BIOSCIENCE STATE OF THE INDUSTRY

October 28, 2020 | 1-2:30 PM
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EXECUTIVE DIRECTOR, LOS ANGELES
BIOCOM
BIOSCIENCE
STATE OF THE INDUSTRY

RICHARD VERCHES
EXECUTIVE DIRECTOR
CENTER FOR A COMPETITIVE WORKFORCE (CCW)
THE CENTER FOR A COMPETITIVE WORKFORCE is leading industry-education partnerships to collaboratively strengthen our region’s talent development ecosystem

1. Data-driven research on the supply and demand for talent
2. Industry Councils and Regional Program Advisories
3. Developing work-based learning and employment opportunities
4. Workforce & Education Partner Portal

For more information, visit: www.CompetitiveWorkforce.LA
Building California’s Life Science Industry

Joe Panetta,
President & CEO, Biocom
Who is Biocom?

Biocom harnesses the collective power and experience of the most innovative and productive life science clusters in the world, with powerful advocacy and transformative programs to help companies on their quest to improve the human condition.

- **Largest**
  We are the largest state-wide association in the world.

- **1,300 Members**
  San Diego, Los Angeles, Bay Area, Tokyo and beyond.

- **Founded in 1995**
  Over 25 years of leadership

- **Experienced**
  Most experienced leader and advocate
Strategic Presence

Offices
- San Francisco
- Sacramento
- Los Angeles
- San Diego
- Washington D.C.

Satellite
- One Nucleus
- EuroBiomed

Strategic Partnerships
- LINK-J
- Japan Bioindustry Association
- City of Kobe
- City of Yokohama
- AusBiotech
What We Do

- Public Policy & Advocacy
- Building Networks
- Capital Development
- Business Strategies and Services
- Workforce Development
### Annual Economic Impact

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Activity</td>
<td>$44.2B</td>
</tr>
<tr>
<td>Market Value of Goods &amp; Services</td>
<td>$24.39B</td>
</tr>
<tr>
<td>Total Jobs (direct/indirect/induced)</td>
<td>195,820</td>
</tr>
<tr>
<td>Labor Income (salaries/wages/benefits paid)</td>
<td>$14.28B</td>
</tr>
</tbody>
</table>

In 2019, the Los Angeles County life science industry generated $44.2B.
Los Angeles County directly employed 93,330 people in 2019.
The average wage for life science employees in Los Angeles county:

$86,501
## Life Science Establishments by Sector

<table>
<thead>
<tr>
<th></th>
<th>BIORENEWABLES</th>
<th>BIOPHARMACEUTICAL MANUFACTURING</th>
<th>MEDICAL DEVICES &amp; DIAGNOSTIC EQUIP</th>
<th>LIFE SCIENCE WHOLESALE</th>
<th>RESEARCH &amp; LAB SERVICES</th>
<th>ALL LIFE SCIENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td>155</td>
<td>159</td>
<td>658</td>
<td>571</td>
<td>1,847</td>
<td>3,390</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>50</td>
<td>125</td>
<td>469</td>
<td>1,217</td>
<td>1,029</td>
<td>2,890</td>
</tr>
<tr>
<td>San Diego County</td>
<td>65</td>
<td>119</td>
<td>241</td>
<td>394</td>
<td>932</td>
<td>1,751</td>
</tr>
<tr>
<td>California</td>
<td>1,528</td>
<td>678</td>
<td>2,441</td>
<td>4,510</td>
<td>6,184</td>
<td>16,341</td>
</tr>
</tbody>
</table>
Los Angeles County received $1.15B in NIH Funding in 2019

### NIH Funding Received by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bay Area</td>
<td>$1.87B</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>$1.15B</td>
</tr>
<tr>
<td>San Diego County</td>
<td>$1.01B</td>
</tr>
<tr>
<td>California</td>
<td>$4.59B</td>
</tr>
</tbody>
</table>

For full report visit: www.biocom.org/eir
Biocom Members in LA are Addressing COVID-19
Workforce Development Efforts in Los Angeles
Los Angeles Regional Bioscience/Biotechnology Industry-Valued Credential

In partnership with Grifols, LA Mission College, LA Valley College, Verdugo Workforce Development Board, Glendale Community College, and the Verdugo Jobs Center, Biocom and Biocom Institute supported the development of the first regional industry-valued credential led and designed by business for technician positions.

Credential defines a common set of skills and competencies required by hiring employers for biomanufacturing, biotechnology and laboratory technicians, facilitating the identification of qualified job candidates.

Additional credential design support was provided by Grifols, Amgen, Gilead, Neutrogena, Kite, Prolacta, Takeda
Amgen Biotech Experience and LabXchange

The Amgen Biotech Experience is an innovative science education program empowering teachers to bring biotechnology into their classrooms.

With leadership from university and key partners in the Los Angeles and San Diego regions, this initiative provides teacher professional development, teaching materials, and research-grade lab equipment to high schools.

Through LabXchange, a collaboration between the Amgen Foundation and Harvard University, students, regardless of income, race, gender or geography, can continue to experience the world of biotechnology with virtual Amgen Biotech Experience labs, free of charge.
Biocom Institute Internship & Fellowship Programs

Biocom Institute is launching internship and fellowship programs in Los Angeles in 2021.

Internships and Fellowships help create or increase awareness of life science careers for students by providing industry experience, mentorship, and career development opportunities.
State & Local Policy Efforts

• Resource for County and City of LA
• Support for LA County’s Bioscience Overlay Zone
• Ensuring life science employees were deemed “essential workers” to continue life-saving work
• Avoiding issues between CA consumer privacy laws and federal HIPAA patient protections relating to clinical trials
Federal Policy Efforts

- March-in rights under Bayh-Dole
- Preventing catastrophic supply chain consequences and drug shortages occurring due to “Buy American” program
Support for Prop 14

- Would authorize $5.5B in state general obligation bonds to continue funding stem cell research and the development and delivery of treatments in California.
- Will help accelerate development of treatments and achieve cures for chronic diseases and conditions.
Thank You

BIOCOM

Connect With Us:

@BiocominLA  @Biocom  @Biocom  @BiocomCA

www.biocom.org
Bioscience State of the Industry Event

Shannon Sedgwick
Director, Institute for Applied Economics
October 28, 2020
BIOSCIENCE

KEY OCCUPATIONS IN LOS ANGELES COUNTY

- Computer and Information Systems Managers
- Computer Systems Analysts
- Software Developers, Applications
- Software Developers, Systems Software
- Biomedical Engineers
- Electrical Engineers
- Electronics Engineers, Except Computer
- Industrial Engineers
- Biochemists and Biophysicists
- Microbiologists
- Biological Scientists, All Other
- Medical Scientists, Except Epidemiologists
- Chemists
- Biological Technicians
- Chemical Technicians
- Health Specialties Teachers, Postsecondary
- Clinical Laboratory Technologists and Technicians
- Phlebotomists
BIOSCIENCE INCUBATORS IN THE LOS ANGELES REGION

- Alexandria Innovation Center - Pasadena
- BATTS Incubator – San Fernando
- BioLabs @ LA BioMed – Harbor-UCLA Medical Center
- Cedars-Sinai Accelerator – Beverly Grove
- CTTi Cal Poly Innovation Center - Pomona
- HATCHspaces - Alhambra
- LA Bioscience – Los Angeles
- Lab Launch - Monrovia
- LabLaunch@ToolBoxLA - Chatsworth
- Magnify, CA NanoSystems Institute at UCLA
- Momentum BioSciences – Culver City
- West Coast Consortium for Technology in Pediatrics – Los Angeles
- Pasadena Bioscience Collaborative Incubator - Pasadena
- Pasadena Bio Collaborative Incubator - Pasadena
- ScaleLA – Los Angeles
- The Alfred E. Mann Institute for Biomedical Engineering - USC
- TheLab – Santa Ana
BIOSCIENCE
THE INDUSTRY IN LOS ANGELES COUNTY

- USC – LA County Medical Center region
- Culver City – Playa del Rey region
- Santa Clarita region
- UCLA Harbor Medical Center region
# Bioscience Industry in Los Angeles County

## Distribution of Impacts by Area (2018)

<table>
<thead>
<tr>
<th>Impact</th>
<th>USC-LAC</th>
<th>Santa Clarita</th>
<th>Silicon Beach</th>
<th>Harbor-UCLA</th>
<th>Other LA County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs Impact</td>
<td>3.5%</td>
<td>8.3%</td>
<td>3.4%</td>
<td>7.9%</td>
<td>76.8%</td>
</tr>
<tr>
<td>Total Labor Income ($ billions)</td>
<td>3.5%</td>
<td>8.2%</td>
<td>3.1%</td>
<td>5.8%</td>
<td>79.4%</td>
</tr>
<tr>
<td>Total Output ($ billions)</td>
<td>3.2%</td>
<td>7.1%</td>
<td>2.7%</td>
<td>5.9%</td>
<td>81.0%</td>
</tr>
<tr>
<td>Total Value Added ($ billions)</td>
<td>4.1%</td>
<td>8.8%</td>
<td>2.6%</td>
<td>6.3%</td>
<td>78.2%</td>
</tr>
<tr>
<td>Total Fiscal Impact ($ billions)</td>
<td>3.6%</td>
<td>7.8%</td>
<td>2.8%</td>
<td>6.5%</td>
<td>79.2%</td>
</tr>
</tbody>
</table>
2018 BIOSCIENCE JOBS: 2,750

• Change in jobs
  • 2013-2018: 905 jobs added
  • 2018-2023f: 730 jobs to be added
  • Job growth 2013-2018: 49.1 percent

2018 AVERAGE ANNUAL WAGES

• Bioscience Average: $74,710
• LA County Average: $64,920
BIOSCIENCE
USC-LAC MEDICAL CENTER (2018)

- Biopharmaceuticals: 39.7%
- Research and Lab Services: 54.7%
- Biotechnology and Biofuels: 1.9%
- Life Science Trade: 3.5%
- Medical Devices and Diagnostics Equipment: 0.2%

BIOSCIENCE JOBS

- 2013: 1,840
- 2018: 2,750
- 2023f: 3,480

CHANGE IN REAL WAGES 2013–2018

- LA County Bioscience: 8.8%
- LA County Average: 6.2%
- USC-LAC Med Center: 1.7%
2018 BIOSCIENCE JOBS: 4,000

• Change in jobs:
  • 2013-2018: 75 jobs lost
  • 2018-2023f: 260 jobs to be added
  • Job growth 2013-2018: -1.8 percent

2018 AVERAGE ANNUAL WAGES

• Bioscience Average: $96,860
• LA County Average: $64,920
2018 BIOSCIENCE JOBS: 6,500

• Change in jobs:
  • 2013-2018: 390 jobs added
  • 2018-2023f: 460 jobs to be added
  • Job growth 2013-2018: 6.3 percent

2018 AVERAGE ANNUAL WAGES

• Bioscience Average: $75,030
• LA County Average: $64,920
BIOSCIENCE
SANTA CLARITA (2018)

- Biopharmaceuticals: 8.4%
- Research and Lab Services: 30.0%
- Life Science Trade: 20.1%
- Medical Devices and Diagnostics Equipment: 41.6%

BIOSCIENCE JOBS

- 2013: 6,100
- 2018: 6,490
- 2023f: 6,950

CHANGE IN REAL WAGES 2013-2018

- LA County Bioscience: 8.8%
- LA County Average: 6.2%
- Santa Clarita: 2.2%
2018 BIOSCIENCE JOBS: 2,700

- Change in jobs:
  - 2013-2018: 570 jobs added
  - 2018-2023f: 600 jobs to be added
  - Job growth 2013-2018: 27.0 percent

2018 AVERAGE ANNUAL WAGES

- Bioscience Average: $71,920
- LA County Average: $64,920
BIOSCIENCE
SILICON BEACH (2018)

CHANGE IN BIOSCIENCE JOBS

CHANGE IN REAL WAGES 2013-2018

- Culver City
- Playa Vista

Biopharmaceuticals
Biotechnology and Biofuels
Life Science Trade
Medical Devices and Diagnostics Equipment
Research and Lab Services
Thank you!

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THANK YOU!

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