009 and an additional \$2.2 billion in the first three quarters of 2010.
- **Product development:** California has the largest concentration of companies and products in the biopharmaceuticals pipeline, including those in pre-clinical and clinical development through registration. The California biopharmaceutical pipeline represents about 12 percent of the total worldwide biopharmaceutical pipeline of 6,889 products. There are 876 new medicines in California's R&D pipeline. Nearly one-third of the state's pipeline, 237, is focused on products that target cancer.
- **Revenues:** California's biomedical companies' revenues for 2009 were an estimated \$114 billion.
- **NIH grants:** In 2009, California received the greatest amount of NIH funding of any state, receiving more than \$3.2 billion. California's share of funding was 38 percent more than Massachusetts, the next highest recipient. California has averaged approximately 15 percent of the total over the past decade, and was awarded 15.1 percent of the total again in 2009.

### 2011 CEO Survey Highlights

A survey of approximately 100 of California's largest biomedical companies' CEOs revealed the industry's resilience and confidence:

- Sixty-eight percent of CEOs said they expected to expand the overall size of their workforce within California, while only 31 percent planned to increase workforce levels outside the state.

- For the first time in the report's 17-year history, nearly twice as many biomedical CEOs said they intend to increase manufacturing within California (41 percent) versus outside the state (21 percent) over the next two years.
- Seventy-eight percent of CEOs surveyed said that they maintained or expanded R&D operations within California over the past year, and 88 percent plan to do so over the next two years, with the majority of those (62 percent) saying that they expect to expand R&D within California.
- The key reasons cited for locating in California were the availability of a highly skilled, entrepreneurial workforce and California's culture of innovation, anchored by leading research universities.
- While relocating out of state was not a strategy cited by CEOs surveyed, when asked about the most attractive U.S. biomedical markets outside California, 76 percent named Greater Boston followed distantly by North Carolina (31 percent), Minneapolis-St. Paul (25 percent) and the Washington-DC corridor.
- Eighty percent of biomedical company CEOs in California reported that their companies have been courted by other countries, state governments or regional economic development associations in the past year.

Although the recession has officially ended, its effects continue to dampen business operations:

- Over the past year, 69 percent of the responding companies reported that R&D projects had been delayed. Among the reasons, "funding not available" was the most prevalent at 44 percent.

As for raising monies through mergers and acquisitions or divestitures, respondents to the survey anticipate that the next two years will find them in a holding pattern:

- Forty-eight percent of respondents said they were somewhat or very likely to participate in a merger or acquisition over the next year while 51 percent said they were very or somewhat unlikely to do so.
- Only 9 percent of respondents said they were likely to participate in a sale or divestiture over the coming year.

With the economy and biomedical industry funding environment showing some initial signs of recovery, CEOs are focused on sustaining growth. Yet, respondents cited the following as challenges and threats to the future of the industry:

- Failure to encourage workforce development and growth was cited by CEOs as the greatest threat to the future of California's biomedical industry. Nearly half (47 percent) of respondents ranked "an unprepared workforce" among the top three threats to the industry.
- Among issues deemed either somewhat or extremely important to keeping biomedical research, innovation and investment in California, the elimination of duplicative regulation by state and federal regulators was cited by 80 percent of respondents, workforce development was cited by 67 percent, and R&D tax credits were cited by 67 percent.
- Thirty-six percent of respondents said that lack of data to demonstrate product safety and effectiveness is a top threat to their business. And, 35 percent said that liability of products on the market is a threat.
- Survey respondents also ranked federal policy issues as somewhat or extremely important to their operations. Eight-four percent of respondents believe that the FDA regulatory approval process has slowed the growth of their organizations.
- More than three-quarters of respondents predict that the cumulative impact of changes in the healthcare marketplace, driven largely by health reform, will decrease their profit margins and 54 percent believe that the pace of innovation will slow.

The respondents also feared that other states and other countries are gaining on California and the U.S. and catching up with our pace of innovation:

- Sixty percent of CEOs believe that another state could recreate the ecosystem that has made California the leading biomedical region in the U.S.

- Sixty seven percent of CEO respondents said that within five years, another country could conceivably recreate the ecosystem that has made the U.S. the leading biomedical region in the world.

According to the survey, while relocating out of state was not a strategy cited by CEOs surveyed, when asked about the most attractive U.S. biomedical markets outside California:

- Seventy six percent named Greater Boston followed distantly by North Carolina (31 percent), Minneapolis-St. Paul (25 percent) and the Washington-DC corridor (20 percent).

### **Survey Methodology**

CHI and BayBio worked with PricewaterhouseCoopers LLP to collect and administer data for the 2011 CHI/BayBio/PwC California Biomedical Industry Survey. The survey was conducted in November 2010 and targeted approximately 100 of the largest companies that conduct business in California in the areas of pharmaceuticals, biotechnology, medical devices, diagnostics or medical equipment.