



# BIOTECHNOLOGY EMPLOYMENT OPPORTUNITY

Montgomery County, Maryland

Market-responsive Education  
and Employment Training System

## MEETS

Brief MCM.2005-1

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DEPARTMENT OF LABOR, LICENSING & REGULATION

Office of Labor Market Analysis  
and Information

## DID YOU KNOW?

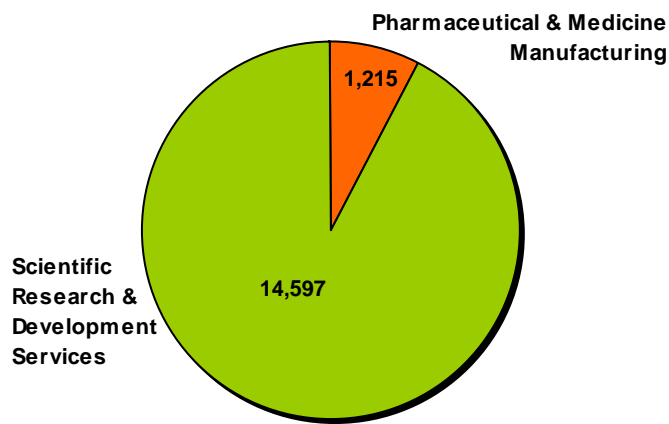
- Over three and a half percent of Montgomery County employment is classified as Biotechnology.
- Ninety-two percent of this biotechnology employment is in *Scientific Research and Development Services*.
- Montgomery County biotechnology employers hired over 5,000 new employees in the most recent full year of data coverage, despite very little growth in the total number of biotechnology employees.
- Fifty-four percent of the new biotechnology employees are women, and 58 percent are between the ages of 25 and 44 years old.

This Brief introduces you to the source of the highlights presented above. Inside, you will find other new insights about biotechnology employment in Montgomery County, Maryland. You will also find suggested ways to use this new information for decision-making. A series of industry briefs like this are now available from MEETS.



U.S. Department of Labor  
Employment & Training Administration

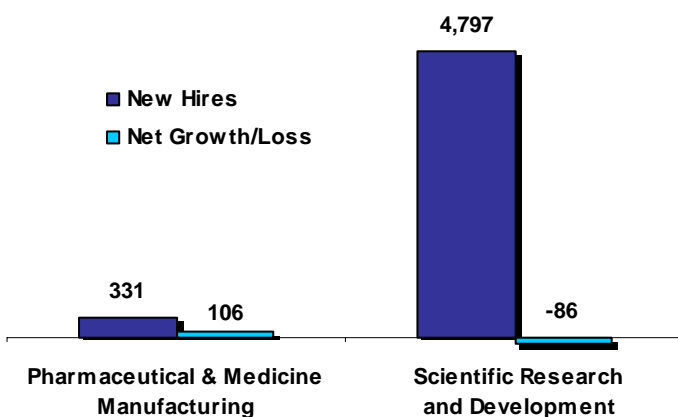
## Montgomery County, Maryland: Biotechnology Employment Highlights



U.S Census Bureau Local Employment Dynamics (LED) Data for 4th Quarter 2003

### EMPLOYMENT AFFILIATIONS WITHIN BIOTECHNOLOGY

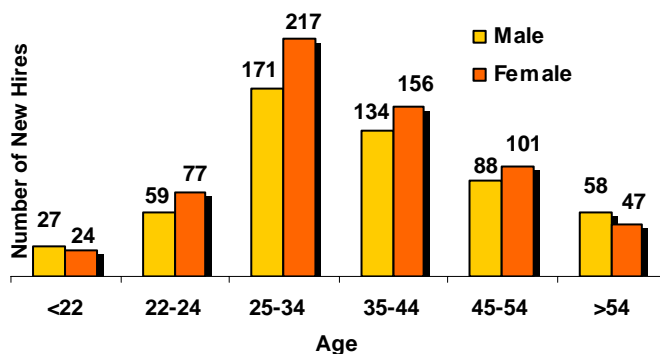
Ninety-two percent of Montgomery County Biotechnology employment is in Scientific Research & Development Services Industry Group, which is dominated (89% nationally) by R&D in the Physical, Engineering, & Life Sciences. Pharmaceutical & Medicine Manufacturing, including Medicinal & Botanical, Pharmaceutical Preparation, In-Vitro Diagnostic Substances, and Biological (except Diagnostic) Products, accounts for the remaining 8% of biotechnology employment.



LED Data for 2003

### ANNUAL HIRES AND NET GROWTH/LOSS WITHIN BIOTECHNOLOGY

Montgomery County's Biotechnology hiring patterns are similar to employment, with 94% of new hires occurring in Scientific Research & Development Services. This sub-sector experienced very slight net job loss during the year, while Pharmaceutical & Medicine Manufacturing claimed significant gain for its size. Overall, however, biotechnology showed a new hires-employment growth/loss ratio of 256:1 for the period.



LED Data for 4th Quarter 2003

### QUARTERLY HIRES WITHIN BIOTECHNOLOGY BY GENDER AND AGE

Fifty-eight percent of new hires in Montgomery County's biotechnology industry are between 25 & 44 years old. While men outnumber women in the oldest & youngest age groups, 58% of all bio-technology new hires are women. The gender & age mix differs among biotechnology industry groups, with further variation occurring at the occupational level.

Occupational Title	Projected 2012 Employment	Average Hourly Wage
Biological Technicians	2,860	\$17.25
Team Assemblers	11,165	\$12.50
Chemists	2,940	\$27.14
Executive Secretaries & Admin. Assistants	34,140	\$19.25
Computer Software Engineers, Applications	16,105	\$41.25
Biochemists & Biophysicists	660	\$32.00
Medical Scientists, Except Epidemiologists	1,500	\$43.50

\*Source for above Occupational Statistics: Maryland Department of Labor, Licensing & Regulation (DLLR), Office of Labor Market Analysis & Information (OLMAI)

### BIOTECHNOLOGY OCCUPATIONAL PROJECTIONS\*

These statewide statistics highlight two facets of biotechnology employment: 1) Some occupations in biotechnology are not found in this industry alone, such as Executive Secretaries & Administrative Assistants, and 2) occupational earnings vary widely. The highlights chosen for this page are intended to guide local inquiries.

### WHAT ARE BIOTECHNOLOGY JOBS?

The Census Bureau Local Employment Dynamics (LED) program QWI statistics presented in this brief use the North American Industry Classification System's (NAICS) coding of biotechnology industry sub-sectors. Dependent upon the NAICS definitions, the biotechnology industry includes establishments that produce pharmaceutical and medicine goods and which support industry research and development. These areas are combined at the industry group level to form a "customized" definition of biotechnology. This speaks to the specialized nature of this industry.

Occupational information is not in the LED data. Biotechnology occupations fall into various groups, including: scientific professionals such as biochemists and biophysicists, workers associated more with the manufacturing processes (e.g., technicians and team assemblers), and other types of work performed in the biotechnology industry (e.g., marketing, administrative support, and computer software applications).

Data users should contact for the Maryland Department of Licensing, Labor, & Regulation (DLLR), assistance in combining industry and occupational information to answer questions.

### EXAMPLES OF HOW TO USE THE NEW LED QWI INFORMATION

- Think about why there is a 256 to 1 ratio of new hires to new jobs in biotechnology. This will help to separate high turnover jobs from more stable opportunities. While high-turnover jobs may be appropriate destinations for some jobs seekers, most strategic decisions focus on stable opportunities with potential for continued learning and earning growth.
- Narrow the scope of further inquiries about promising occupations within the industry group by selecting four-digit NAICS industry group codes within biotechnology.
- Think about the gender disparities within the biotechnology industry groups and decide what your conclusion means for the individual and program management decision-making.
- Align the age group breakout of new hires activity in biotechnology with current or targeted program demographics and decide whether and what additional information is needed before making strategic management counseling decisions.

### USEFUL WEB LINKS

**Maryland labor market information:** <http://www.dllr.state.md.us/lmi/index.htm>

**Montgomery County occupational wage estimates:** <http://www.dllr.state.md.us/lmi/wages/TOC008.htm>

**BLS occupational employment statistics *Technical Notes*:** [http://www.bls.gov/oes/current/oes\\_tec.htm](http://www.bls.gov/oes/current/oes_tec.htm)

**BLS occupational employment projections methods:** <http://www.bls.gov/emp/home.htm>

**BLS National Industry-Occupation Employment Matrix information:**

<http://www.bls.gov/emp/nioem/empioan.htm>

**Standard occupational classification *user guide*:** <http://www.bls.gov/soc/socguide.htm>

**NAICS Codes and Titles:** <http://www.census.gov/epcd/naics02/>

Sources of the data included in this Brief are:

- The Maryland Department of Labor, Licensing and Regulation (DLLR) (<http://www.dllr.state.md.us>)
- The Census Bureau Local Employment Dynamics (LED) program (<http://lehd.dsd.census.gov>)

DLLR and LED have joined forces to deliver the new **Quarterly Workforce Indicators (QWI) series**. No new information is collected. No surveys are conducted. No new employer or employee burden is involved. No confidentiality laws or principles are compromised.

#### What is new here?

- Reliable local employment and new hire indicators by age group and gender.
- Updates with no more than a one-year lag in availability.
- More descriptive detail thanks to adoption of a new disclosure-proofing approach that continues to protect business and work anonymity.

#### Remaining challenges include:

- Awareness that *new* means *unfamiliar*. Some commitment to learning is needed to fully realize the potential from new indicators and decision-making uses.
- Understanding the value of the new indicators, even though they can not answer all questions.

#### Why now, and not before?

- Seven years, 1998-2004, were needed to successfully complete the organizational, legal, staffing and technical steps to transition from start-up through pilot testing to production and release.
- Continuing advances in data processing capacity and efficiency allow commitment to a production schedule that was impossible to imagine earlier.
- The workforce development community understands that sustained reinvention is urgent to become and remain viable in the open world economy.

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