

Life Science & Biotech in Medford

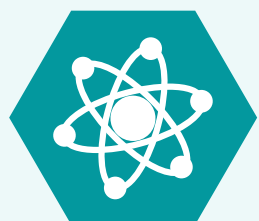
Medford is well-positioned to capture the Boston Metro Area's growing life science and biotech industry. Why is biotech a good fit for Medford?



Job Creation



Increased Tax Revenue



Cross-Community Innovation and Partnerships

What is biotech?

The life science and biotech industry consists of pharmaceutical, biomedical, and medical device companies. The Greater Boston Area is home to 35 million RSF of life science lab space and over 600 companies. In 2020, nearly \$10 billion in venture capital and NIH funding was raised by companies in the region.

Planning, Development, & Sustainability



Federal Regulations

Federal regulations enforce best practices in life science labs, protecting communities and neighborhoods.

Food & Drug Administration

The **Current Good Manufacturing Practices** (CGMPs) set standards for manufacturing facilities, ensuring quality and safety of drug products.

Enforcement



Inspection (FDA certification is required to open a facility)



Recalls



Legal Action

National Institutes of Health

The **NIH Guidelines** detail construction and handling procedures for biotech research, ensuring proper safety and containment of cells, organisms, and molecules.

Reporting Requirements

- Most minor incidents must be reported to the NIH
- Spills and accidents in Biosafety Lab Levels over 2 must be reported immediately

Biosafety Levels (BSL)

BSL 1

Infectious Agents

Not known to cause disease.

Practices & Equipment

- Basic safety procedures
- No special equipment

BSL 2

Infectious Agents

Moderate risk if inhaled, swallowed, or touched.

Practices & Equipment

- Gloves
- Eyewear
- Handwashing sink
- Waste decontamination facility

Biosafety Levels define proper laboratory techniques, safety equipment, and design, depending on the types of agents being studied in a facility.

BSL 3

Infectious Agents: Air transmission causing potentially lethal infection.

Practices & Equipment: Gas tight enclosure, clothing decontamination, sealed windows, and specialized ventilation systems

BSL 4

Infectious Agents: High risk of lethal disease with no known vaccine or treatment.

Practices & Equipment: Full-body air supplied suits, showers, BSL3 practices and equipment, and isolated within a larger building

Did you know?

There are a limited number of BSL3 labs in Massachusetts. Biotech facilities coming to Medford will most likely be Biosafety Levels 1-2. BSL4 labs are prohibited and the Board of Health is considering further limitations on BSL3 Labs.

State & Municipal Regulations

Massachusetts

The Department of Public Health regulates medical and biological waste disposal (105 CMR 480). Waste products regulated under state law include:

- Blood and blood products
- Pathological waste
- Infectious agents
- Contaminated animal waste
- Biotechnology by-product effluents

Medford

Life science and biotech laboratories in Medford are subject to building code requirements and Board of Health oversight. Projects that require zoning approval are also subject to CD Board and ZBA review.

BSL4 laboratories are **PROHIBITED** in Medford (Ord. No. 615, § 2, 3-25-1997).



Looking for more information?

[NIH Information Homepage](https://osp.od.nih.gov/biotechnology/nih-guidelines/): osp.od.nih.gov/biotechnology/nih-guidelines/

[NIH Guidelines \(pdf\)](https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf): osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf

[FDA Current Good Manufacturing Practice \(CGMP\) Regulations](https://fda.gov/drugs/pharmaceutical-quality-resources/facts-about-current-good-manufacturing-practices-cgmps):

fda.gov/drugs/pharmaceutical-quality-resources/facts-about-current-good-manufacturing-practices-cgmps

[Biosafety in Microbiological and Biomedical Laboratories \(BMBL\) 5th Edition](https://www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2009-P.PDF):

www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2009-P.PDF

[CDCs Guide to BSLs](https://www.cdc.gov/cpr/documents/BSL_infographic_final.pdf): www.cdc.gov/cpr/documents/BSL_infographic_final.pdf

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