

I ndustry Snapshots

- During 2005, the 329 publicly held biotechnology companies in the United States earned \$47.8 billion in combined revenue, with market capitalizations of \$410 billion. Meanwhile, the 1,086 private U.S. biotech firms earned revenues of \$2.9 billion. (Ernst & Young annual scorecard, New York Times, April 5, 2006)
- Biological technicians, a key biotechnology occupation, is expected to grow by 28.2 percent between 2004 and 2014, while the occupation of biological scientists is projected to grow by 17.0 percent. (U.S. Bureau of Labor Statistics, National Employment Data)
- The biotechnology industry employed 713,000 workers in 2002 and is anticipated to employ 814,000 workers in 2007 (Economy.com, Industry Workstation, Biotech industry forecast.)

High Growth INDUSTRY PROFILE

W orkforce Issues

Recruitment and Retention

To succeed and grow in the 21st century economy, biotechnology employers need to fill each position in their companies – from entry-level to the most advanced – with qualified and skilled individuals. Because the industry is experiencing such rapid growth, biotechnology firms often demand more skilled workers than are available and are projected to need more workers than are currently enrolled in training programs.

Skills Competencies and Training

While there may be instances where locally industry-driven career ladders and competency models exist, there is a challenge with the lack of nationally-recognized articulated skills competencies and career ladders as well as sources of training. However, the biotechnology industry's challenges in this area are complicated by the rapidly changing environment in which the industry operates. Advances in the underlying sciences have a continuous effect on the technology and processes used by the biotechnology industry; making it necessary for employees working in the industry to upgrade their skills to maintain productivity.

Image and Outreach to the Public

There is a need for clear information about career options within the biotechnology industry geared towards youth, educators and job seekers for career exploration and recruitment activities. Currently this lack of available information results in a disconnect between these groups

and presents a challenge for the industry because the lack of definition and outreach limits the number of people who consider the biotechnology field to be a viable career option.

S kill Sets

(Source: U.S. Department of Commerce, *Survey of the Use of Biotechnology in U.S. Industry and U.S. Bureau of Labor Statistics, 2006-07 Career Guide to Industries*)

- Increasingly, companies and research organizations are seeking workers with more formalized training who have both computer and life sciences skills.
- For science technician jobs in the pharmaceutical and medicine manufacturing industry, most companies prefer to hire graduates of technical institutes or junior colleges or those who have completed college courses in chemistry, biology, mathematics or engineering. Some companies, however, require science technicians to hold a bachelor's degree in a biological or chemical science.
- Because biotechnology is not one discipline, but the interaction of several disciplines, the best preparation for work in biotechnology is training in a traditional biological science, such as genetics, molecular biology, biochemistry, virology, or biochemical engineering. Individuals with a scientific background and several years of industrial experience may eventually advance to managerial positions.

E TA in Action

In June 2003, ETA announced the High Growth Job Training Initiative to engage businesses with local education providers and the local/regional workforce investment system to find solutions that address changing talent development needs in various industries.

In October 2005, the Community-Based Job Training Grants were announced to improve the role of community colleges in providing affordable, flexible and accessible education for the nation's workforce.

ETA is investing more than \$260 million in 26 different regions across the United States in support of the WIRED (Workforce Innovation in Regional Economic Development) Initiative. Through WIRED, local leaders design and implement strategic approaches to regional economic

development and job growth. WIRED focuses on catalyzing the creation of high skill, high wage opportunities for American workers through an integrated approach to economic and talent development.

These initiatives reinforce ETA's commitment to transform the workforce system through engaging business, education, state and local governments and other federal agencies with the goal of creating a skilled workforce to meet the dynamic needs of today's economy.

I nvestments

ETA has invested \$33,985,520 in the biotechnology industry. This includes 16 High Growth Job Training Initiative grants totaling \$22,921,599 and seven Community-Based Job Training Grants totaling \$11,063,921. Leveraged resources from all of the grantees total \$23,847,037.

R esources

For additional background information about the industry and details on the grants, information about employment and training opportunities and workforce development tools for employers, educators and workforce professionals, please visit: www.doleta.gov/BRG, www.careervoyages.gov, www.careeronestop.org, and www.workforce3one.org.