Meng-Chang Hsiao

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445 Great Circle Rd, Suite 1323
Nashville, TN 37228
(615) 875-3270

Education

University of Alabama at Birmingham — Birmingham, AL
Ph.D. Genetics — Aug. 2008 - Apr. 2015

National Taiwan Ocean University — Keelung, Taiwan
M.S. Biotechnology and Bioscience — Sep. 2004 - Jun. 2006

National Taiwan Ocean University — Keelung, Taiwan
B.S. Food Science — Sep. 1997 - Jul. 2002

Working Experience

Vanderbilt University Medical Center — Nashville, TN
Assistant Professor, Department of Pathology, Microbiology and Immunology — Jul. 2023 - Present
Associate Medical Director, Cytogenetics and Molecular Diagnostics (CAP/CLIA)

Columbia University Irving Medical Center/NewYork-Presbyterian Hospital — New York, NY
ABMGG Fellow in Laboratory Genetics and Genomics (CAP/CLIA) — Jul. 2021 - Jun. 2023

Sema4 — Branford, CT
Somatic Curator in Molecular Oncology Lab (CAP/CLIA) — Jun. 2020 - Jun. 2021

The Jackson Laboratory — Farmington, CT
Clinical Genomic Scientist in Clinical Genomics Lab (CAP/CLIA) — Jul. 2018 - Apr. 2020
Interim Technical Supervisor — Jul. 2019 - Dec. 2019

University of Alabama at Birmingham — Birmingham, AL
Postdoctoral Fellow in Medical Genomics Lab (CAP/CLIA) — May. 2015 - Jul. 2018

University of Alabama at Birmingham — Birmingham, AL
Graduate Research Assistant in Medical Genomics Lab (CAP/CLIA) — Aug. 2009 - Apr. 2015

National Taiwan Ocean University — Keelung, Taiwan
Research Assistant in Genomic & Bioinformatics Lab — Aug. 2007 - Aug. 2008

National Taiwan Ocean University — Keelung, Taiwan
Teaching Assistant in Department of Life Science — Jul. 2006 - Jul. 2007

National Taiwan Ocean University — Keelung, Taiwan
Graduate Research Assistant in Department of Life Science — Jul. 2004 - Jun. 2006

Compulsory Military Service — Kinmen, Taiwan
Sniper — Aug. 2002 - Feb. 2004

Peer-Reviewed Publications

1. Eugene Yu-Chuan Kang, **Meng-Chang Hsiao**, Kuang-Hua Chen, Nan-Kai Wang, Yih-Shiou Hwang: Neuronal intranuclear inclusion disease in one family: clinical diversity and diagnostic challenges. ***Canadian Journal of Ophthalmology*** (2024 Oct 22:S0008-4182(24)00306-5. doi: 10.1016/j.jcjo.2024.09.009)

2. Ethan Hung-Hsi Wang, Pei-Hsuan Lin, Pei-Liang Wu, Eugene Yu-Chuan Kang, Laura Liu, Lung-Kun Yeh, Kuan-Jen Chen, **Meng-Chang Hsiao**, Nan-Kai Wang: Genetic underpinnings explored: OPA1 deletion and complex phenotypes on chromosome 3q29. ***BMC Medical Genomics*** (2024 Apr 19;17(1):94. doi: 10.1186/s12920-024-01850-6)

3. Tzu-Yi Lin, Pei-Liang Wu, Eugene Yu-Chuan Kang, Yi-Chun Chi, Laura A. Jenny, Pei-Hsuan Lin, Chia-Ying Lee, Chun-Hsiu Liu, Laura Liu, Lung-Kun Yeh, Kuan-Jen Chen, Yih-Hsiou Hwang, Wei-Chi Wu, Chi-Chun Lai, **Meng-Chang Hsiao**, Pei-Kang Liu, Nan-Kai Wang: Clinical Characteristics and Genetic Variants in Taiwanese Patients with PROM1-related Inherited Retinal Disorders. ***Invest Ophthalmol Vis Sci.*** (2023 Nov 1;64(14):25. doi: 10.1167/iovs.64.14.25)

4. Yin-Hsi Chang, Eugene Yu-Chuan Kang, Laura Liu, Laura A Jenny, Rin Khang, Go Hun Seo, Hane Lee, Kuan-Jen Chen, We-Chi Wu, **Meng-Chang Hsiao**, Nan-Kai Wang: Maternal Mosaicism in SSBP1 Causing Optic Atrophy with Retinal Degeneration: Implications for Genetic Counseling. ***Orphanet Journal of Rare Diseases*** (2023 May 31;18(1):131. doi: 10.1186/s13023-023-02748-9)

5. Daniella Rogerson, Anna Alkelai, Jessica Giordano, Madhulatha Pantrangi, **Meng-Chang Hsiao**, Chia-Ling Nhan-Chang, Joshua Motelow, Vimla Aggarwal, David Goldstein, Ron Wapner, and Carrie J. Shawber: Investigation into the Genetics of Fetal Congenital Lymphatic Anomalies. ***Prenatal Diagnosis*** (2023 Mar 23. doi: 10.1002/pd.6345)

6. Nelson Chen, **Meng-Chang Hsiao**, Nan-Kai Wang: Letter to the Editor. ***Retina*** (2023 Feb 1;43(2):e9-e11. doi: 10.1097/IAE.0000000000003664)

7. Angela H Kim, Pei-Kang Liu, Yin-Hsi Chang, Eugene Yu-Chuan Kang, Hung-Hsuan Wang, Nelson Chen, Yun-Ju Tseng, Go Hun Seo, Hane Lee, Laura Liu, An-Ning Chao, Kuan-Jen Chen, Yih-Shiou Hwang, Wei-Chi Wu, Chi-Chun Lai, Stephen H. Tsang, **Meng-Chang Hsiao**, and Nan-Kai Wang: Congenital Stationary Night Blindness: Clinical and Genetic Features. ***International Journal of Molecular Sciences*** (2022 Nov 29;23(23):14965. doi: 10.3390/ijms232314965)

8. Nelson Chen, Angela H Kim, Pei-Kang Liu, Eugene Yu-Chuan Kang, Yun-Ju Tseng, Go Hun Seo, Hane Lee, Rin Khang, Laura Liu, Kuan-Jen Chen, We-Chi Wu, **Meng-Chang Hsiao**, and Nan-Kai Wang: Novel *PCDH15* variant causes Usher syndrome type 1F with congenital hearing loss and syndromic retinitis pigmentosa. ***BMC Ophthalmology*** (2022 Nov 16;22(1):441. doi: 10.1186/s12886-022-02659-6)

9. Yi-Chien Lee, Tsung-Hsien Chen, **Meng-Chang Hsiao**, Peir-Haur Hung, Shao-Hsien Tung, Chih-Yen Hsiao: Glycated hemoglobin less than 6.5% is associated with uroseptic shock in diabetic patients with urinary tract infection. ***Frontiers in Medicine*** (2020; 7: 515506. doi:10.3389/fmed.2020.515506)

10. Chih-Yen Hsiao, Tsung-Hsien Chen, Yi-Chien Lee, **Meng-Chang Hsiao**, Peir-Haur Hung and Ming-Cheng Wang: Risk factors for uroseptic shock in hospitalized patients aged over 80 years with urinary tract infection. ***Annals of Translational Medicine*** (2020 Apr;8(7):477. doi: 10.21037/atm.2020.03.95)

11. Qian Nie, Gregory Omerza, Harshpreet Chandok, Matthew Prego, **Meng-Chang Hsiao**, Bridgette Meyers, Andrew Hesse, Jasmina Uvalic, Melissa Soucy, Daniel Bergeron, Michael Peracchio, Shelbi Burns, Kevin Kelly, Shannon Rowe, Jens Rueter, and Honey V Reddi: Molecular profiling of gynecologic cancers for treatment and management of disease – demonstrating clinical significance using the AMP/ASCO/CAP guidelines for interpretation and reporting of somatic variants. ***Cancer Genetics*** (2020 Apr;242:25-34. doi:

10.1016/j.cancergen.2019.11.008. Epub 2020 Jan 14)

12. Pavalan Selvam#, **Meng-Chang Hsiao#**, Gregory Omerza#, Daniel Bergeron#, Shannon Rowe, Jasmina Uvalic, Melissa Soucy, Michael Peracchio, Shelbi Burns, Bridgette Meyers, Matthew Prego, Qian Nie, Guruprasad Ananda, Harshpreet Chandok, Kevin Kelly, Andrew Hesse, and Honey V Reddi: Mutation yield of a custom 212-gene next-generation sequencing panel for solid tumors: clinical experience of the first 260 cases tested using the JAX ActionSeq^{TM} assay. (# Equal contribution) ***Molecular Diagnosis & Therapy*** (2020 Feb;24(1):103-111. doi: 10.1007/s40291-019-00435-9

13. Qian Nie#, **Meng-Chang Hsiao#**, Harshpreet Chandok, Shannon Rowe, Michael Peracchio, Matthew Prego, Bridgette Meyers, Gregory Omerza, Andrew Hesse, Jasmina Uvalic, Melissa Soucy, Daniel Bergeron, Shelbi Burns, Kevin Kelly, Jens Rueter, and Honey V Reddi: Molecular profiling of CNS tumors for the treatment and management of disease. ***Journal of Clinical Neuroscience*** (# Equal contribution) (2020 Jan;71:311-315. doi: 10.1016/j.jocn.2019.11.035. Epub 2019 Dec 16)

14. Chih-Yen Hsiao, Tsung-Hsien Chen, Yi-Chien Lee, **Meng-Chang Hsiao**, Peir-Haur Hung, Yih-Yuan Chen, Ming-Cheng Wang. Urolithiasis is a risk factor for uroseptic shock and acute kidney injury in patients with urinary tract infection. ***Frontiers in Medicine*** (2019 Dec 5;6:288. doi: 10.3389/fmed.2019.00288. eCollection 2019)

15. Magdalena Koczkowska, Yunjia Chen, Tom Callens, Alicia Gomes, Angela Sharp, Sherrell Johnson, **Meng-Chang Hsiao**, Zhenbin Chen, Meena Balasubramanian, Christopher P. Barnett, Troy A. Becker, Shay Ben-Shachar, Debora R. Bertola, Jaishri O. Blakeley, Emma M.M. Burkitt-Wright, Alison Callaway, Melissa Crenshaw, Karin S. Cunha, Mitch Cunningham, Maria D. D'Agostino, Karin Dahan, Alessandro De Luca, Anne Destre´e, Radhika Dhamija, Marica Eoli, D. Gareth R. Evans, Patricia Galvin-Parton, Jaya K. George-Abraham, Karen W. Gripp, Jose Guevara-Campos, Neil A. Hanchard, Concepcion Herna´ndez-Chico, LaDonna Immken, Sandra Janssens, Kristi J. Jones Beth A. Keena, Aaina Kochhar, Jan Liebelt, Arelis Martir-Negron, Maurice J. Mahoney, Isabelle Maystadt, Carey McDougall, Meriel McEntagart, Nancy Mendelsohn, David T. Miller, Geert Mortier, Jenny Morton, John Pappas, Scott R. Plotkin, Dinel Pond, Kenneth Rosenbaum, Karol Rubin, Laura Russell, Lane S. Rutledge, Veronica Saletti, Rhonda Schonberg, Allison Schreiber, Meredith Seidel, Elizabeth Siqveland, David W. Stockton, Eva Trevisson, Nicole J. Ullrich, Meena Upadhyaya, Rick van Minkelen, Helene Verhelst, Margaret R. Wallace, Yoon-Sim Yap, Elaine Zackai, Jonathan Zonana, Vickie Zurcher, Kathleen Claes, Yolanda Martin, Bruce R. Korf, Eric Legius, and Ludwine Messiaen: Genotype-phenotype correlation in NF1: evidence for a more severe phenotype associated with missense mutations affecting NF1 codons 844–848. ***The American Journal of Human Genetics*** (Volume 102, Issue 1 Pages 69-87, January 2018)

16. **Meng-Chang Hsiao**, Arkadiusz Piotrowski, Andrzej Poplawski, Tom Callens, Chuanhua Fu and Ludwine Messiaen: Alternative outcomes of pathogenic complex somatic structural variations in the genomes of NF1 and NF2 patients. ***Neurogenetics*** (Volume 18, Issue 3, Pages 169–174, July 2017)

17. R.K. Jobling, I. Lara-Corrales, **M.-C. Hsiao**, A. Shugar, S. Hedges, L. Messiaen and P. Kannu: Mosaicism for a *SPRED1* deletion revealed in a patient with clinically suspected mosaic NF. ***British Journal of Dermatology*** (Volume 176, Issue 4, 5 February 2017)

18. **Meng-Chang Hsiao**, Arkadiusz Piotrowski, Tom Callens, Chuanhua Fu, Katharina Wimmer, Kathleen BM Claes and Ludwine Messiaen: Decoding NF1 intragenic copy-number variations. ***The American Journal of Human Genetics*** (Volume 97, Issue 2, 6 Pages 238-249, August 2015)

19. Chih-Yen Hsiao, Huang-Yu Yang, Chih-Hsiang Chang, Hing-Lin Lin, Chao-Yi Wu, **Meng-Chang Hsiao**, Peir-Haur Hung, Su-Hsun Liu, Tzung-Hai Yen, Yung-Chang Chen, and Tzu-Chin Wu: Risk factors for development of septic shock in patients with urinary tract infection. ***BioMed Research International*** (Volume 2015, Article ID 717094, 7 pages)

20. Chih-Yen Hsiao, Huang-Yu Yang, **Meng-Chang Hsiao**, and Ming-Cheng Wang: Risk factors for development of acute kidney injury in patients with urinary tract infection. ***PLOS ONE*** (2015 Jul 27;10(7): e0133835. doi:

10.1371/journal.pone.0133835)

21. **Meng-Chang Hsiao**, Arkadiusz Piotrowski, John Alexander, Tom Callens, Chuanhua Fu, Fady Mikhail, Kathleen Claes and Ludwine Messiaen: Palindrome-mediated and replication-dependent pathogenic structural rearrangements within the *NF1* gene. ***Human Mutation*** 35(7):891–898, 2014 **(This manuscript was selected as the monthly highlight. Commented by *Human Mutation* Volume 35, Issue 7 July 2014 Page v "In This Issue")**

22. Tun-Wen Pai, Chien-Ming Chen, **Meng-Chang Hsiao**, Ron-Shan Cheng, Wen-Shyong Tzou, and Chin-Hua Hu: An online conserved SSR discovery through cross-species comparison. ***Computational Biology and Chemistry: Advances and Applications*** (2009:2 23–35)

Conference Papers

1. Chien-Ming Chen, **Meng-Chang Hsiao**, Tun-Wen Pai, Ronshan Cheng, Wen-Shyong Tzou, and Margaret Dah-Tsyr Chang: Identify SSR regulators for functional gene sets through cross-species comparison. International Symposium on Optimization and Systems Biology (OSB), Lijiang, China. Oct. 2008

2. Tun-Wen Pai, **Meng-Chang Hsiao**, Chien-Ming Chen, Wen-Shyong Tzou, and Ron-Shan Chen: An SSR comparative genomics database and its applications. Intelligent Informatics in Biology and Medicine (IIBM), Barcelona, Spain. Mar. 2008

3. **Meng-Chang Hsiao,** Chien-Ming Chen, Tzu-Ying Hsiao, Hua-Ying Gao, and Tun-Wen Pai: CG-SSR: an online comparative genomics database for SSR discovery. National Computer Symposium (NCS), Taichung, Taiwan. Dec. 2007

Posters/Abstracts

1. **Meng-Chang Hsiao,** Samantha Stover, Ashwini Yenamandra, and Rebecca B. Smith: Beyond Down Syndrome Diagnosis: Recurrence Risk Assessment for Maternally Derived Isodicentric Chromosome 21 with Partial Monosomy 21q22.3. Association for Molecular Pathology (AMP) Annual Meeting, Vancouver, CA. Nov. 2024

2. **Meng-Chang Hsiao,** Nina Harkavy, Ronald Wapner, and Jun Liao: Prenatal diagnosis of 6pter-p24 deletion syndrome in a fetus associated with multiple posterior fossa anomalies. American College of Medical Genetics and Genomics (ACMG) Annual Meeting, Salt Lake City, UT. Mar. 2023

3. **Meng-Chang Hsiao,** Kelsie Bogyo, and Sandeep Wontakal: A Novel Missense Variant in *COL2A1* Strengthens the Pathogenic Role of the C-propeptide Domain in the Torrance Type of Platyspondylic Lethal Skeletal Dysplasia. Association for Molecular Pathology (AMP) Annual Meeting, Phoenix, AZ. Nov. 2022

4. **Meng-Chang Hsiao,** Shulan Li, Vaidehi Jobanputra, Brynn Levy and Jun Liao: A founder deletion of exons 3-8 in *FBN2* is not associated with congenital contractural arachnodactyly in Ashkenazi Jews. Curating the Clinical Genome (CCG) conference, Jun. 2022

5. Michael Peracchio, **Meng-Chang Hsiao**, Kevin Kelly, Daniel Bergeron, Qian Nie, Bridgette Meyers, Andrew Hesse, Jennifer Davey, Qian Wu, Roel Verhaak, Ching Lau, Honey V Reddi and Lauren Holinka: Using DNA methylation profiles to classify central nervous system tumors provides an opportunity for improved diagnostic accuracy for clinical decision making. American Society of Human Genetics Annual Meeting, Houston, TX. Oct. 2019

6. **Meng-Chang Hsiao,** Yunjia Chen, Tom Callens, and Ludwine Messiaen: Decoding *NF1* microdeletions, microinsertions and nonsense mutations. Children's Tumor Foundation NF conference, Washington, D.C. Jun. 2017

7. **Meng-Chang Hsiao,** Arkadiusz Piotrowski, Tom Callens, Andrzej Poplawski, Chuanhua Fu and Ludwine Messiaen: Alternative outcomes of pathogenic complex somatic structural variations in the genomes of NF1 and NF2 patients. Children's Tumor Foundation NF conference, Austin, TX. Jun. 2016

4. **Meng-Chang Hsiao,** Arkadiusz Piotrowski, John Alexander, Tom Callens, Chuanhua Fu, Fady Mikhail, Kathleen Claes and Ludwine Messiaen: Palindrome-mediated and replication-dependent genomic rearrangements within the *NF1* gene. Children's Tumor Foundation NF conference, Washington, D.C. Jun. 2014

5. **Meng-Chang Hsiao,** Tom Callens, Chuanhua Fu, Fady Mikhail, Arkadiusz Piotrowski and Ludwine Messiaen: Decoding palindrome-mediated deletion mechanisms. Children's Tumor Foundation NF conference, New Orleans, LA. Jun. 2012

6. Julia Ramsey, Chuanhua Fu, Fady Mikhail, **Meng-Chang Hsiao**, Angela Sharp and Ludwine Messiaen: Identification of *PKHD1* multi-exon deletions using multiplex ligation-dependent probe amplification and quantitative polymerase chain reaction. Hepato-Renal Fibrocystic Disease Core Center Annual Scientific Symposium, Birmingham, AL. Sep. 2011

7. Arkadiusz Piotrowski, **Meng-Chang Hsiao**, Suxia Yao and Ludwine Messiaen: Compound gDNA and cDNA analysis reveals details of mutational spectrum in the *SMARCB1* gene in schwannomatosis and rhabdoid tumor patients. Children's Tumor Foundation NF conference, Jackson Hole, WY. Jun. 2011

8. **Meng-Chang Hsiao**, Tom Callens, Emily Spencer, Arkadiusz Piotrowski and Ludwine Messiaen: Decoding *NF1* intragenic copy number changes. Children's Tumor Foundation NF conference, Baltimore, MD, Jun. 2010

9. **Meng-Chang Hsiao**, Chien-Ming Chen, Tun-Wen Pai, Wen-Shyong Tzou, and Ron-Shan Chen**:** A study of microsatellites dominating mammalian size variation. Research in Computational Molecular Biology Conference (RECOMB), Singapore. Mar. 2008

10. **Meng-Chang Hsiao**, Tzu-Ying Hsiao, Chien-Ming Chen, Hua-Ying Kao, Ron-Shan Chen and Tun-Wen Pai: CG-SSR: an online comparative genomics database for SSR discovery. Asia-Pacific Bioinformatics Conference (APBC), Kyoto, Japan. Jan. 2008.

11. **Meng-Chang Hsiao**, Wei-Yuan Chang, Tun-Wen Pai and Wen-Shyong Tzou: Genome-wide *in silico* identification of transcriptional modules regulating the gene expression during mammalian cell cycle. Bioinformatics in Taiwan (BIT), Tainan, Taiwan, Sep. 2006

12. **Meng-Chang Hsiao,** Wen-Shyong Tzou: Looking for new tumor gene by comparative genomics tool. Workshop on Statistics and Machine Learning, Taichung, Taiwan. Jan. 2005

Oral Presentations

1. Future prospects of Artificial Intelligence in CNS tumor diagnosis. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States, Atlanta, GA. Aug. 2024

2. Exploring X-chromosome inactivation and genetic disorder dynamics. **Laboratory Medicine Round** at Vanderbilt University Medical Center, Nashville, TN. Feb. 2024

3. Precision Medicine: Revolutionizing Healthcare through Personalized Approaches and Genetic Insights. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States, Atlanta, GA. Sep. 2023

4. X-chromosome inactivation and its implications for genetic disorders. **Genetics Grand Round** at Columbia University Irving Medical Center, New York, NY. May. 2023

5. Unknown molecular etiology leading to global developmental delay and autistic spectrum disorder associated with mosaic derivative X chromosome. **Laboratory Diagnostic Challenges session** at the ACMG 2023 Annual Clinical Genetics Meeting, Salt Lake City, UT. Mar. 2023

6. My genetic journey. **PML Seminar** at Brown University Department of Pathology and Laboratory Medicine, Providence, RI. Dec. 2022

7. My genetic journey. **Pathology Seminar** at University of Arkansas for Medical Sciences Department of Pathology, Little Rock, AR. Dec. 2022

8. My genetic journey. **Grand Round** at University of Minnesota Department of Laboratory Medicine and Pathology, Minneapolis, MN. Nov. 2022

9. My genetic journey. **Laboratory Medicine Round** at Vanderbilt University Medical Center, Nashville, TN. Nov. 2022

10. How to make smart decisions in genetic testing. **Platform presentation** at the Taiwan Macula Society Annual Meeting, Taipei, Taiwan. Sep. 2022

11. How Precision Medicine is Transforming Healthcare. Chinese-American Academic and Professional Association in Southeastern United States, Atlanta, GA. Oct. 2021

12. Decoding *NF1* microdeletions, microinsertions and nonsense mutations. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States Annual Conference, Atlanta, GA. Aug. 2017

13. Alternative outcomes of pathogenic complex somatic structural variations in the genomes of NF1 and NF2 patients. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States Annual Conference, Atlanta, GA. Aug. 2016

14. Decoding *NF1* intragenic copy-number changes. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States Annual Conference, Atlanta, GA. Aug. 2015

15. Decoding *NF1* intragenic copy-number variations. **Platform presentation** at the 10th NF1 workshop (video presentation), Leuven, Belgium. May. 2015

16. Decoding *NF1* intragenic copy number changes. **Platform presentation** at the 64th American Society of Human Genetics Annual Meeting, **(Selected abstract for Epstein Trainee Award for Excellence in Human Genetics Research)**. San Diego, CA. Oct. 2014

14. Decoding *NF1* intragenic copy number changes. Ataxia-Telangiectasia, DNA Repair and Genome Instability Satellite Meeting at the 64th American Society of Human Genetics Annual Meeting, San Diego, CA. Oct. 2014

15. Palindrome-mediated structural rearrangements within the *NF1* gene. Genomic Medicine Institute Seminar, Cleveland Clinic, Cleveland, OH. Sep. 2014

16. Palindrome-mediated and replication-dependent genomic aberrations within the *NF1* gene. **Platform presentation** at the Chinese-American Academic and Professional Association in Southeastern United States Annual Conference, Atlanta, GA. Aug. 2014

17. Palindrome-mediated and replication-dependent pathogenic structural rearrangements within the *NF1* gene. Medical Genomic Laboratory Education Meeting, Birmingham, AL. Apr. 2014

18. Palindrome-mediated genomic rearrangements within the *NF1* gene. UAB CMDB, GGS, and Cancer Biology Joint Student Seminar Series, Birmingham, AL. Mar. 2013

19. Decoding palindrome-mediated rearrangement mechanisms. Department of Genetics 7th Annual Scientific Retreat, Huntsville, AL, Oct. 2012

20. CG-SSR: an online comparative genomics database for SSR discovery. **Platform presentation** at the National Computer Symposium (NCS), Taichung, Taiwan. Dec. 2007

Licensure and Certification

Diplomate of the American Board of Medical Genetics and Genomics (ABMGG) 2023
Laboratory Genetics and Genomics

Tennessee Medical Laboratory Board 2023
Director of Cytogenetics and Molecular Diagnostics

Center for the Integration of Research, Teaching and Learning (CIRTL: NSF-funded national consortium of research universities training the next generation of faculty in the scientific community)
CIRTL Practitioner Certification 2014
CIRTL Fellow Certification 2017

UAB Mentoring & Leadership Certification 2017

Awards and Honors

ACMG GENEius Challenge Champion Award 2023
American College of Medical Genetics and Genomics Annual Meeting

Distinguished Young Scholar Award 2017
Chinese-American Academic and Professional Association in Southeastern United States Annual Conference

Travel Award 2017
University of Alabama at Birmingham, Office of Postdoctoral Education

Scholarship Award 2017
CIRTL@UAB (Center for the Integration of Research, Teaching, and Learning)

Distinguished Young Scholar Award 2016
Chinese-American Academic and Professional Association in Southeastern United States Annual Conference

Scholarship Award 2016
CIRTL@UAB (Center for the Integration of Research, Teaching, and Learning)

Travel Award 2015
University of Alabama at Birmingham, Office of Postdoctoral Education

Travel Award 2015
Chinese-American Academic and Professional Association in Southeastern United States Annual Conference

Charles J. Epstein Trainee Award for Excellence in Human Genetics Research: Semifinalist 2014
American Society of Human Genetics Annual Meeting

Travel Award 2014
Chinese-American Academic and Professional Association in Southeastern United States Annual Conference

Graduate Fellowship 2008-2009
University of Alabama at Birmingham, Department of Genetics

Scholarship 2004-2006
Cathay Life Insurance Foundation

The Army Commander Award 2004
The Ministry of National Defense of Taiwan

Professional Affiliation

American College of Medical Genetics and Genomics (ACMG)
Association for Molecular Pathology (AMP)
Association of Chinese Geneticists in America (ACGA)
Cancer Genomics Consortium (CGC)
Chinese-American Academic and Professional Association in Southeastern United States (CAPASUS)

Professional Activities and Committee Positions

American College of Medical Genetics and Genomics (ACMG)
Member, E3 Genomics Pathways Program Advisory Committee (2024 – Present)

Association for Molecular Pathology (AMP)
Conference Meeting Moderator, AMP 2023 Annual Meeting, "Polygenic Risk Scores - Implementation and Clinical Utility"

Chinese-American Academic and Professional Association in Southeastern United States (CAPASUS)
State of Tennessee Representative (2024 – Present)
Annual Meeting Panel Organizer (2024 – Present)

Vanderbilt University School of Medicine
Interviewer for Medical School Applicants (2024 - Present)

Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center
Interviewer for Resident Applications (2024 - Present)

Editorial Service

Reviewer of manuscripts submitted to *PLOS Genetics*, *Journal of Neurogenetics*, *Biomedicine & Pharmacotherapy*, *Genes & Genomics,* and *Journal of Scientific Discovery.*

Teaching Activities

Lecturer, Clinical Pathology Didactics (1 hr/yr), for CP residences and fellows (2024 – Present)

Lecturer, Genetic Counseling Program (4 hrs/yr), for Genetic Counseling master program students (2024 – Present)

Lecturer, Medical Laboratory Science Program (2 hrs/yr), for medical laboratory program students (2024 – Present)

Course Coordinator, Medical Laboratory Science Program (Cytogenetics Module in Medical Genetics), for Medical Laboratory program students (2024 – Present)

Mentorship

Training Faculty, Laboratory Genetics and Genomics Fellowship
2024 – Present Xinxiu Xu, PhD
2023 – 2024 Barbara Nelson, PhD, Assistant Professor at Medical University of South Carolina

Training Faculty, Molecular Genetic Pathology Fellowship
2024 – Present Ali Moosvi, MD
2023 – 2024 Alexander Gross, MD, Clinical Instructor at University of Michigan

Training Faculty in Cytogenetics and Molecular Diagnostics Laboratories, Rotation Residents/Fellows /Students

2025:
Department of Pathology, Microbiology, and Immunology Residents/Fellows
Elizabeth Pogue, MD

Vanderbilt University School of Medicine
Gabriella Longway

Vanderbilt University Master of Genetic Counseling
Allison Binsfeld

2024:
Department of Pathology, Microbiology, and Immunology Residents/Fellows
Stephanie Hart, MD
Zachary Kadow, MD, PhD
Sanyk McCuller, MD
Michael Pettit, MD
Ayaka Sugiura, MD, PhD
Hamama Tul Bushra, MBBS

Department of Pediatrics, Clinical Medical Genetics Residents
Yutaka Furuta, MD
Suné van Wyk, MD
Rory Tinker, MD

2023:
Department of Pathology, Microbiology, and Immunology Residents
Raeshun Glover MD
Sarah Fitzlaff MD

Eye Genetics Consortium
2023-present
Eugene Yu-Chuan Kang, MD (Columbia University Medical Center, NY, NY)
Nelson Chen (Queen's University, Kingston, Ontario, Canada)
Vincent Chen (Queen's University, Kingston, Ontario, Canada)
Ethan Hung-Hsi Wang (University of Miami, Coral Gables, FL)
Yin-Hsi Chang, MD (Chang Gung Memorial Hospital, Taiwan)
Tzu-Yi Lin (Chang Gung Memorial Hospital, Taiwan)
Kai-Hsiang Yang (Chang Gung University College of Medicine, Taiwan)