

Curriculum Vitae
Huazhang Guo, M.D., Ph.D.

Personal Information

Professional Address
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Current Position, Institution and Start Date

Associate Professor, Department of Pathology, Saint Louis University	07/2021-Present
Medical Director, Clinical Laboratory, OSF Saint Anthony's Hospital	10/2023-Present

Education

Postgraduate training: Fellowship – Molecular Genetic Pathology Mount Sinai Hospital	07/2014-06/2015
Residency – Anatomical/Clinical Pathology New York Medical College at Westchester Medical Center	07/2010-06/2014
Postdoctoral research University of Tennessee, Health Science Center	05/2000-01/2003
Graduate degree and major Fourth Military Medical University (China) “Prediction and validation of T cell antigen epitope in HCV NS3 region”	Doctor of Medicine (Pathology) 08/1996-07/1999
Graduate degree and major Fourth Military Medical University (China) “Osteogenesis and immunogenicity of reconstituted bone xenograft”	Master of Medicine (Orthopedics) 08/1993-07/1996
Undergraduate degree and major Fourth Military Medical University (China)	Bachelor of Medicine (Medicine) 08/1987-07/1993

Previous Professional Experience

Medical Director, Laboratories, Anderson Hospital	06/2022-09/2023
Medical Director of SLU Molecular Diagnostic Lab	07/2017-08/2019
Assistant Professor, University of Pittsburgh Medical Center	07/2015-06/2017
Research Associate, University of Tennessee, HSC	05/2005-06/2010
Instructor, Fourth Military Medical University (China)	02/2003-04/2005
Instructor, Fourth Military Medical University (China)	08/1999-04/2000

Hospital and Clinical Staff Appointments

SSM Saint Louis University Hospital	07/2017-Present
SSM Cardinal Glennon Children's Hospital	07/2017-Present

SSM St. Mary's Hospital	07/2019-Present
Anderson Hospital	06/2022-Present
OSF St Anthony's Hospital	10/2023-Present

Board Certification and Licensure

Clinical Informatics Board Certification	11/2018
Molecular Genetic Pathology Board Certification	09/2015
Anatomical/Clinical Pathology Board Certification	07/2014
Missouri Medical License (active)	04/2017
Illinois Medical License (active)	02/2020
Pennsylvania Medical License (inactive)	06/2015
New York Medical License (inactive)	12/2013

Professional Society Memberships

National	College of American Pathologists (CAP) Member of the House of Delegates of CAP (2023-2025)
National	Chinese American Pathologists Association (CAPA) IT Committee Chair of CAPA (2025-2026)

Current and Past Teaching Responsibilities

Workshops	Molecular Pathology for Residents	(2019, 2020, 2023)
Rotations	Molecular Pathology for Residents and Fellows	(2018, 2019, 2020)
	Pathology Informatics for Residents	(2019)
	Introduction to Pathology for High School Students	(2022-Present)
Lectures	Molecular Pathology for Residents	(2017)
	Pathology Informatics for Residents	(2017)
	Basic Computation in Pathology Informatics	(2015, 2016)

Protégé

Mentoring a computer science Ph.D. student of University of Missouri at Columbia
Teaching pathology residents, fellows (pathology and other specialties), medical students, and high school students

Bibliography

Peer-reviewed articles

- 1: [Guo H](#), Ray RM, Johnson LR. RhoA stimulates IEC-6 cell proliferation by increasing polyamine-dependent Cdk2 activity. *Am J Physiol Gastrointest Liver Physiol.* 2003 Oct;285(4):G704-13. Epub 2003 Jun 19. PubMed PMID: 12816757.
- 2: [Guo HZ](#), Yin Y, Wang WL, Zhang CS, Wang T, Wang Z, Zhang J, Cheng H, Wang HT. Sequence evolution of putative cytotoxic T cell epitopes in NS3 region of hepatitis C virus. *World J Gastroenterol.* 2004 Mar 15;10(6):847-51. PubMed PMID: 15040030.
- 3: Wang Z, Li Q, Huang GS, Liu SJ, [Guo HZ](#), Zhang J, Cheng H, Xu J, Barenboim-Stapleton L, Ried T. Clinical report of congenital lymphatic malformations and partial gigantism of the hands associated with a heterogeneous karyotype. *Am J Med Genet A.* 2005 Jan 1;132A(1):106-7. PubMed PMID: 15472995.

CVFormat: Revised 11/08/2011, 3/7/12

(Modified based on input from Credentials Committee, Dean's Staff, Chairs Committee and Faculty Affairs Committee)

- 4: Ray RM, Guo H, Patel M, Jin S, Bhattacharya S, Johnson LR. Role of myosin regulatory light chain and Rac1 in the migration of polyamine-depleted intestinal epithelial cells. *Am J Physiol Gastrointest Liver Physiol*. 2007 Apr;292(4):G983-95. Epub 2006 Dec 14. PubMed PMID: 17170026.
- 5: Bhattacharya S, Guo H, Ray RM, Johnson LR. Basic helix-loop-helix protein E47-mediated p21Waf1/Cip1 gene expression regulates apoptosis of intestinal epithelial cells. *Biochem J*. 2007 Oct 15;407(2):243-54. PubMed PMID: 17617061.
- 6: Khurana S, Tomar A, George SP, Wang Y, Siddiqui MR, Guo H, Tigyi G, Mathew S. Autotaxin and lysophosphatidic acid stimulate intestinal cell motility by redistribution of the actin modifying protein villin to the developing lamellipodia. *Exp Cell Res*. 2008 Feb 1;314(3):530-42. Epub 2007 Nov 12. PubMed PMID: 18054784.
- 7: Guo H, Makarova N, Cheng Y, E S, Ji RR, Zhang C, Farrar P, Tigyi G. The early-and late stages in phenotypic modulation of vascular smooth muscle cells:differential roles for lysophosphatidic acid. *Biochim Biophys Acta*. 2008 Sep;1781(9):571-81. doi: 10.1016/j.bbali.2008.06.003. Epub 2008 Jun 13. PubMed PMID: 18602022.
- 8: Khandoga AL, Fujiwara Y, Goyal P, Pandey D, Tsukahara R, Bolen A, Guo H, Wilke N, Liu J, Valentine WJ, Durgam GG, Miller DD, Jiang G, Prestwich GD, Tigyi G, Siess W. Lysophosphatidic acid-induced platelet shape change revealed through LPA(1-5) receptor-selective probes and albumin. *Platelets*. 2008 Sep;19(6):415-27. doi: 10.1080/09537100802220468. PubMed PMID: 18925509.
- 9: E S, Lai YJ, Tsukahara R, Chen CS, Fujiwara Y, Yue J, Yu JH, Guo H, Kihara A, Tigyi G, Lin FT. Lysophosphatidic acid 2 receptor-mediated supramolecular complex formation regulates its antiapoptotic effect. *J Biol Chem*. 2009 May 22;284(21):14558-71. doi: 10.1074/jbc.M900185200. Epub 2009 Mar 17. PubMed PMID: 19293149.
- 10: Cheng Y, Makarova N, Tsukahara R, Guo H, Shuyu E, Farrar P, Balazs L, Zhang C, Tigyi G. Lysophosphatidic acid-induced arterial wall remodeling: requirement of PPARgamma but not LPA1 or LPA2 GPCR. *Cell Signal*. 2009 Dec;21(12):1874-84. doi: 10.1016/j.cellsig.2009.08.003. Epub 2009 Aug 23. PubMed PMID: 19709640.
- 11: Tsukahara T, Tsukahara R, Fujiwara Y, Yue J, Cheng Y, Guo H, Bolen A, Zhang C, Balazs L, Re F, Du G, Frohman MA, Baker DL, Parrill AL, Uchiyama A, Kobayashi T, Murakami-Murofushi K, Tigyi G. Phospholipase D2-dependent inhibition of the nuclear hormone receptor PPARgamma by cyclic phosphatidic acid. *Mol Cell*. 2010 Aug 13;39(3):421-32. doi: 10.1016/j.molcel.2010.07.022. PubMed PMID: 20705243.
- 12: Guo H, Birsa J, Farahani N, Hartman DJ, Piccoli A, O'Leary M, McHugh J, Nyman M, Stratman C, Kvarnstrom V, Yousem S, Pantanowitz L. Digital pathology and anatomic pathology laboratory information system integration to support digital pathology sign-out. *J Pathol Inform*. 2016 May 4;7:23. doi: 10.4103/2153-3539.181767. eCollection 2016 May 4. PubMed PMID: 27217973.
- 13: Brożyna AA, Guo H, Yang SE, Cornelius L, Linette G, Murphy M, Sheehan C, Ross J, Slominski A, Carlson JA. TRPM1 (melastatin) expression is an independent predictor of overall survival in clinical AJCC stage I and II melanoma patients. *J Cutan Pathol*. 2017 Apr;44(4):328-337. doi: 10.1111/cup.12872. Epub 2017 Jan 26. PubMed PMID: 27987328.

14: TRPM1 (melastatin) expression is an independent predictor of overall survival in clinical AJCC stage I and II melanoma patients. Brożyna AA, Guo H, Yang SE, Cornelius L, Linette G, Murphy M, Sheehan C, Ross J, Slominski A, Carlson JA. *J Cutan Pathol*. 2017 Apr;44(4):328-337

15: Pantanowitz L, Liu C, Huang Y, Guo H, Rohde GK. Impact of Altering Various Image Parameters on Human Epidermal Growth Factor Receptor 2 Image Analysis Data Quality. *J Pathol Inform*. 2017 Sep 7;8:39

16: Williams EE, Patel N, Guo H, Hurley MY, Abate MS. Kikuchi-Fujimoto disease diagnosed by correlating skin and lymph node biopsies. *JAAD Case Rep*. 2019 Apr 5(5):416-418

17: Muzaffar R, Vacca F, Guo H, Mhapsekar R, Osman MM. Pediatric Nasopharyngeal Carcinoma as Seen on 18F-FDG PET/CT. *Front Oncol*. 2019 Mar 6;9:110

18: Siddiqui Z, Maldonado J, Grojean J, Ye F, Zhang D, Longtine J, Ahn TH, Guo H. Rchimerism: An R-Package for automated chimerism data analysis. *J Mol Diag*. 2020 Jan 22(1): 21-29

19: Hanson J, Etemady-Deylamy A, Frisby J, D'Addario J, Smeds M, Chamberland R, Guo H, Abate G. Femoral artery aneurysm with large hematoma from Pasteurella: case report and literature review. *BMC Infect Dis*. 2022 Feb 21;22(1):170

20: Duan A, Guo K, Guo H. Automate cancer synoptic reporting with HyperText Markup Language (HTML) and JavaScript. *Am J Clin Pathol*. 2025 Jan 1;aqae173. doi: 10.1093/ajcp/aqae173. Epub ahead of print. PMID: 39742872.

21: Guo J, Grojean J, Guo H. ARMSprimer3: An open-source primer design Python program for amplification refractory mutation system PCR (ARMS-PCR). *J Pathol Inform*. 2025 Apr 15;17:100442. doi: 10.1016/j.jpi.2025.100442. PMID: 40421167; PMCID: PMC12104711.

Invited review articles

1: Guo H, Carlson JA, Slominski A. Role of TRPM in melanocytes and melanoma. *Exp Dermatol*. 2012 Sep;21(9):650-4. doi: 10.1111/j.1600-0625.2012.01565.x. PubMed PMID: 22897572.

2: Guo J, Starr D, Guo H. Classification and review of free PCR primer design software. *Bioinformatics*. 2021 Apr;36(22-23):5263-8. doi: 10.1093/bioinformatics/btaa910. PubMed PMID: 33104196.

3: Zhang X, Niyazi S, Guo H, Zhang L. Mimickers and associated neoplasms of Castleman disease. *Journal of Clinical and Translational Pathology*. 2025 vol. 5(1): 20-9. doi: 10.14218/JCTP.2024.00047

Invited talks

1: Invited talk on “An introduction and update on image analysis and machine learning in digital pathology” in the Missouri Society of Pathologists 2022 Conference, March 05, 2022 Stoney Creek Hotel, Columbia MO.

2: Invited talk on “New advances in digital pathology diagnosis” in the Seventh (2024) Annual Conference, Pathology Section, Shaanxi International Medical Exchange Promotion Association. April 27, 2024, Xi'an Guangcheng hotel, Xi'an, Shaanxi, China.

3: Invited talk on “An introduction and update on image analysis and machine learning in digital pathology”. University of Texas Health Science Center. Houston, TX (06/2025)

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4: Invited talk on “Molecular technologies” (2022, 2023, 2024, 2025) for Genetic Counselor program at Washington University, School of Medicine, in Saint Louis

Books published or in press, role (joint authorship, editor)

1: Qing Li and Huazhang Guo, editors. Bilingual Textbook of Pathology. The Fourth Military Medical University Press, 2004.

Abstracts

National/International Meeting Posters

1: Huazhang Guo, Humayun Islam, Alex Braun, and Fouzia Shakil. Isolated intracranial myeloid sarcoma mimicking lymphoblastic lymphoma in a 2 years-old girl. In CAP '11, Grapevine, Texas, USA, September 2011.

2: Huazhang Guo, Shiquan Jiang, William Lam, Junaid Ibrahim, David Zhang, Janina Longtine, and Fei Ye. LOCHI: a suite of R programs to automate chimerism analysis. In USCAP 2015 Annual Meeting, Boston, MA, USA, March 2015.

3: Jeremy Grojean, Mark Hoyer, and Huazhang Guo. Using Autolt to automatically enter molecular LDT results into the laboratory information system. In Association for Molecular Pathology 2018 annual meeting. Salt Lake city, UT, USA, November 2018.

4: Zohair Siddiqui, Tae-Hyuk Ahn, David Y. Zhang, Janina A. Longtine, Fei Ye, and Huazhang Guo. HOTPIPE: improving variant call accuracy by combining Torrent Variant Caller and PLATYPUS. In Association for Molecular Pathology 2018 annual meeting. Salt Lake city, UT, USA, November 2018.

5: Caleb Heinzman, Huazhang Guo, Mai He, Ye Duan. LMMs for Histopathology: Zero- and Few-Shot Patch Classification with GPT and Gemini Models. 2025 9th International Conference on Advances in Image Processing (ICAIP 2025), Chengdu, China

6: Caleb Heinzman, Huazhang Guo, Mai He, Ye Duan. From CNNs to Transformers: An In-Depth Study of Mycobacteria Detection Models, Augmentation Techniques and Ensemble Methods. 2025 9th International Conference on Advances in Image Processing (ICAIP 2025), Chengdu, China

Local/Regional Meetings

1: Huazhang Guo, Larry L. Tague, Ramesh M. Ray, and Leonard R. Johnson. REALCROSS: an automatic computer tool for cross-species real-time PCR primer design. In The 5th Annual UT/ORNL Bioinformatics Summit. Cadiz, Kentucky, USA, April 2006.

Supplemental Material

Grand Rounds "Developing computer-assisted diagnostic algorithms: acid fast bacilli, lung cancer grading, and prostate cancer screen". University of Pittsburgh. Pittsburgh, PA

(03/2016)

Journal Article Review for

American Journal of Clinical Pathology
 Bioinformatics
 Cytogenetic and Genome Research
 International Journal of Endocrinology
 Journal of Pathology Informatics
 Journal of Biomedical Informatics
 Liver International
 PHAGE: Therapy, Application, and Research

Journal Editor

Assistant Editor for the American Journal of Clinical Pathology
 (2025)

Support SLU Research Proposal

Support research proposal of the Department of Computer Science, Saint Louis University. NSF CC 23-526 "CC* Compute-Campus: Modernizing Campus Cyberinfrastructure for AI-Enhanced Research and Education (ModernCARE)". (Note: the proposal was awarded to SLU in 2025)

Patents and Technology Transfer

Automatic screening for acid fast bacilli on acid fast stained whole slide images
 (provisional patent filed) (02/2017)

Common PCR platform for molecular diagnostics
 (provisional patent filed) (05/2019)