

GRACE J KWON

EDUCATION & TRAINING

Duke University Medical Center – Durham, NC Gastrointestinal/Liver Pathology Fellowship Residency; Pathology (Anatomic & Clinical)	2026 – 2027 (committed) 2022 – 2026 (expected)
University of Connecticut [Health Center] – Farmington, CT MD PhD, Biomedical Science (Area of Concentration in Genetics & Developmental Biology)	2014 – 2022
Washington State University – Vancouver, WA BS, Biology (<i>magna cum laude</i>)	2010 – 2012
Scripps College – Claremont, CA Biology (transferred)	2008 – 2010

RESEARCH EXPERIENCE

The Jackson Laboratory for Genomic Medicine – Farmington, CT <i>MD/PhD Graduate Assistant</i>	2016 – 2020
<ul style="list-style-type: none">• Advisor: Adam Williams, PhD• Identification and characterization of a highly expressed lncRNA and its effects on IL-13 signaling using air-liquid interface cultures of primary human bronchial epithelial cells• Dissertation defended 05/2020, titled “<i>Investigating the Function of a Highly Expressed Long Noncoding RNA in Bronchial Epithelium</i>”	
<i>Summer Research Rotation</i>	Summer 2015
<ul style="list-style-type: none">• Advisor: Michael Stitzel, PhD• Using CRISPR/Cas9 to build cellular models of type 2 diabetes enhanceropathies	
National Institute of Arthritis, Musculoskeletal, and Skin Diseases (NIAMS) – Bethesda, MD <i>Postbaccalaureate Intramural Research Training Award (IRTA) Fellow</i>	2012 – 2014
<ul style="list-style-type: none">• Advisor: Robert Colbert, MD, PhD• Understanding the role of HLA-B27 in the unfolded protein response and bone homeostasis in human peripheral blood mononuclear cells and transgenic rats	
Vollum Institute, Oregon Health & Science University – Portland, OR <i>Undergraduate Student Fellow</i>	2010 – 2012
<ul style="list-style-type: none">• Advisor: Gary Thomas, PhD• Identification of critical amino acids in the interaction between HIV-1 Nef and PACS proteins required for HIV-1 Nef-mediated immune evasion	
Harvard TH Chan School of Public Health – Boston, MA <i>Undergraduate Intern</i>	Summer 2010
<ul style="list-style-type: none">• Advisor: Tiffany Horng, PhD• Determination of how proteotoxic stress induces inflammasome-mediated caspase-1 activation in murine bone marrow-derived macrophages	

PUBLICATIONS

- Kwon GJ**, Su Z, Jeck WR, McCall S, Pendse AA. T cells are significantly reduced in the luminal gastrointestinal tract of patients with “complete” 22q11.2 deletion syndrome (DiGeorge syndrome). (*in preparation*)
- Kwon GJ**, Blackley A, Perkinson K, Bentley R, Pavlisko EN, Cardona DM. Automation of Fluorescence In situ Hybridization (FISH) Leading to Cost Savings and Consistent High-Quality Results. (*in preparation*)

Kwon G, Pendse A. Adenocarcinoma of the esophagus. PathologyOutlines.com website.
<https://www.pathologyoutlines.com/topic/esophagusadenocarcinoma.html>. *Best Author Award 2023

Kwon GJ, Jorgensen JR, Vedere TR, Sanders M, Nam G. Rare Primary Fallopian Tube Grade 2 Neuroendocrine Tumor: A Case Report with Review of Literature. *Int J Gynecol Pathol*. 2023;42(6):632-639. doi: 10.1097/PGP.0000000000000944. PubMed PMID: 36867495.

Kwon G, Nam G, Singh K. Tall cell carcinoma with reverse polarity. PathologyOutlines.com website.
<https://www.pathologyoutlines.com/topic/breastmalignantspcrp.html>.

Kwon GJ, Henao-Mejia J, Williams A. Long Non-Coding RNAs and Immunity. *Front Immunol*. 2019;(10):2378. doi: 10.3389/fimmu.2019.02378. PubMed PMID: 31649679; PMCID: PMC6794607

Roman TS, Cannon ME, Vadlamudi S, Buchkovich ML, Wolford BN, Welch RP, Morken MA, **Kwon GJ**, Varshney A, Kursawe R, Wu Y, Jackson AU, NISC Comparative Sequencing Program, Erdos MR, Kuusisto J, Laakso M, Scott LJ, Boehnke M, Collins FS, Parker SCJ, Stitzel ML, Mohlke KL. A Type 2 Diabetes-Associated Functional Regulatory Variant in a Pancreatic Islet Enhancer at the ADCY5 Locus. *Diabetes*. 2017;66(9):2521-2530. doi: 10.2337/db17-0464. PubMed PMID: 28684635; PMCID: PMC5860374

Layh-Schmitt G, Yang EY, **Kwon G**, Colbert RA. HLA-B27 alters the response to TNF α and promotes osteoclastogenesis in bone marrow monocytes from HLA-B27-transgenic rats. *Arthritis Rheum*. 2013;65(8):2123-2131. doi: 10.1002/art.38001. PubMed PMID: 23666508; PMCID: PMC3857096

Dikeakos JD, Thomas L, **Kwon G**, Elferich J, Shinde U, Thomas G. An interdomain binding site on HIV-1 Nef interacts with PACS-1 and PACS-2 on endosomes to down-regulate MHC-I. *Mol Biol Cell*. 2012;23(11):2184-2197. doi: 10.1091/mbc.E11-11-0928. PubMed PMID: 22496420; PMCID: PMC3364181

PRESENTATIONS

*Underline denotes presenting author

Kwon GJ, Cardona DM, Deak KL, Neff JL, Jeck WR. A Novel *EWSR1::KLF5* Fusion in a Malignant Epithelioid Neoplasm of the Finger with Review of the Literature. *CAP 24*, 2024 October 20. (poster)

Kwon GJ, Rentas S, Deak KL, Rapisardo S, Cardona DM, Rehder C, Neff JL, Jeck WR. Utilization of an In-House Solid Tumor Next-Generation Sequencing Fusion Panel: A 1-Year Institutional Experience with a Focus on the Diagnosis of Soft Tissue Tumors. *AMP Europe 2024*, 2024 June 25. (poster) *AMP Young Investigator Award

Kwon GJ, Yurieva M, Williams A. A Novel Role for Long Noncoding RNAs in Airway Responses to Type 2 Cytokines. *FOCiS 2020 Annual Meeting* (virtual), 2020 October 29. (oral)

Kwon GJ, Yurieva M, Williams A. A novel role for a long noncoding RNA in STAT signaling contributing to allergic asthma. *ASHG 2019 Annual Meeting*, Houston, TX, 2019 October 18. (poster)

Kwon GJ, Yurieva M, Williams A. A novel role for a long noncoding RNA in STAT signaling contributing to allergic asthma. *MD/PhD National Student Conference*, Copper Mountain, CO, 2019 July 12. (poster)

Kwon GJ, Yurieva M, Williams A. A novel role for a long noncoding RNA in airway differentiation during allergic asthma. *AAP/ASCI/APSA Joint Meeting*, Chicago, IL, 2019 April 6. (poster)

Kwon GJ, Yurieva M, Williams A. A novel role for a long noncoding RNA in airway differentiation during allergic asthma. *ASHG 2018 Annual Meeting*, San Diego, CA, 2018 October 19. (poster) *Reviewers' Choice Abstract, ranking in top 10% reviewed posters

Yang EY, **Kwon G**, Colbert RA, Layh-Schmitt G. HLA-B27 expression prevents TNF α -induced inhibition of bone formation in vitro in IFN γ /TNF α -treated osteoblasts. *ACR/ARHP Annual Meeting*. San Diego, CA, 2013 October 29. (oral)

Kwon G, Yang EY, Sikora K, Srinivasalu H, Layh-Schmitt G, Colbert RA. Evidence for enhanced induction of unfolded protein response target genes in peripheral blood mononuclear cells from spondyloarthritis patients. *ACR/ARHP Annual Meeting*. San Diego, CA, 2013 October 27. (poster)

Kwon G, Yang EY, Sikora K, Srinivasalu H, Colbert RA, Layh-Schmitt G. Evidence for enhanced induction of unfolded protein response target genes in peripheral blood mononuclear cells from spondyloarthritis patients. *National Institutes of Health Postbaccalaureate Poster Day*. Bethesda, MD, 2013 May 1. (poster) ***Outstanding Poster Award, ranking in top 20% of posters judged by NIH scientific staff**

LEADERSHIP AND ACADEMIC SERVICE

Duke Medical Education Leadership Track 2024 – 2025

Duke Graduate Medical Education (GME)

- Year-long curriculum focused on developing clinical educator skills, composed of didactics, workshops, and peer review culminating in the development of a specialty-focused educational project

Junior Member, Clinical Pathology Education Committee 2023 – present

College of American Pathologists

- Provide oversight to the Clinical Pathology Improvement Program (CPIP), online CME courses in clinical pathology topics (e.g., chemistry, coagulation, hematology, molecular, transfusion medicine)
- Review submitted cases and suggest new education topics
- Prepare Pathology Case Challenge focused on clinical pathology topic

Residents Forum Delegate 2023 – present

College of American Pathologists

- 1 of 2 representatives for Duke Pathology Residency Program
- Engage in bi-annual meetings to discuss topics and develop action plans pertaining to pathology trainees
- Relay information discussed at bi-annual forum back to program residents

Member, Graduate Medical Education (GME) Committee 2023 – present

Association of Pathology Chairs

- Act as trainee representative and provide perspective on issues relevant to GME in pathology
- Support academic pathology departments in their residency and fellowship training missions
- Stay informed about activities within AAMC that impact graduate medical education activities

Member, Subcommittee on Accreditation 2023 – present

Duke Graduate Medical Education (GME)

- Resident member of the GME subcommittee on accreditation, overseeing the maintenance of ACGME accreditation of Duke University Hospital and identifying areas for ongoing improvement
- Assist with ADS review and participate in the Annual Program Evaluation and Improvement (APEI) review
- Assess trends and evaluate citations or areas of concern in accreditation letters

Histopathology Teaching in Foundations of Patient Care 2022 – present

School of Medicine, Duke University

- Annual teaching of histopathology to first-year medical students
- Facilitate active learning with appropriate questions to assess knowledge level
- Review imaging of histopathology and correlate with clinical cases

4th Year Longitudinal Teaching in the Fabric of Anatomy & Biology Lab 2021 – 2022

School of Medicine, University of Connecticut

- Weekly peer teaching of histopathology to first- and second-year medical students
- Facilitate active learning with appropriate questions to assess knowledge level
- Review imaging of histopathology and correlate with clinical cases

Social Media Co-Chair, Virtual Pathology Student Interest Group (Path SIG) 2021 – 2022

Virtual Pathology Student Interest Group (Path SIG)

- Manage social media for student interest group (<https://www.pathelective.com/pathsig-info>)
- Distribute information on scheduled interest group events, lectures, and educational resources
- Work with the rest of student leadership on organizing major events and initiatives, including a pathology residency program director panel, #FeatureFriday series, Spring Speaker series, and histology reviews

Member, Student Diversity, Equity, & Inclusion Committee	2021 – 2022
School of Medicine, University of Connecticut	
<ul style="list-style-type: none"> • Newly formed committee primarily led by students in response to student/faculty feedback during 2020 • Focused on improving the medical curriculum and student experience • Projects included assessing trends in evaluation and grading data from clinical clerkships, developing improved tutorials and guidelines for written and oral feedback 	
Contributing Writer and Editor, <i>The Nascent Transcript</i>	2019 – 2021
American Society of Human Genetics	
<ul style="list-style-type: none"> • <i>The Nascent Transcript</i> is a quarterly newsletter entirely run by trainee members of ASHG • Interviewed professionals in the genetics workforce and prepared written summaries • Edited published articles, worked with senior leadership to establish deadlines/scheduling 	
Member, Career Development Committee	2018 – 2020
American Society of Human Genetics	
<ul style="list-style-type: none"> • Recommend and carry out activities concerned with training and career development • Plan 2-3 career development sessions for the annual ASHG meeting, including: <ul style="list-style-type: none"> ○ Peer Networking Trivia Reception, Careers in Industry Panel, Writing Competitive Training Grants and Fellowships, Mentoring Up: How Trainees Can Help Mentors Mentor • Carry out year-long initiatives and programming, including: <ul style="list-style-type: none"> ○ Trainee Paper Spotlight, Social Media Engagement, Digital Programming (webinars) • 2019 Rally for Medical Research – Washington, DC <ul style="list-style-type: none"> ○ 1 of 2 ASHG representatives and the sole CT representative to meet with offices of the Senate and House of Representatives to raise awareness for continued investment in medical research 	
Member, Women in Science and Engineering Interest Group	2018 – 2020
The Jackson Laboratory for Genomic Medicine	
<ul style="list-style-type: none"> • Advancing women in STEM via networking, career development, mentorship, community building • Plan and execute organization-wide events, including but not limited to “coffee chats”, trivia night 	
Student Member, Steering Committee	2018 – 2020
MD/PhD Program, University of Connecticut	
<ul style="list-style-type: none"> • 1 of 3 voting student members on the admissions committee • Review student AMCAS applications and interview evaluations • Present applicant summaries and provide a holistic review at monthly meetings • Interview applicants, give campus tours, and aid in the general operations of interview days 	
Student Member, Physician-Scientist Colloquium Organizing Committee	2016 – 2020
Office of Physician-Scientist Career Development, University of Connecticut	
<ul style="list-style-type: none"> • Coordinate annual colloquium inviting established physician-scientist to speak on their career path • Individualize invited speaker’s schedule to meet with program directors, faculty, current students • Previously invited speakers: Margaret Baron, MD, PhD (2017); Stephanie Eisenbarth, MD, PhD (2018); Robert Colbert, MD, PhD (2019); Sekar Kathiresan, MD (2021) 	

HONORS AND AWARDS

AMP Young Investigator Travel Award , Association of Molecular Pathology (AMP)	2024
Best Author Award , PathologyOutlines.com, Inc.	2024
Society of '67 Kinney Scholar , Association of Pathology Chairs (APC)	2023
MD/PhD Program Leadership Award , School of Medicine, University of Connecticut	2022
Diversity Visiting Student Clerkship Award , University of Washington	2021
Ruth L. Kirschstein NRSA Individual Fellowship (F30HL143986) , NHLBI/NIH	2019 – 2021
Disease Models & Mechanisms Conference Travel Grant , The Company of Biologists	2019
Reviewer’s Choice Abstract , 2018 Annual Meeting, American Society of Human Genetics (ASHG)	2018

Travel Award , Office of Physician-Scientist Career Development, University of Connecticut	2018, 2017
Travel Award , Graduate Programs Committee, University of Connecticut	2017
Outstanding Poster Award, Postbaccalaureate Poster Day , National Institutes of Health (NIH)	2013
Certificate of Completion, NIH Academy , National Institutes of Health (NIH)	2013
Travel Award , UT Health Science Center at Houston, MD Anderson Cancer Center	2012
Jean Vollum Fund Award , Vollum Institute, Oregon Health & Science University	2011
Robert M. Breech Annual Fund Scholarship , Scripps College	2008

VOLUNTEER SERVICE

Mentor to Undergraduate , American Physician Scientists Association	2017 – 2022
Finance Coordinator	2016 – 2017
Student Coordinator	2015 – 2016
Clinic Volunteer , South Park Clinic; School of Medicine, University of Connecticut	2014 – 2016
Tutor, K-12 , Latino Student Fund	2013 – 2014
Mentor, Student Career Exploration Experience , NIH/Medical Recruitment Forum	2013
Tutor , Boys & Girls Club of SW Washington	2011 – 2012
Tour Guide, Overnight Hostess, Student Panelist , Scripps College	2008 – 2010

ADDITIONAL EMPLOYMENT

Team Leader, New Student Program , Scripps College	2009 – 2010
Summer Intern, Admissions Office , Scripps College	Summer 2009

SUPPLEMENTAL COURSES AND WORKSHOPS

Conference to Career Program , American Society of Human Genetics/The Jackson Laboratory	2018
The 58th McKusick Short Course on Human and Mammalian Genetics and Genomics	July 2017