

Medical Scientists

SOC: 19-1042 • Career Profile Report

■ Key Facts

\$100,590

Median Salary

165,300

Employment

+9.0%

Growth Rate

■ Requirements & Salary Range

Education: Doctoral

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

8.7/10 - Excellent work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	Investigative	9.4/10
Artistic	5.6/10	Social	6.4/10
Enterprising	4.8/10	Conventional	6.4/10

■ Top Skills Required

Communication skills, Critical-thinking skills, Data-analysis skills, Decision-making skills, Observation skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Medical Scientists are research professionals who investigate **human diseases, treatments, and biological processes to improve health outcomes**. They design and conduct studies that advance medical knowledge, develop new therapies, and improve diagnostic tools. Working at the intersection of biology, medicine, and data, medical scientists help translate laboratory discoveries into real-world clinical applications.

This career is well suited for individuals who enjoy scientific inquiry, complex problem-solving, and contributing to advances in healthcare and medicine.

What Do Medical Scientists Do?

Medical scientists plan and carry out research to better understand disease and improve patient care.

Common responsibilities include:

- Designing and conducting laboratory or clinical research studies
- Investigating causes of diseases and testing potential treatments
- Developing and evaluating drugs, medical devices, or therapies
- Analyzing biological samples such as blood, tissue, or cells
- Interpreting experimental data using statistical and analytical methods
- Writing research papers, reports, and grant proposals
- Collaborating with physicians, technicians, and other scientists

Areas of Research and Specialization

Medical scientists often focus on specific fields of study:

- Clinical Research: Studying treatments and outcomes in patient populations.
- Biomedical Research: Investigating cellular and molecular mechanisms of disease.
- Pharmacology and Drug Development: Testing safety and effectiveness of medications.
- Epidemiology and Disease Prevention: Analyzing disease patterns and risk factors.
- Immunology and Infectious Disease: Researching immune responses and pathogens.
- Translational Research: Turning lab discoveries into clinical applications.

Skills and Abilities Needed

Medical scientists combine advanced scientific knowledge with analytical precision.

Core Professional Skills

Personal Qualities That Matter

Education and Training Pathway

Becoming a medical scientist requires extensive education and research training:

- Bachelor's Degree: Biology, biochemistry, or related life sciences
- Doctoral Degree (PhD or MD/PhD): Required for independent research roles
- Postdoctoral Training: Advanced research specialization (common)
- Clinical Research Training: For scientists working with human subjects
- Continuing Education: Staying current with scientific and regulatory advances

Where Do Medical Scientists Work?

Medical scientists work in research-intensive healthcare and science settings:

- Universities and Academic Medical Centers
- Hospitals and Research Hospitals

- Pharmaceutical and Biotechnology Companies
- Government Research Agencies
- Private Research Laboratories

Work is typically laboratory- or office-based, sometimes combined with clinical settings.

How Much Do Medical Scientists Earn?

Earnings vary by education level, sector, and research focus:

- Early-Career Medical Scientists: Typically earn competitive research salaries
- Experienced or Senior Scientists: Often earn higher compensation
- Industry-Based Scientists: May earn more than academic counterparts

Compensation often includes research funding opportunities and strong benefits.

Is This Career Difficult?

This career is intellectually demanding and highly competitive. Medical scientists must master complex scientific concepts, secure research funding, and produce reproducible results. The challenge lies in persistence—experiments may fail, and progress can be slow, but successful discoveries can have profound impact.

Who Should Consider Becoming a Medical Scientist?

This career may be a strong fit if you:

- Enjoy advanced science and research
- Are motivated by solving complex medical problems
- Can commit to long-term education and training
- Are detail-oriented and data-driven
- Want to contribute to advances in human health

How to Prepare Early

- Take advanced courses in biology, chemistry, and math
- Participate in laboratory research or science fairs
- Learn data analysis and scientific writing skills
- Seek research internships or assistant roles
- Explore graduate programs in biomedical or medical sciences

Medical scientists drive progress in healthcare by uncovering the biological foundations of disease and transforming research into knowledge that leads to better treatments, diagnostics, and outcomes for patients worldwide.