



Pathology & Immunology

Office of Faculty Development

Awards Ceremony
October 26, 2021

The Department of Pathology & Immunology has a long and rich history of excellence in research, teaching, and clinical service. Achieving departmental excellence is not a solitary act, it involves the efforts of many, many dedicated individuals. This year, as we continue to deal with the COVID-19 pandemic, it is especially satisfying to gather together and celebrate some of the faculty and staff who have made outstanding contributions to our department.



The Office of Faculty Development is grateful to the many individuals who submitted high-quality nominations and to the Awards Committee who had the very difficult job of selecting the award winners.

Please join us in congratulating the 2021 awardees for their dedication and commitment to excellence.

Ann M. Gronowski, PhD
Vice-Chair of Faculty Affairs and Development

Carey-Ann D. Burnham, PhD
Vice-Chair of Faculty Mentoring and Advancement

Awards Committee

Carey-Ann D. Burnham, PhD
Joseph Corbo, MD, PhD
Ali Ellebedy, PhD
Ann M. Gronowski, PhD
Jo Anne Humphries
Chris Nelson, PhD
Vijayalakshmi Padmanabhan, MBBS, MPH
Melanie L. Yarbrough, PhD

Awards Ceremony Program

Welcome

Staff Shining Star Awards

Outstanding Achievements in Leadership and Professionalism Awards

Outstanding Paper of the Year Awards

Excellence in Faculty Mentoring Award

Outstanding Achievements in Quality Improvement Award

Outstanding Contributions to Education Award

Department Head Special Recognition Awards

Promotions

Milestone Years of Service

Daisy J. Daleo

P&I Shining Star Award



Daisy J. Daleo, Clinical Laboratory Manager for the Dermatopathology Center Laboratory and Clinical Support Office, is honored with the staff shining star award. She began at Washington University in June of 2010 and joined Dermatopathology July 1, 2013.

Daisy has truly been a shining star for the department based on her outstanding customer service and leadership in the Dermatopathology Center.

In FY21 Daisy successfully on-boarded over 10 new Dermatopathology Center clients leading to a 142% increase in external case volumes for FY21. Daisy has been a key leader in advancing several department projects to improve customer service and service culture. She and her team implemented a customer relationship management (CRM) software solution with the help of the department's IT team and planning manager. This successful implementation in Dermatopathology was used as a template for implementing in the Clinical Support Office and other laboratories. Daisy has also been instrumental in developing and implementing onboarding and marketing materials with the department's marketing and communication team. She has successfully managed the front office for the Dermatopathology Center, including oversight and management of the courier routes for specimen deliveries, accessioning, and customer service staff. She has represented the Dermatopathology Center on client visits and has played a key role in the department's ability to retain current clients and attract new clients.

These accomplishments are even more impressive since they were achieved while dealing with the staffing and operational challenges during the pandemic. Daisy is a committed team member and provides excellent service to our patients, our clients and her colleagues in the department. She is the true definition of a shining star.

Jennifer (Jenni) Dickinson

Shining Star Award



Jenni Dickinson, Senior Grant Specialist, is honored with the staff shining star award. Jenni joined Washington University in September of 2008 in the Office of Sponsored Research Services. She joined Pathology & Immunology in March of 2014.

Jenni provides financial management support in the Business Office. She takes the initiative to thoroughly review agency guidelines and researches issues/problems from all angles to ensure contracts, budgets, and grants are in compliance and managed appropriately. She is proactive and does not shy away from unfamiliar tasks. She communicates her ideas and concerns in a professional manner and is eager to take on additional projects and to help others.

One of the most remarkable aspects of working with Jenni is that beyond her incredible competency, professionalism, and efficiency, she is a pleasure to work with. She is consistently cheerful, positive, and optimistic. No problem is too difficult to solve, and no task is too large of a burden for her. Jenni interacts extremely well with coworkers, and she can always be counted on to provide the support needed. Jenni epitomizes all the characteristics that are important for us to succeed and is an exemplary example of a shining star. Many traits set Jenni apart, even from some of the very best at WUSM, and we in P&I are lucky to have her as our colleague.

Jordana Stewart

Staff Shining Star



Jordana Stewart, Executive Administrator serving the Division of Neuropathology, is honored with the staff shining star award. Jordana has been with Washington University for 23 years, 19 of which have been in Neuropathology.

Jordana has been an exemplary professional in all her interactions. She is unfailingly prompt and detail oriented and keeps many things running at once with calm professionalism. She is capable of anything assigned to her.

Jordana simplifies the work-lives of faculty and trainees alike. She processes the Foundation One requisitions and tracks down lost cases and/or results of ancillary testing. Until recently, she handled the Neuropathology fellowship communications and ACGME deadlines. Additionally, she helps with the Division's research projects, QI endeavors, Dr. Schmidt's neuropathology Atlas and communicating with the Prion center. In her interactions with other teams including those in Neurosurgery, Neurology, Neuroradiology, Pediatrics, Medical-, and Radiation-Oncology she receives praise for her ability to accomplish any task irrespective of its complexity. She is the face of the Division of Neuropathology for the multitude of rotating trainees, administrators and outside healthcare providers who interact with us daily. We could not ask for a better colleague.

Charles Eby, MD

Outstanding Achievements in Leadership and Professionalism



Charles Eby, MD Professor of Pathology & Immunology in the Division of Laboratory and Genomic Medicine is honored for his outstanding achievements in leadership and professionalism. Dr. Eby serves as Division Chief of LGM, Medical Director of Barnes-Jewish Hospital Clinical Laboratories, and Laboratory Director of AMP Core Labs.

Dr. Eby has served tirelessly in many leadership roles in our department, in addition to his roles as an outstanding clinician, laboratory director, and teacher. He led our department as the interim Chair, deftly keeping the department on track through the time of transition. He led the Division of Laboratory and Genomic Medicine (LGM) through the COVID-19 pandemic, facilitating the successful ramping up of the COVID-19 testing capacity while uniting faculty and staff members in delivering excellent care in all laboratory services. He also took on additional responsibilities as the director of the AMP Core Laboratories. No matter how busy his schedule is, he can always find time to listen to faculty and help others. Dr. Eby is also a gifted educator, and serves as both a laboratory medicine subject matter expert and career mentor to many trainees in LGM.

With his calm and professional demeanor, he has supported team members at times of contentious debate. As a gifted communicator, he helps others build consensus and find common ground. He is fair, never judgmental, and always holds up his standards. Leading by his actions and examples, Dr. Eby has nurtured an inclusive and collaborative culture and working environment in LGM. He will continue to be an inspiration to many.

Julie Gutierrez

Outstanding Achievement in Leadership/Professionalism

Julie Gutierrez, Administrator for Department Operations, manages the clinical administrative support team that provides support for the clinical faculty in the AMP, LGM, and NP divisions.

In her role, Julie is responsible for hiring, training and development of the administrative staff, prioritizing and assigning work assignments, and managing the daily administrative operations of the clinical divisions. Julie has done an exceptional job in this role. She has provided opportunities for her staff to develop through attending training courses in Excel and Administrative Certification classes offered through Human Resources.



Julie is the first person to step up to the plate when work needs to be done, and she willingly gives her support across all areas of the department. Julie has mobilized her team to contribute to trainee and faculty recruitment efforts, supported Trainee Research Day, provided staffing to support clinical laboratories, facilitated office moves for faculty and staff, and supported department-wide events such as the Holiday Party, Year-End, and Welcome Dinners.

During the COVID-19 pandemic, Julie's work has been essential to maintaining clinical administrative operations. Julie worked tirelessly to move administrative staff to remote work, provide essential onsite staffing, distribute masks and hand sanitizer, and fill in any support gaps due to staffing shortages.

In addition to her impressive work ethic, Julie is a caring and considerate leader. She routinely provides emotional support to her staff through calls and texts and social events such as monthly birthday breakfasts for her team. Julie represents compassion, dedication, and commitment in her leadership and we are truly grateful.

Jonathan R. Brestoff, MD, PhD, MPH

Outstanding Paper of the Year



Jonathan R. Brestoff, MD, PhD, MPH, Assistant Professor of Pathology & Immunology in the Division of Laboratory and Genomic Medicine, is honored for his outstanding paper of the year: *Intercellular Mitochondria Transfer to Macrophages Regulates White Adipose Tissue Homeostasis and Is Impaired in Obesity* published in *Cell Metabolism*.

Although obesity is driven by chronic positive energy balance, recent studies indicate the immune system modulates neuroendocrine pathways that govern food intake and energy expenditure. Over the past 10 years, it has become clear that some cell types have the ability to obtain mitochondria from their environment or neighboring cells and then use these "foreign" mitochondria for their own metabolic benefit. However, it remains unknown whether this process of intercellular mitochondria transfer occurs in adipose tissue to regulate weight gain and obesity pathogenesis. Brestoff and colleagues generated adipocyte-specific mitochondria reporter mice and found that the majority of macrophages in fat tissue contain mitochondria that originated in adipocytes and that these macrophages are transcriptionally distinct. To determine how this process occurs, the team performed a genome-wide CRISPR-Cas9 knockout screen, which revealed that mitochondria capture by macrophages is dependent on heparan sulfates (HS). Adipose-resident macrophages downregulate their production of HS in the setting high fat diet (HFD)-induced obesity, and this leads to reduced mitochondria transfer from adipocytes to macrophages *in vivo*. Genetically deleting the rate-limiting enzyme of HS synthesis, *Ext1*, from myeloid cells reduced mitochondria transfer from adipocytes to macrophages, increased fat mass, lowered energy expenditure, and exacerbated diet-induced obesity in mice. Collectively, this study suggests that adipocytes transfer their mitochondria to macrophages as a homeostatic process that supports normal metabolism and that is impaired in metabolic diseases such as obesity.

Brestoff JR, Wilen CB, Moley JR, Li Y, Zou W, Malvin NP, Rowen MN, Saunders BT, Ma H, Mack MR, Hykes BL Jr, Balce DR, Orvedahl A, Williams JW, Rohatgi N, Wang X, McAllaster MR, Handley SA, Kim BS, Doench JG, Zinselmeyer BH, Diamond MS, Virgin HW, Gelman AE, Teitelbaum SL. Intercellular Mitochondria Transfer to Macrophages Regulates White Adipose Tissue Homeostasis and Is Impaired in Obesity. *Cell Metab*. 2021 Feb 2;33(2):270-282.e8. doi: 10.1016/j.cmet.2020.11.008. Epub 2020 Dec 4. PMID: 33278339; PMCID: PMC7858234.

Cheryl F. Lichti, PhD

Outstanding Paper of the Year



Cheryl Lichti, PhD, Assistant Professor of Pathology & Immunology in the Division of Immunobiology, is honored for her outstanding paper of the year: *Identification of spliced peptides in pancreatic islets uncovers errors leading to false assignments* published in *Proteomics*.

Dr. Lichti is a mass spectrometrists who has been studying the structure of autoimmune peptides in diabetes. She was concerned with a number of reports that appeared in the literature reporting on the presence of spliced peptides as the major contributors to autoimmunity and to the MHC class I immunopeptidome in cancer.

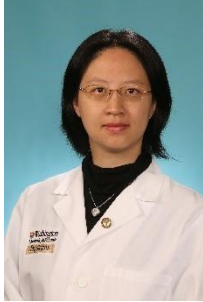
In her paper, she made a full analysis of the spliced peptides reported in the literature and concluded that most were wrong. Her observation was of extreme importance because of the claim of the relevance of spliced peptides. In her report, she gives a full explanation of the errors made in the analysis of mass spectrometry data that led to these erroneous conclusions. She also details that a few selected peptides were truly fused peptides, but which had no major impact in diabetic autoimmunity. Needless to say, Dr. Lichti's observation was controversial, but in the end, most mass spectrometrists completely agreed with her and have accepted her conclusions.

Her observations indicate the importance of careful, detailed analysis of mass spectrometry data. This is a significant contribution that has corrected perceptions that drove unwarranted conclusions while confirming the presence of some true fused peptides.

Lichti CF. Identification of spliced peptides in pancreatic islets uncovers errors leading to false assignments. *Proteomics*. 2021 Apr;21(7-8):e2000176. doi: 10.1002/pmic.202000176. Epub 2021 Mar 5. PMID: 33548107.

Chieh-Yu Lin, MD, PhD

Outstanding Paper of the Year



Dr. Chieh-Yu Lin, MD, PhD Assistant Professor of Pathology & Immunology in the Division of Anatomical and Molecular Pathology, is honored for her outstanding paper of the year: “SARS-CoV-2 Infects Human Engineered Heart Tissue and Models COVID-19 Myocarditis” published in *JACC: Basic to Transitional Science*.

Dr. Lin has made many contributions to the scientific literature. This recent and timely contribution has been of particular importance with regards to SARS-CoV-2/COVID-19 research.

She collaborated as a co-senior author with other departments within Washington University in St. Louis, as well as with other researchers from other institutions to show that SARS-CoV-2 directly infects cardiomyocytes rather than inflammatory cells, fibroblasts, or endothelial cells. This paper showed that the virus infected cardiomyocytes through the ACE2 and endosomal cysteine protease dependent pathway. The infected myocytes undergo reduced contractility through sarcomere breakdown leading to cardiomyocyte cell death. In addition, the histologic pattern was characterized as a myeloid-rich inflammatory infiltrate. This characterization helps to bridge the basic science findings to clinical practice as it provides a salient learning point for practicing pathologists to be able to recognize this entity.

Bailey AL, Dmytrenko O, Greenberg L, Bredemeyer AL, Ma P, Liu J, Penna V, Lai L, Winkler ES, Sviben S, Brooks E, Nair AP, Heck KA, Rali AS, Simpson L, Saririan M, Hobohm D, Stump WT, Fitzpatrick JA, Xie X, Shi PY, Hinson JT, Gi WT, Schmidt C, Leuschner F, Lin CY, Diamond MS, Greenberg MJ, Lavine KJ. SARS-CoV-2 Infects Human Engineered Heart Tissues and Models COVID-19 Myocarditis. bioRxiv [Preprint]. 2020 Nov 5:2020.11.04.364315. doi: 10.1101/2020.11.04.364315. Update in: *JACC Basic Transl Sci*. 2021 Feb 26;: PMID: 33173875; PMCID: PMC7654892.

Mitchell Scott, PhD

Excellence in Faculty Mentoring

Mitchell Scott, PhD Professor of Pathology & Immunology in the Division of Laboratory and Genetic Medicine, is honored for his excellence in faculty mentoring.



Dr. Scott has been a WUSM faculty member for over 30 years and recently retired in June of this year. He is an excellent, and well-known, educator and mentor. He has co-directed the well-respected ComACC-approved Clinical Chemistry training program since 1991. In that capacity, he has trained over 60 PhD fellows and through the Clinical Pathology Residency Training program, he has trained nearly 200 residents. The people he has trained have become preeminent faculty & leaders in the profession. In 2000, he received the AACC Outstanding Contributions through Education Award to recognize his achievements in this area.

He is always willing to assist colleagues with clinical questions, teaching initiatives and research ideas. During formal coaching sessions, he helps junior faculty with constructive feedback and brainstorming research ideas.

Despite his demanding responsibilities, he was never too busy to share advice with new faculty members. His jovial nature and willingness to provide guidance have made him very approachable.

In summary, Dr. Scott is an outstanding mentor. His general wisdom in clinical chemistry/navigating academia and his willingness to mentor have been important assets for all faculty in the department.

Outstanding Achievement in Quality Improvement

Saliva SARS-CoV-2 Surveillance Testing Group

Team Members

Pathology & Immunology: Jared Amann-Stewart, Victor Brodsky, Yang Cao, Charles Eby, Jon Heusel, Mike Isaacs, Julie Neidich

Genetics: Lauren Burcea, Richard Head, Jeff Milbrandt, Shelly O’Laughlin, Chris Sawyer

Informatics Institute: Albert Lai

Occupational Health: Eva Aagaard, Amanda Wilkins

Office of General Counsel: Patty Hastings

Student Health: Stephanie Hammer, Cheri LeBlanc

Early in June, 2020, the above departments at Washington University came together to launch a surveillance test for SARS-CoV-2 for the undergraduates on Danforth campus. Most of the team were geneticists or genetics/genomics lab staff, and not viral genome specialists, or informatics faculty and staff.

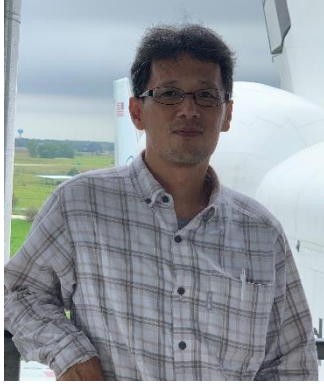
Within two months they developed and validated an assay that gained Emergency Use Authorization by the FDA. They successfully launched the assay in time for the students return to campus for the Fall Semester 2020.

The group created all the pre- and post-analysis workflow, ran clinical trials to assure the assay was accurate, sensitive, specific, rapid, and useful with high enough throughput to allow for thousands of samples to be reported out per day. It required interaction with the FDA and with others who eventually would use the same assay on the same platform.

To date, over 140,000 samples have been tested successfully, including samples from the State of Missouri, several grants which brought testing to the underserved, and to a sports organization.

Takeshi Egawa, MD, PhD

Outstanding Contributions to Education



Takeshi Egawa, MD, PhD, Associate Professor in Pathology & Immunology in the Division of Immunobiology, is honored for his outstanding contributions to education.

Dr. Takeshi Egawa has been a dedicated member of the P&I Department since 2010, during significant changes to the Immunobiology Division and the Immunology program. While establishing his excellent research program, Dr. Egawa has worked tirelessly to promote trainee education. He has always been a key organizer and participant in *Foundations in Immunology* and *Advanced Topics in Immunology* courses. In particular, he held the demanding position of course master for *Foundations* from 2016 to 2021, entailing not only his overall responsibility for the first-year graduate course but also carrying an especially heavy teaching role within it. He also reorganized the course to make the material more accessible to trainees with a variety of backgrounds.

For several years, Dr. Egawa has been the primary organizer for Work in Progress, the principal venue for research presentations by trainees in the department, a taxing but critically important role for the immunology community. Additionally, he has been a committed figure in preparing and administering the program's yearly qualifying exams.

In summary, Dr. Egawa's service to the Department and the Immunology Program has provided important consistency and excellence and has been instrumental in fostering the scientific growth of numerous trainees, truly an outstanding educator.

Promotions

July 1, 2020 through July 1, 2021

Promotions to Professor

Rebecca Chernock, MD
Professor of Pathology and Immunology on the Clinician Track

Sonika Dahiya, MBBS, MD
Professor of Pathology and Immunology on the Clinician Track

Eric Duncavage, MD
Professor of Pathology and Immunology on the Clinician Track

Joseph Gaut, MD, PhD
Professor of Pathology & Immunology with Tenure and Professor of Medicine on the Investigator Track

Promotions to Associate Professor

Neil Anderson, MD
Associate Professor of Pathology and Immunology on the Clinician Track

Michael Barrett, PhD
Associate Professor of Pathology & Immunology on the Research Track

Ali Ellebedy, PhD
Associate Professor of Pathology and Immunology, of Medicine and of Molecular Microbiology with Tenure on the Investigator Track

Chang Liu, MD, PhD
Associate Professor of Pathology and Immunology on the Clinician Track

Ta-Chiang Liu, MD, PhD
Associate Professor of Pathology & Immunology with Tenure on the Investigator Track

Promotions to Assistant Professor

Christopher Farnsworth, PhD
Assistant Professor of Pathology and Immunology on the Clinician Track

Parker Wilson, MD, PhD
Assistant Professor of Pathology & Immunology on the Clinician Track

*Celebrating Milestone Years of Service
in Pathology & Immunology*

Fifty-Five Years

Louis P. Dehner, M.D.

Thirty-Five Years

Orlando B. Crisp
Susan J. Johnson
Kathleen C. Sheehan, Ph.D.

Thirty Years

Jennifer R. Adams
Karl G. Hock
Theresa L. Murphy, Ph.D.
Christopher A. Nelson, Ph.D.

Twenty Years

Marina Cella, M.D.
Marco Colonna, M.D.
Susan Gilfillan, Ph.D.
Jo Anne Humphries

Fifteen Years

John L. Frater, M.D.
Vicky Fuehne
Jacqueline E. Payton, M.D., Ph.D.

Ten Years

Cory T. Bernadt, M.D., Ph.D.
Jonathan D. Bihl
Carey-Ann D. Burnham, Ph.D.
Sonika M. Dahiya, M.D.
Eric J. Duncavage, M.D.
Dijana Durakovic
Kimberly D. Green
Jennifer M. Greenbaum-DiRuscio
Kate E. Stehl
Gwendalyn J. Randolph, Ph.D.
Julie L. Shafferkoetter
Anthony N. Vomund