Focus on Careers in Clinical Microbiology

“The health of individuals and communities hinges on the services and expertise of clinical microbiologists.”  D. Wolk, 2010

What does a clinical microbiologist do?

- Recommends methods for obtaining and transporting clinical specimens that would be most helpful in diagnosing infectious diseases.
- Isolates and identifies bacterial, viral, fungal and parasitic agents that are likely to be contributing to infectious processes.
- Determines the susceptibility of microorganisms to various antimicrobial agents that could be used to treat infections caused by the microorganisms.
- Reports results to healthcare providers caring for patients in a clear, concise and clinically relevant manner.
- Works with healthcare teams, including public health officials, to improve processes to diagnose and control infectious diseases with a strong emphasis on effective communication at all levels.
- Works with pharmaceutical and medical device manufacturers to develop new and improved technologies to confront emerging infectious diseases.

Where does a clinical microbiologist work?

- Hospital Laboratories
- Commercial and Reference Laboratories (where more complex lab tests are often performed)
- Federal and State Government Laboratories
- State and Local Public Health Laboratories
- Universities and Medical Schools
- Pharmaceutical and Diagnostic Instrument Companies

Go here to learn more about the day-to-day activities of a Clinical Microbiologist.

"Life in the Clinical Microbiology Laboratory” (5 min video)
https://www.youtube.com/watch?v=fHitKYBQy4
"Clinical Microbiology with Ellen Jo Baren” (60 min video)

How many ASM members have clinical microbiology as their focus?

Of the 37,000 ASM members, over 15% indicate their primary career focus is clinical microbiology.

Considering increasing challenges in healthcare today, where is the greatest need for clinical microbiologists?

- Develop new tests to identify emerging infectious diseases that are rapid, clinically relevant and cost effective.
- Identify innovative ways to assess the activity of antimicrobial agents against microorganisms that are most predictive of therapeutic outcomes.
- Provide guidance to computer programmers to develop information technology that can best serve clinicians when ordering tests, reviewing test results and integrating test results with each patients electronic medical record.
- Work with healthcare teams to better control transmission of infectious diseases within healthcare settings and in communities in the USA and beyond.

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**Career Tracks and Educational Opportunities / Requirements for Clinical Microbiologists**

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<thead>
<tr>
<th>Position</th>
<th>Educational Requirements</th>
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<tr>
<td>Medical Laboratory Technician (MLT)</td>
<td>Associate’s Degree&lt;br&gt;Completion of an accredited MLT program&lt;br&gt;.....more here&lt;br&gt;National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)&lt;br&gt;<a href="http://www.naacls.org/">http://www.naacls.org/</a>&lt;br&gt;American Society for Clinical Laboratory Science (ASCLS)&lt;br&gt;<a href="http://www.ascls.org/">http://www.ascls.org/</a></td>
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<tr>
<td>Medical Technologist (MT) aka Medical Laboratory Scientist (MLS), Clinical Laboratory Scientist (CLS)</td>
<td>BS in the biology / health-related sciences&lt;br&gt;Completion of an accredited MT program&lt;br&gt;.....more here&lt;br&gt;National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)&lt;br&gt;<a href="http://www.naacls.org/">http://www.naacls.org/</a>&lt;br&gt;American Society for Clinical Laboratory Science (ASCLS)&lt;br&gt;<a href="http://www.ascls.org/">http://www.ascls.org/</a></td>
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<td>Doctoral Level Clinical Microbiologist</td>
<td>PhD and/or MD in Microbiology/Molecular Biology&lt;br&gt;Post Doc through ASM’s Committee on Postgraduate Education Programs (CPEP) training (optional but desirable)&lt;br&gt;<a href="http://clinmicro.asm.org/index.php/asm-programs/professional-development/cpep">http://clinmicro.asm.org/index.php/asm-programs/professional-development/cpep</a></td>
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**Board Certification for MLT / MT / PhD and/or MD**


Doctoral level only:<br> American Board of Medical Microbiology (ABMM) - for individuals who want to direct public health or clinical microbiology laboratories<br>[http://www.asm.org/index.php/certification/abmm](http://www.asm.org/index.php/certification/abmm)

- American Board of Medical Laboratory Immunology (ABMLI) - for individuals who want to direct medical immunology laboratories<br>[http://www.asm.org/index.php/certification/abml](http://www.asm.org/index.php/certification/abml)

**...more on Clinical Microbiology at ASM**