

Andrea Ferreira-Gonzalez, PhD



Chair of Molecular Diagnostics
Director of Molecular Diagnostics Lab
Professor of Pathology
Division Department of Pathology
Virginia Commonwealth University 1994 - Present
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Education

Graduate Education

PhD, Microbiology/Immunology
Graduate School of Arts and Science George Washington University
Washington, DC, 1994

Licenses & Certifications

2003-present Diplomate of American Board of Bioanalysis (ABB)- High Complexity Laboratory Director
2012-present Diplomate of the American Board of Bioanalysis (ABB)- Clinical Consultant

Selected Awards & Honors

- 2010 **AMP Leadership Award.** Given by the Association for Molecular Pathology (AMP) to a member that has significantly contributed to the practice of molecular diagnostics and influenced the field of molecular pathology.
- 2020 **IFCC Award for Significant Contributions in Molecular Diagnostics.** This award honors an individual who has made unique contributions to promoting and understanding molecular biology and its application in Clinical Chemistry and Laboratory Medicine worldwide.

VCU Service

2024-2027	SOM Faculty Advisory Council
2022-2024	SOM Executive Committee
2020-2022	VCU Health System COVID-19 Response Task Force
2020-2022	VCU Health System COVID-19 Leadership Committee
2020-2022	VCU Health System. Healthy Workplace/Back to Campus Committee
2018-2019	VCU Task Force Genomic Core Facilities at VCU

Professional Service (outside)

- IFCC: Committee on Clinical Molecular Biology Curriculum, Chair
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| 2018- present | AACC Molecular Pathology Division. Ad Hoc Board Member |
| 2019-present | Professional Relations Committee, Member. Association for Molecular Pathology |
| 2022-present | Policy and External Advisory Core Committee. American Association for Clinical Chemistry, Member |

Recent Invited Presentations

The Roadmap to Recognition of Molecular Professionals as Qualified Healthcare Professionals. Annual Meeting Association for Molecular Pathology. November 2020.

Quality Control in the era of Next Generation Sequencing. Annual meeting American Association of Clinical Chemistry. December 2020.

Applications of Cell free DNA in clinical practice. Annual meeting American Association of Clinical Chemistry. Atlanta, GA July 2021.

Solid Tumor Summit- Comprehensive genomic profiling or targeted NGS panels. GenomeWeb Summit, June 29th, 2021

Exome sequencing in Rare Genetic Disease. Qiagen Corporation webinar on demand- March 2021.

Quality Control in the era of Next Generation Sequencing. Annual meeting American Association of Clinical Chemistry, Chicago July 2022.

Molecular Diagnostics-Advanced Workshop on Principles and Practices MDx. International Federation of Clinical Chemistry (IFCC), Cappadocia, Turkey, December 2022.

Molecular Diagnostics- Introduction Course in Molecular Biology- IFCC. Turkey 2022 IFCC Cappadocia, Turkey, November 2022.

Empowering precision oncology through localized comprehensive genomic tumor profiling 2024 Oncomine World. March 21, 2024.

Selected Publications

Peer Reviewed Papers

Hegde M, Santani A, Mao R, **Ferreira-Gonzalez A**, Weck KE, Voelkerding KV. Development and Validation of Clinical Whole-Exome and Whole-Genome Sequencing for Detection of Germline Variants in Inherited Disease. Arch Pathol Lab Med. 2017 Jun;141(6):798-805.

Santani A, Murrell J, Funke B, Yu Z, Hegde M, Mao R, **Ferreira-Gonzalez A**, Voelkerding KV, Weck KE. Development and Validation of Targeted Next-Generation Sequencing Panels for Detection of Germline Variants in Inherited Diseases. Arch Pathol Lab Med. 2017 Jun;141(6):787-797.

Ferreira-Gonzalez A, Mardis ER. Precision oncogenomics. Cold Spring Harb Mol Case Stud. 2019 Apr 1;5(2). pii: a004150. doi: 10.1101/mcs. a004150.

Yan C, Turner SA, **Ferreira-Gonzalez A**. Lynch syndrome-associated ultra-hypermuted pediatric glioblastoma mimicking a constitutional mismatch repair deficiency syndrome. Cold Spring Harb Mol Case Stud. 2019 Oct 23;5(5). PMID:31604779.

Gupta G, Yakubu I, Bhati C, Zhang Y, Kang L, Patterson AJ, **Ferreira-Gonzalez A**, Kumar D, Moinuddin I, Kamal L, King A, Levy M, Sharma A, Cotterell A, Reichman T, Khan A, Kimball P, Stiltner DR, Baldecchi N, Brigle N, Gehr T, Sterling RK. Ultra-short Duration Direct Acting Anti-Viral Prophylaxis to Prevent Virus Transmission from Hepatitis C Viremic Donors to Hepatitis C Negative Kidney Transplant Recipients. Am J Transplant. 2020 Mar;20(3):739-751.

Finlay-Schultz J, Jacobsen BM, Riley D, Paul KV, Turner S, **Ferreira-Gonzalez A**, Harrell JC, Kabos P, Sartorius. New generation breast cancer cell lines developed from patient-derived xenografts. CA Breast Cancer Res. 2020 Jun 23;22(1):68. PMID: 32576280.

Ferreira-Gonzalez, A. Plasma PIK3CA mutation testing in advanced breast cancer patients for personalized medicine: A value proposition. J Applied Lab Medicine. 2020, 5(5): 1076-1089.

Zhou L, Zhang Y, Meads MB, Dai Y, Ning Y, Hu X, Li L, Sharma K, Nkwocha J, Parker R, Bui D, McCarter J, Kramer L, Purcell C, Sudalagunta PR, Canevarolo RR, Coelho Siqueira Silva MD, De Avila G, Alugubelli RR, Silva AS, Kmeiciak M, **Ferreira-Gonzalez A**, Shain KH, Grant S. IAP, and HDAC inhibitors interact synergistically in myeloma cells through noncanonical NF- κ B- and caspase-8-dependent mechanisms. *Blood Adv.* 2021 5(19):3776-3788. PMID: 3446497.

Rafferty KA, Barrie ES, Turner SA, **Ferreira-Gonzalez A**, Jackson-Cook C, Paulraj P. Severe Graft-Versus-Host Disease Following Solid-Organ Transplant Confirmed by Chimerism Studies and Cytogenetic Analyses. *Exp Clin Transplant.* 2022 Nov;20(11):1031-1034. PMID: 35297330.

Boyd DC, Zboril EK, Olex AL, Leftwich TJ, Hairr NS, Byers HA, Valentine AD, Altman JE, Alzubi MA, Grible JM, Turner SA, **Ferreira-Gonzalez A**, Dozmorov MG, Harrell JC. .Discovering Synergistic Compounds with BYL-719 in PI3K Overactivated Basal-like PDXs. *Cancers (Basel).* 2023 Mar 3;15(5):1582. PMID: 36900375.

Zboril EK, Grible JM, Boyd DC, Hairr NS, Leftwich TJ, Esquivel MF, Duong AK, Turner SA, **Ferreira-Gonzalez A**, Olex AL, Sartorius CA, Dozmorov MG, Harrell JC. Stratification of Tamoxifen Synergistic Combinations for the Treatment of ER+ Breast Cancer. *Cancers (Basel).* 2023;15(12):3179. PMID: 37370789.

Ferreira-Gonzalez A, Hocum B, Ko G, Shuvo S, Appukkuttan S, Babajanyan S. Next-Generation Sequencing Trends among Adult Patients with Select Advanced Tumor Types: A Real-World Evidence Evaluation. *J Mol Diagn.* 2024 Apr;26(4):292-303. doi: 10.1016/j.jmoldx.2024.01.005. Epub 2024 Feb 1. PMID: 38296192.

Book Chapters and Monographs

Ferreira-Gonzalez A. Evidence builds for tumor mutation burden as an immunotherapy biomarker. In *Current Topics in Molecular Pathology.* 2nd Ed. Tsongalis (ed). Elsevier 2019.

Ferreira-Gonzalez, A. Section Editor Somatic Cancer *Current Topics in Molecular Pathology.* 3rd Ed. Tsongalis (ed). Elsevier 2020.

Ferreira-Gonzalez A. PIK3CA and Breast Cancer. In *Current Topics in Molecular Pathology.* 3rd Ed. Tsongalis (ed). Elsevier 2020.