

# SPECIALIST AND INTERNATIONAL SPECIALIST IN MOLECULAR BIOLOGY, SMB(ASCP) AND SMB(ASCP<sup>i</sup>)

## Suggested Reading for Examination Preparation

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This list is intended only as a partial reference source. Its distribution does not indicate endorsement by the American Society for Clinical Pathology (ASCP) Board of Certification (BOC), nor does the ASCP BOC wish to imply that the content of the examination will be drawn solely from these publications.

### JOURNALS

**The review of journal articles is highly recommended for success on the SMB exam.**

- Horak, P., et al. (2022). [Standards for the classification of pathogenicity of somatic variants in cancer \(oncogenicity\): Joint recommendations of Clinical Genome Resource \(ClinGen\), Cancer Genomics Consortium \(CGC\), and Variant Interpretation for Cancer Consortium \(VICC\)](#). *Genetics in Medicine*, 24(5), 986-998. <https://doi.org/10.1016/j.gim.2022.01.001>
- Jennings, L.J., et al. (2017). [Guidelines for Validation of Next-Generation Sequencing-Based Oncology Panels: A Joint Consensus Recommendation of the Association for Molecular Pathology and College of American Pathologists](#). *The Journal of Molecular Diagnostics*, 19(3), 341–365. <https://doi.org/10.1016/j.jmoldx.2017.01.011>
- Li, M.M., et al. (2017). [Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer: A Joint Consensus Recommendation of the Association for Molecular Pathology, American Society of Clinical Oncology, and College of American Pathologists](#). *Journal of Molecular Diagnostics*, 19(1), 4–23. <https://doi.org/10.1016/j.jmoldx.2016.10.002>
- Quan, P. L., Sauzade, M., & Brouzes, E. (2018). [dPCR: A Technology Review](#). *Sensors*, 18(4). <https://doi.org/10.3390/s18041271>
- Rehm, H.L., et al. (2013). [ACMG Clinical Laboratory Standards for Next-Generation Sequencing](#). *Genetics in Medicine*, 15(9), 733–747. <https://doi.org/10.1038/gim.2013.92>
- Richards, S., et al. (2015). [Standards and Guidelines for the Interpretation of Sequence Variants: A Joint Consensus Recommendation of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology](#). *Genetics in Medicine*, 17(5), 405–424. <https://doi.org/10.1038/gim.2015.30>

### TEXTS

#### GENERAL MOLECULAR BIOLOGY

- Alberts, B., et al. (2022). [Molecular Biology of the Cell](#) (7<sup>th</sup> ed.). New York: Garland Science.
- Buckingham, L. (2019). [Molecular Diagnostics: Fundamentals, Methods, & Clinical Applications](#) (3<sup>rd</sup> ed.). Philadelphia: F.A. Davis Company.
- Coleman, W.B. & Tsongalis, G.J. (Eds.). (2018). [Molecular Pathology: The Molecular Basis of Human Disease](#) (2<sup>nd</sup> ed.). Elsevier Inc. **\*\*A new edition will be available November 2025\*\***
- Leonard, D.G.B. (Ed.). (2016). [Molecular Pathology in Clinical Practice](#) (2<sup>nd</sup> ed.). New York: Springer. (Chapters 1 – 2 ONLY)
- Rifai, N., et al. (Eds.). (2018). [Principles and Applications of Molecular Diagnostics](#). Elsevier Inc.

#### APPLICATIONS OF MOLECULAR SCIENCE

- Cohn, R., Scherer, S., & Hamosh, A. (Eds.). (2023). [Thompson & Thompson Genetics and Genomics in Medicine](#) (9<sup>th</sup> ed.). Philadelphia, PA: Elsevier Inc.
- Coleman W., & Tsongalis G. (Eds.). (2023). [Diagnostic Molecular Pathology: A Guide to Applied Molecular Testing](#) (2<sup>nd</sup> ed.). Academic Press.
- DeVita, V.T., et al. (2021). [DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology: Primer of the Molecular Biology of Cancer](#) (3<sup>rd</sup> ed.). Philadelphia: Wolters Kluwer Health.

Jorde, L.B., Carey, J.C., & Bamshad, M.J. (2019). [\*Medical Genetics\*](#) (6<sup>th</sup> ed.). Philadelphia, PA: Elsevier Inc.  
Kulkarni, S., & Roy, S. (Eds.). (2015). [\*Clinical Genomics: A Guide to Clinical Next Generation Sequencing\*](#). Elsevier Inc.  
**\*\*A new edition will be available July 2025\*\***  
Persing, D.H., et al. (Eds.). (2016). [\*Molecular Microbiology: Diagnostic Principles and Practice\*](#) (3<sup>rd</sup> ed.). Washington D.C.: ASM Press.

#### LABORATORY OPERATIONS

Davis, D.L. (2016). [\*Laboratory Safety: A Self-Assessment Workbook\*](#) (2<sup>nd</sup> ed.). Chicago: ASCP Press.  
Doucette, L.J. (2021). [\*Mathematics for the Clinical Laboratory\*](#) (4<sup>th</sup> ed.). St. Louis: Elsevier.  
Stephenson, F.H. (2016). [\*Calculations for Molecular Biology and Biotechnology: A Guide to Mathematics in the Laboratory\*](#) (3<sup>rd</sup> ed.). London: Academic Press.

#### MANAGEMENT

Garcia, L.S., et al. (Eds.). (2024). [\*Clinical Laboratory Management\*](#) (3<sup>rd</sup> ed.). Washington D.C.: ASM Press.  
Harmening, D.M. (2020). [\*Laboratory Management: Principles and Processes\*](#) (4<sup>th</sup> ed.). St. Petersburg: D.H. Pub. & Consulting, Inc.

#### ONLINE

***Some online resources may require membership or a subscription.***

[ACMG Technical Standards for Clinical Genetics Laboratories \(2021 Revision\)](#)  
[Association for Molecular Pathology \(AMP\) "Molecular in My Pocket™" Reference Card Series](#)  
[American Society for Histocompatibility and Immunogenetics \(ASHI\) Educational Resources](#)  
[American Society for Microbiology \(ASM\) Molecular Resources](#)  
[College of American Pathologists \(CAP\)](#)  
[Compendium of Cancer Genome Aberrations](#)  
[HGVS Nomenclature](#)