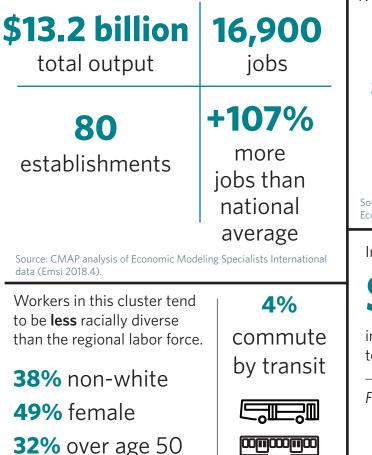# Biopharmaceuticals

This cluster produces complex chemical and biological substances used in medications, vaccines, diagnostic tests, and similar medical applications. The technical report, *Metropolitan Chicago's traded industry clusters*, offers extensive data on the characteristics and performance of the Chicago region's core industrial assets since 2001, available for download at https://cmap.is/Traded-Clusters.
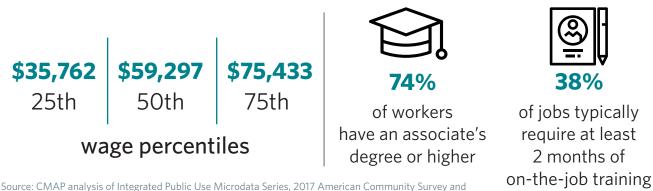
In the Chicago region in 2017, this cluster consisted of

$13.2 billion
total output

16,900
jobs

80
establishments

+107%
more jobs than national average

Workers in this cluster tend to be **less** racially diverse than the regional labor force.

38% non-white
49% female
32% over age 50

4%
commute by transit

Largest occupations

Filling Machine Operator
Inspector
Sales Representatives
Chemists
Machine Setters

In recent years, the cluster's competitive position **held steady** as it remained **specialized** in the national context.

-7%
jobs

+44%
total output

Chicago

+134%
jobs

+41%
total output

San Francisco

-33%
jobs

-11%
total output

Philadelphia

Middle-skill workers have **greater** opportunity than the regional average.

$35,762
25th

$59,297
50th

$75,433
75th

wage percentiles

74%
of workers have an associate's degree or higher

38%
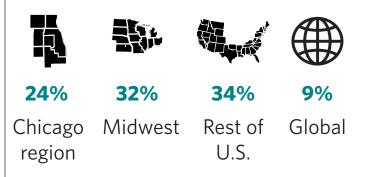of jobs typically require at least 2 months of on-the-job training

In 2016, this cluster generated approximately

$44.0 billion

in freight shipments that originate, terminate, or circulate regionally.

Freight mode share, by value

57%
Truck

38%
Multimodal

2%
Rail

Freight trade geography, by value

24%
Chicago region

32%
Midwest

34%
Rest of U.S.

9%
Global