April 28, 2017



A newsletter providing information for the faculty, staff and trainees of the Department of Pathology & Immunology

# PATHOLOGY & NEWS



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#### CELEBRATING LABORATORY PROFESSIONALS WEEK | APRIL 23-29, 2017

Medical Laboratory Professionals Week is observed nationally this week. Originating in 1975 under the auspices of the American Society for Medical Technology, now called the American Society of Clinical Laboratory Science (ASCLS), this event recognizes the contributions of the scientific and technical personnel in medical/clinical laboratories.

The Department of Pathology & Immunology would like to take this opportunity to recognize the efforts and dedication of *all* individuals who contribute to the success of the Department's missions. It is the combination of outstanding basic research with exceptional clinical care supported by a committed administrative staff that makes the Department so successful.

From individuals who are new to the team to those who have been with us for more than 50 years, the Department boasts an amazing group of people. Thank you!



Laboratory Professionals GET RESULTS Medical Laboratory Professionals Week APRIL 23-29, 2017 • #LABWEEK



AMP and Neuropathology administrative assistants Jordana Stewart, Kathy Nesser, Billie Charleton, Lisa Taylor, Tammy Robinson, Blerina Cuka and Julie Gutierrez

#### **ADMINISTRATION KEEPS IT RUNNING**

The Department of Pathology & Immunology is comprised of a dynamic group of administrators, clinical laboratories and research laboratories that support the overall missions of the Department.

#### **BUSINESS OFFICE**

**Executive Director:** Judy Elleson, *MBA* 

The Business Office is organized to provide comprehensive administrative services to faculty, staff, and trainees in the department.

The staff of the Business Office work closely with each of the division's faculty directors supporting the department's missions. They provide financial oversight, HR services, grants and contracts administrative services, IT/computing services, and revenue cycle management.

In addition, the directors of these services provide strategic planning support to the Chair and Vice Chair for Clinical Affairs.

#### **ADMINISTRATION**

**Supervisor:** *Lisa Taylor- Reinwald, MBA* 

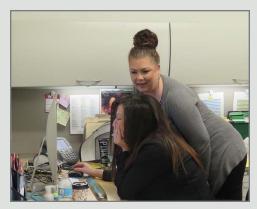
The Administrative Support staff works tirelessly to provide high quality administrative assistance to our faculty in order to support the medical school's research, educational, and clinical missions.

Whether it's submitting expense reports, assisting with travel arrangements, preparing clinical cases for conference, or completing any other administrative task, our support staff strives to ease the administrative burden on faculty and provide a link to the business office with one overarching goal: providing excellent service.

#### **ADMINISTRATION LIFE**



Bridget Franklin and Mary Beth Mobley of Immunobiology Administration



Kelly Antolik and Jennifer Schwierjohn of Immunobiology Administration



Robert Schmidt, MD, PhD, Christopher Dunham, Joseph Gaut, MD and Karen Green of the Electron Microscopy Facility.

#### **CLINICAL LABORATORIES POWER PATIENT CARE**

#### **AMP CORE LABORATORY**

**Director:** *Erica Crouch, MD, PhD* **Lab Manager:** *Tom Fitzgerald, MS* 

AMP Core Laboratory is a full-service, CAP/CLIA certified, pathology laboratory that supports testing for the Department's clinical consult service and a variety of clinical outreach activities. It also provides laboratory support for selected clinical trials and translational research projects.

The Lab performs grossing, tissue processing and embedding, and has a large menu of histochemical stains and FDA-approved immunohistochemical tests. It also supports coring of paraffin blocks or micro-dissection of unstained slides to isolate cells for molecular analysis. Testing is supported by WU anatomic pathologists, technicians, and administrative staff.

All specimens are accessioned in Cerner CoPath Plus, and all blocks and slides are bar coded and labeled using the Ventana Vantage work flow solution, which is driven by the CoPath LMS. Routine histochemical staining and cover-slipping are automated. Immunohistochemical testing uses the Ventana Benchmark Ultra platform. The Lab supports intra-operative diagnosis via telepathology with whole slide imaging using the Ventana iScan Coreo digital slide scanning system. Volume, turnaround time, and quality metrics can be tracked in real time using Microsoft PowerBI.

#### **CLINICAL CONSULT OFFICE**

**Director:** John Pfeifer, MD **Supervisor:** Jeannie Doerr

The Clinical Consult Office was created in 2012 to increase consult growth and establish WashU as a reference lab for BJH affiliates as well as outside providers and health systems.

Led by supervisor Jeannie Doerr, the CS Office is the gateway to Washington University Diagnostic Laboratory Services. CS Office staff receive pathology cases and specimens from outside institutions and distribute them to our clinical laboratories for testing and to our pathologists for

#### **CLINICAL LAB LIFE**



Tom Fitzgerald of AMP Core Labs



Kristin Kintz of AMP Core Labs

consultation and diagnosis.

In addition, the CS Office is the primary customer service contact for WU Diagnostic Laboratory Services, providing support and service to outside clients and ensuring excellent patient care. Jeannie and her team work closely with Lab Managers, Medical Directors, and Department Administration to ensure all of the administrative and front office functions of the laboratories are handled properly, including patient registration, insurance precertification, specimen accessioning, and specimen distribution.

#### CLINICAL & TRANSLATIONAL GENOMICS LABORATORY (CaTG)

#### Director: Jon Heusel, MD, PhD

The CaTG represents a proactive integration of two formerly independent clinical laboratories performing high-complexity testing in the dynamic field of clinical genomics—the Cytogenetics & Molecular Pathology Laboratory, and Genomics and Pathology Services (GPS).

Supporting the Department's clinical mission, the CaTG allows for a new way to manage the avenue toward Precision Medicine, seeking to maximize economics, expertise and innovation.

The CaTG will also become an important translational research unit, collaborating with existing, well established partners in human genomics, as well as emerging groups in informatics, genetics, and functional genomics at this institution. The lab will partner with institutional efforts to bring forward highly curated genomics knowledge bases and the clinical decision support mechanisms needed to realize the potential of healthcare informed by large data sets and tailored to the unique needs of the individual patient.

## (FORMER) CYTOGENETICS & MOLECULAR PATHOLOGY

Associate Directors: Ina Amarillo, PhD and Yoshiko Mito, PhD

#### Lab Manager: Jane Bauer

Cytogenetics & Molecular Pathology is a CAP/CLIA certified laboratory that provides quality care with expert genomic services from "chromosome to base pair". The lab's professional team is fully equipped with a state-of-the-art facility to fully assist with prenatal, constitutional and cancer.

The lab is supported by over 30 highly trained individuals and includes Washington University faculty, cytogenetic technologists, medical secretaries, laboratory assistants and administrative staff.

Beyond traditional clinical services, the team is a major collaborator of international, multi-center clinical trials such as those with the Childhood Oncology Group, Cancer and Leukemia Group B, Genetic Testing Reference Material Program at the Center for Disease Control and Prevention, Clinical and Laboratory Standards Institute and DECIPHER (Database of Chromosomal Imbalance and Phenotype in Humans using Ensembl Resources).



Lisa Snipes of AMP Core Labs



Marina Platik of AMP Core Labs



Deann Winkler, Tracey Hammontree and Kevin Boyer of the Clinical Consult Office



Dave Britton and Jasmine Prater of the Clinical Consult Office

#### (FORMER) GENOMICS AND PATHOLOGY SERVICES (GPS)

#### CMO: Jon Heusel, MD, PhD

GPS provides physicians with clinically validated nextgeneration sequencing for cancer, somatic overgrowth and a variety of constitutional diseases. Due to extensive technological capabilities the lab also offers customized tests for clinical trials and clinical research.

GPS' clinical genomic tests improve patient care by enabling a personalized approach to medicine. Next-generation sequencing tests return actionable genomic intelligence across multiple key diseaserelevant genes.

Sequencing results are interpreted by board-certified pathologists and clinical geneticists. Variants are categorized by medical significance in a concise clinical report. These results help ordering physicians stratify disease subtypes and identify optimal patient treatment strategies.

#### DERMATOPATHOLOGY CENTER

#### **Director:** *Ilana Rosman, MD* **Lab Manager:** *Amanda Kelley*

The Dermatopathology Center is a collaboration between the Department of Pathology & Immunology and the Department of Medicine, Dermatology Division.

The lab is committed to expert interpretation of routine and complex skin, hair and nail biopsy specimens. The physicians at the Dermatopathology Center deliver patient-focused care by providing timely and definitive diagnoses.

The comprehensive array of diagnostic services performed in-house include primary diagnosis, molecular diagnostics, BRAF testing for melanoma, ELISA testing for bullous pemphigoid and pemphigus, direct immunoflurescence (DIF) for blistering, vasculitic and connective tissue diseases and staged excisions ("slow Mohs").

#### ELECTRON MICROSCOPY FACILITY

Director: Robert Schmidt, MD, PhD

Lab Manager: Karen Green

The CAP/CLIA certified Electron Microscopy Facility provides a variety of electron microscopy services for clinical and research use. These include tissue processing and embedding, preparation of one micron thick toluidine blue stained sections and routine transmission electron microscopy for cell culture and tissue specimens.

Both the JEOL 1200EX and JEOL JEM1400 electron microscopes in the facility have high resolution CCD based cameras for high quality digital imaging. The clinical digital images of renal biopsies are collected and uploaded into password protected on line clinical reports. Research images will be available for downloading by individual investigators as part of a password protected on line system.



Sherry Ellis of the Clinical Consult Office



Megan Heroux of the Clinical Consult Office



Emily Brophy, Brandy Gee and Mary Niedringhaus of CoPath Support



Christopher Dunham and Joseph Gaut, MD of the EM Facility



Both from the Colonna Lab, Hanna Miller (sitting) works on the role of dendritic cell subsets in allergic skin inflammation and Luisa Cervantes Barragan, PhD (standing) studies intestinal intraepithelial T cells and their interaction with the microbiome.

#### **RESEARCH LABORATORIES DRIVE INNOVATION**

#### **DIGITAL IMAGING CENTER**

The Digital Imaging Center is a joint resource of the Department of Pathology & Immunology and BJH. This Center specializes in digital imaging for clinical, teaching and research applications and is keeping up with advances in this fast moving area.

In addition to resources for traditional and digital photography, poster and other image printing, the Digital Imaging Center currently provides resources for high quality whole slide scanning including for teaching, archival, or deidentified sharing off site. We are also in the process of acquiring and utilizing image analysis software for use with scanned slides.

#### **FACS FACILITY**

**Director:** *Marina Cella, MD* **Lab Manager:** *Erica Lantelme, PhD* 

The FACS Facility provides investigators with instrumentation and support for cell sorting as well as acquisition and analysis of flow cytometry data.

Specific services include high speed cell sorting, assistance with experimental design, instruction and training on the instruments and consultations on sample preparation and data analysis.

#### **HYBRIDOMA CENTER**

#### Director: Kathleen Sheehan, PhD

The Hybridoma Center provides monoclonal antibody technology to the University research community. With over 35 years of experience, the Hybridoma Center assists investigators in the generation of custom monoclonal antibody-producing B cell hybridomas.

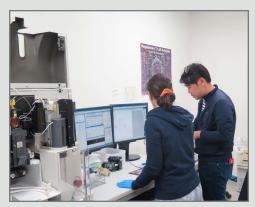
The lab also provides custom monoclonal antibody development for parties outside of the university.

#### **TRANSGENIC MOUSE CORE**

Director: J. Mike White

The Transgenic, Knockout and Micro-Injection Core offers a wide array of mouse embryo

#### **RESEARCH LAB LIFE**



Erica Lantelme of the FACS Facility



Vicky Lampropoulou of the Aryomov Lab

manipulation techniques.

The lab provides investigators resources to generate mutant mouse models through a variety of techniques, cryopreserve mouse lines, cryopreservation/ storage of mouse sperm, perform embryo rederivation, thaw embryos and perform IVF. C57BL/6 inbred is the standard strain for both pronuclear and ES micro-injection, but Albino B6 host embryos for injection of B6 ES cell lines such as those from KOMP, EUCOMM TIGM and other cell suppliers are also available. Hybrids and additional inbred strains may be used for transgenic production.



Jaya Bhushan of the Vig Lab

#### FACULTY RESEARCH LABS

Allen Lab Amarasinghe Lab Bhattacharya Lab Burnham Lab Choi Lab Collona Lab Conrad Lab Corbo Lab Dantas Lab Eby Lab Edelson Lab

Egawa Lab Fremont Lab Gordon Lab Klechevsky Lab Ladenson Lab Mosammaparast Lab Murphy Lab Otlz Lab Payton Lab Randolph Lab Scott Lab Schreiber Lab Stappenbeck Lab Swamidass Lab Teitelbaum Lab Unanue Lab Vig Lab Virgin Lab Watson Lab Zinzelmeyer Lab



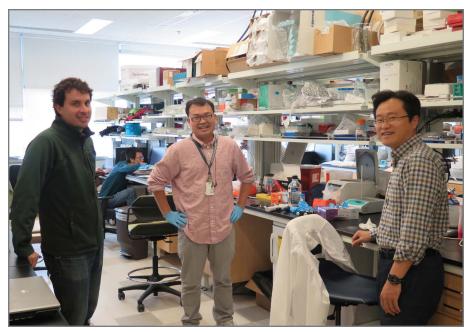
Savaikar Madhusudan of the Vig Lab



Nicholas Jarjour of the Edelson Lab



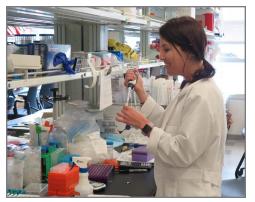
Osamu Baba and Nan Zhang of the Randolph Lab



Jesse Williams, Nan Zhang, Li-Hao "Paul" Huang and Jaehoon Choi of the Randolph Lab



Heather Kohlmiller, Daniele Runci and Elise Alspach of the Schreiber Lab



Danielle Lussier of the Schreiber Lab



Stephen Ferris of the Unanue Lab



Xiaoxiao Wan of the Unanue Lab



Javier Carrero of the Unanue Lab



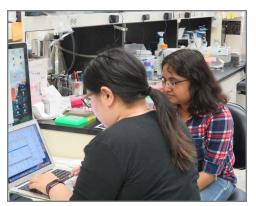
Parmeshwar Amatya, Wenjie Wang and Britney Johnson of the Amarasinghe Lab



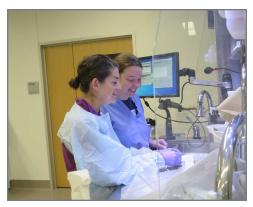
Sarah Pyrorm and Jackie Payton of the Payton Lab



Caitlyn Purman and two students from the Oltz Lab



Arijita Jash of the Bhattacharya Lab



Colleen Newhouse and Laura Garvey of Anatomic and Molecular Pathology



Ken Murphy is so committed to his work, he NEVER leaves the office



Taylor of the Virgin Lab



#### **PHOTO CONTEST WINNER**

Cytogenetics & Molecular Pathology superheroes get results to treat patients

Pictured: Mo Yu Kwong, Megan Hillen, Steve Lamp, Joan Reid-Milburn, Amanda Hausman, Kate Stehl, Janice Muckerman, Donna Lehmann, Jane Bauer, Monica Carrillo, Mike Evenson, Shelia Rackers, Gina Oppelt, Julie Branson, Jennifer Birk

#### PHOTO CONTEST AND LAB HIGHLIGHTS

Labs got funny and creative for the opportunity to win a pizza party by submitting photos of their group to showcase their personality and mission. Thank you to all who participated and congratulations to the winning lab!

#### **BURHNAM LAB**

The Burnham Lab is a group of microbiologists that studies the transmission and epidemiology of multi-drug resistant pathogens, especially bacteria that cause infections in the hospital setting such as Clostridium difficile and Staphylococcus aureus. We utilize a variety of methods, including conventional culture, MALDI-TOF MS, and molecular methods. In addition, we develop and evaluate new diagnostic methods to detect microbes causing infection in clinical samples. We evaluate the microbiome of various body compartments, and evaluate the

role of microbes in health and disease.

#### **CONRAD LAB**

The Conrad lab is a diverse blend of scientists from different disciplines and geographic origins. Our mission is to make fundamental contributions to all steps of the translational cycle of human genetics: discovery of genetic variation, functional characterization of this variation, diagnosis and therapy. Our focus is reproductive disorders and neuropsychiatric disease. We are scientists that write computer programs and analyze data, scientists that create beautiful and informative images using microscopy, scientists who breed and characterize mice, scientists who talk to patients and physicians to accelerate the use of genetics in medicine. We come from across the globe: China, Estonia, Portugal, Germany, South Korea, India, the United



The Burnham Lab enjoys microbiology so much, even when they are goofing off they play a microbiome related game!

Pictured: Tiffany Hink, William Lainhart, Melanie Yarbrough, Meghan Wallace, Angela Shupe, Carey-Ann Burnham



The Conrad Lab Finds the Min.

Pictured: Nicole Rockweiler, Wu-Lin Charng, Min Jung, Amy Wilfert, Me, Brian Leon-Ricardo, Chengran Yang, Ana Lima, Avinash Ramu States, and we are extremely happy to call Washington University our scientific home.

#### **CORBO LAB**

The Corbo Lab works at the interface of neurobiology and genomics to understand the mysteries of the brain and retina. Rearch in the lab has three main goals: 1) To elucidate the cis-regulatory architecture of the retina and utilize this knowledge to treat blindness, 2) to understand the molecular and genetic basis of color vision, focusing on how animals both see and produce colors, and 3)to decipher the role of cis-regulatory variation in the human cognition and neuropsychiatric disease.

#### CYTOGENETICS & MOLECULAR PATHOLOGY

With access to state-of the-art technologies for chromosome analysis, karyotyping, chromosomal microarray analysis, and FISH testing, the Cytogenetics & Molecular Pathology Lab offers full laboratory services for prenatal, POC, constitutional and cancer testing. The lab is supported by a dynamic group of over 30 highly trained individuals including faculty, cytogenetic technologists, medical secretaries, laboratory assistants and administrative staff.

#### **DANTAS LAB**

The Dantas lab applies cuttingedge metagenomic analyses to track the dynamics and spread of antibiotic resistance in humanand environmentally-associated microbial communities. We also harness the outstanding and under explored genetic material in these communities to accelerate microbial synthetic biology for medical and industrial applications.

#### **PAYTON LAB**

The Payton lab focuses on the role of aberrant epigenomic patterns in cancer-specific gene dysregulation. We take an integrative approach to understanding the complex interplay of genomic and epigenomic mutations and their impact on gene regulation, employing translational, bioinformatic, and basic biological approaches to understand the progression of hematopoietic cells from healthy to malignant.

#### **STAPPENBECK LAB**

The Stappenbeck lab studies how the cells that form mucosal surfaces of the intestine and lung function during health and disease. We are particularly interested in how these cells interact with bacteria (or the products bacteria produce) to alter disease and wound repair processes. Lab members use a wide variety of techniques and model systems in their research. Some specialize in growing mouse or human mucosal cells or culturing bacteria; others specialize in modeling hostbacteria interactions in mice or analyzing human tissue samples. All of us are very thankful for our lab manager, Nikki, who specializes in keeping our lab running smoothly! Despite a wide range of scientific interests, the Stappenbeck lab members are focused on working as a team to tackle complex scientific questions.



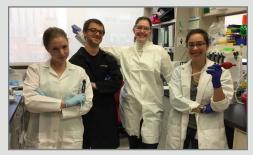
Corbo Lab

Pictured: Leo Volkov, Dan Murphy, Susan Shen, Back row left to right. Jeong Sook Kim-Han, Joe Corbo, Cindy Montana, Connie Myers, Jenny Enright, Matt Toomey, Drew Hughes



Dantas Lab

Pictured: Aki Kau, Nathan Crook, Aimee Moore, Gretchen Walljasper, Christopher Bulow, Boahemaa Adu-Oppong, Terence Crofts, Manish Boolchandani, Drew Gasparrini, Gautam Dantas, Bert Berla, Amy Langdon, Robert Potter, Alaric D'Souza, Tayte Campbell, Bin Wang, Nick Goldner, and Aura Ferreiro



The Payton lab is like a family, complete with real "sibling" rivalry and feigned "maternal" disapproval

Pictured: Lab manager Jennifer Schmidt, Graduate students Jared Andrews, Sarah Pyfrom, and Nina Beri



Stappenbeck Lab

Pictured: Chin-Wen "RC" Lai, Ashley Steed, Nicole Malvin, Shanshan Xiong, Yi Wang, Victoria Goodwin, Haerin Jung, Naomi Sonnek, Takahiro Ohara, Gerard Kaiko, Kelli VanDussen, Steven Ekman, Tom Mauer, Qiuhe Liu, Brian Muegge, Christina Hickey, Umang Jain



Dr. Steven Teitelbaum, MD and Karen Green receive their service awards from Executive Director, Judy Elleson, MBA

#### **RECOGNIZING OUR FACULTY AND STAFF**

#### **P&I STAFF**

#### 40+ years

Karen Green Jessie Hardges

#### 35-39 years

Byron Henderson

#### 30-34 years

Orlando Crisp David Donermeyer Susan Johnson Jennifer Lackner

#### 25-29 years

Jennifer Adams Jataun Alberty Corazon Arthur Katherine Frederick Karl Hock Vivian Hogan Michael Isaacs Jean Loehr Debra Weber

#### 20-24 years

Stephen Horvath Darren Kreamalmeyer Rhonda Porche-Sorbet Lisa Snipes Donna Thompson James White

#### Xiaopei Zhu

#### 15-19 years

Nancy Brada Jeannie Doerr JoAnne Humphries Rosa Montileone Sharon Smith Melvin Stewart Christopher Swan Lisa Taylor-Reinwald Autumn Watson Ann Winn Mary Wohltmann

#### 10-14 years

*Stephanie Amen* Pamela Anderson Elease Barnes Amy Brink Emily Brophy Virginia Colombo Lindsay Droit Sherry Ellis Vicky Fuehne Laura Kyro Bonnie Meltzer Connie Myers Betty Norton *Iordana Stewart* Kimberely Unger Xin Zhang

5-9 years

Patricia Alldredge Edward Anderson III Sharon Austin Iane Bauer Ionathan Bihr *Tara Bradstreet Matthew* Breuer David Britton Bonita Brooks Monica Carrillo *Jive Cheng* Sandra Crocker Adish Dani Su Deng Michaela Dino Andrew Drury Dijana Durakovic Michael Evenson Angela Felton Tonya Fields Barbara Fowler Erika Fuess **Bijoy** George Kimberly Green Jennifer Greenbaum-DiRuscio Snehil Gupta Janaki Guruge Iulie Gutierrez Ianis Hardin Jessica Hoisington-Lopez Lynda Imber Benjamin Joseph

#### JOHN KISSANE, MD | FACULTY IN AMP | 63 YEARS

John Kissane, MD has been instrumental in the training and mentoring of pediatric pathologists throughout his tenure with the Department of Pathology & Immunology. John Kissane graduated cum laude from WUSM in 1952. The following two years were spent as a resident in pathology at Barnes Hospital and as a research fellow. After the completion of a twoyear tour in the United States Army, he returned to St Louis and joined the pathology faculty in 1958 as an assistant professor.

Dr. Kissane has fulfilled many roles within the Department of Pathology & Immunology, and has established himself as a preeminent clinician and researcher. He has served as director of the autopsy service at a time when 600 to 700 autopsies per year were performed in the department. Dr. Kissane also was responsible for the pediatric and adult renal biopsies which came through surgical pathology. He was actively involved in the second-year pathology course as a lecturer in a number of organ systems, in addition to his supervisory role in the student laboratories.

Dr. Kissane is a pioneer in the field of pediatric pathology; his interest in pediatric pathology emerged while he was a resident and was on exhibit in his first published paper on the topic of maturation of neuroblastic tumors, which he coauthored with Lauren V. Ackerman in 1955. Throughout his active years, Dr. Kissane continued his interest and developed his insights into various aspects of renal diseases in children with studies on cystic disease and hereditary nephropathies. Dr. Kissane also was involved in a number of studies on various aspects of childhood neoplasia, including Ewing sarcoma, renal tumors, small cell osteosarcoma, pancreatic tumors, rhabdomyosarcoma, and histiocytic disorders.

Maria Karlsson Aki Kau Jason Kenney Iason Kerr Suhas Khot Brian Koebbe Shashi Kumar Mo Kwong *Jeffrey Lacey* Stephen Lamp Donna Lehmann Nicole Malvin Eric Martin Shirley McKinney *Nathan McNulty* Martin Meier Yong Miao Ianice Muckerman Colleen Newhouse *Mary Niedringhaus* David O'Donnell Susan Pagano Anne Paredes Sanket Patel Shelia Rackers Ioan Reid Lori Scantlan Jennifer Schmidt *Elizabeth Schwarzkopf* Julie Shafferkoetter Terry Sherlinski Kate Stehl Douglas Tihen Mary Uhlmansiek Anthony Vomund Sabrina Wagoner Bin Wang Mingqiang Xie

#### < 5 years

Rosalia Alcoser Vanessa Alexander Jared Amann-Stewart Parmeshwar Amatya Jeanne Anderson Rebecca Andrews Kelly Antolik Fnu Anu Vadakkumcheril Kylie Austin Osamu Baba

Iohn Ball Alexander Barrow Michael Baxter Diane Bender Nicholas Benshoff Kendra Bockius Amanda Booher Tiana Bowdry Heather Bowman Kevin Boyer Julie Branson Dorjan Brinja Della Brooks Aviva Buck-Yael Amie Burke Alan Catalano Kimberly Caves Luisa Cervantes Barragan Nisha Chatterjee Aisha Clark Ioi Clark Kia Coleman Zevin Condiotte Meagan Corliss *Lauren* Coryea Blerina Cuka Daisv Daleo *Keith Dandurand Rajashree Dasgupta* Bonnie Dee German Demidov Chandni Desai Brandi DeVore Jennifer Dickinson Rebecca Dodson Susan Doetzel Christopher Dunham Ashley Edwards Judy Elleson Andrew Elvington Joseph Essmyer Jessica File Thomas Fitzgerald Erin Franklin Bridget Franklin Joan Fritz Laura Garvey Brandy Gee Kevin Glass Mary Gohsman

Iavier Gonzalez

Tracy Goodman *Carrie Goodson* Jeanne Grigsby Tracey Hammontree Linda Hankins Ryan Hardy Amanda Hausman Megan Heroux *Elizabeth Herries* Megan Hillen Melanie Holmgren Cinda Houska Lee-Yang Hsieh June Huang Cassandra Huff Barry Hykes Jr Haerin Jung Sebastian Karlsson Atul Kaushal Madhurima Kaushal Lauren Keck Amanda Kelley Krista Kennerly *Iustin Kern* Divya Khandekar Jeong Kim-Han Kristin Kintz Artem Kiselev Tina Knepper-Smith Heather Kohlmiller Daniel Korenfeld Karen Krchma *Katherine Kyle* Julie Lackey *Erica Lantelme* Xiaoyan Liu Alexandra Livingstone Ekaterina Loginicheva Latisha Love-Gregory Oun Lu Olga Malkova Anna Malova Chelsea Mannie Ion Marsh Tina Marti Daniel Martin Brittany Masters Melissa McKenna Samantha McNulty Patrick Meier Cathrine Miner

#### STEVEN TEITELBAUM, MD | AMP DIVISION CHIEF | 48 YEARS



Steven L. Teitelbaum, MD is the Division Chief of Anatomic and Molecular Pathology and is renowned as one of the world's leading experts in bone metabolism. Dr. Teitelbaum received his bachelor's degree from Columbia College in 1960 and his medical degree from Washington University in 1964. After residency, Dr. Teitelbaum returned to Washington University in 1968 as a clinical fellow in pathology. He served as chair of the Department of Pathology of the Jewish Hospital from 1987 to 1996 and of that institution's institutional review board from 1977 to 1997.

The WUMC Alumni Association named a scholarship to honor him as a distinguished alumnus in 1997. He is currently the Wilma and Roswell Messing Professor of Pathology and Immunology. Dr. Teitelbaum's pioneering research focuses on bone cell biology for the purpose of developing new treatments for the prevention and cure of diseases such as osteoporosis. He has published over 300 papers in his career.

He has held leadership positions in many national organizations, including serving as President of the Federation of American Societies for Experimental Biology and of the American Society for Bone and Mineral Research. Among his honors are the William F. Newman Award of the American Society for Bone and Mineral Research, Washington University's Second Century Award, the Rous-Whipple Award from the American Society for Investigative Pathology, the Carl and Gerty Cori Faculty Achievement Award, the Peter H. Raven Lifetime Achievement Award from St. Louis Academy of Science, and the Pieter Gaillard Founders Award from the International Bone and Mineral Society.

In addition to his academic pursuits, Dr. Teitelbaum enjoys spending time with his wife Marilyn and doting on his grandchildren.

*Mary Mobley* Eric Moll Miranda Mudge James Murray Katherine Nesser Melissa Nilson Ashley Njaka Gina Oppelt Keith Page Hannah Page Romil Patel Susan Phillips Marina Platik *Timothy Poole* Sofia Porter *Jasmine Prater* Landon Reading *Elaine Marie Ritter* Gregory Robbins Tammy Robison Nidhi Rohatgi Brian Romine Tiffany Ross Sheila Rozmirsky Brian Saunders *Mary Schaefer* William Schaiff *Eric Schnable* Jennifer Schwierjohn Tatum Seawell *Alexey* Sergushichev Justin Serugo Angela Shupe Melissa Smith *Jacqueline* Snider Abigail Sondker Naomi Sonnek *Rebecca Speidel* Lisa Strauser Xiaoqing Sun Lauri Thienes Felicia Thomas Priya Thomas-Abraham *Matthew Toomey* Valerie Varady Keith Vaughan Daniel Vianello Tammi Vickery Katinka Vigh-Conrad **Benjamin Vincent** Meghan Wallace

Kristin Waterson Shawn Wenren Donna Williams Deann Winkeler Ryan Winschief Wesley Wright Jun Wu Kanstantsyia Zabarouskaya Nicole Zanolli Yu Zhao Dequan Zhou Michelle Ziegler

#### **P&I FACULTY**

60+ years

John M Kissane

#### 45-49 years

Louis Dehner Michael Kyriakos Steven Teitelbaum

#### 40-44 years

Samir El-Mofty Jack Ladenson

#### 35-39 years

Robert Schmidt

#### 30-34 years

Paul Allen Erika Crouch Robert Schreiber John Turk Emil Unanue

#### 25-29 years

Morey Blinder Charles Eby Kenneth Murphy Theresa Murphy John Pfeifer Mitchell Scott Kathleen Sheehan Herbert "Skip" Virgin IV

#### 20-24 years

Ann Gronowski Frances White

#### 15-19 years

Marina Cella Kyunghee Choi Marco Colonna George Despotis Daved Fremont Susan Gilfillan Christopher Nelson Deborah Novack Wojciech Swat

#### 10-14 years

Nigel Cairns Joseph Corbo John Frater Anjum Hassan Friederike Kreisel Jason Mills Jacqueline Payton Thaddeus Stappenbeck David Wang Xiaoli Wang Mark Watson

#### 5-9 years

Philip Ahern Gaya Amarasinghe Michael Barratt *Melissa Barrow* Cory Bernadt Deepta Bhattacharya Carey-Ann Burnham *Iavier Carrero-Brewer* Chih-Hao Chang Rebecca Chernock *Catherine Cottrell* Sonika Dahiya *Gautam Dantas* Eric Duncavage Brian Edelson Takeshi Egawa Jeffrey Gordon Brenda Grossman Scott Handley Thomas Hannan Ronald Jackups Jr.

#### KAREN GREEN | EM FACILITY TECHNICAL DIRECTOR | 43 YEARS



Karen Green is the technical director of the Electron Microscopy Facility and has been with the Department of Pathology & Immunology since 1973. When she arrived here, there was a flower shop where the Metrolink is now, Euclid was a real street, and the McDonnell Science Building was a new WUMS edifice.

Karen has been tireless in the pursuit of excellence in the varied jobs she has been called upon to master. She has mentored a large number of graduate students, residents, fellows (and even principal investigators and professors) during her 43 years, most of it spent in the practice of electron microscopy, an old technique now new again. She has never rested on her laurels or feared a challenge, adapting to a rapidly changing clinical and research environment.

Bob Schmidt, MD, PhD, Director of the EM facility says "I couldn't ask for a better employee, colleague and friend".

#### Eynav Klechevsky Daisy Leung Olga Lubman Horacio M Maluf Leslie McIntosh Ilke Nalbantoglu Eugene Oltz Richard Perrin Gwendalyn Randolph Souzan Sanati S. Joshua Swamidass Monika Vig Guoyan Zhao Wei Zou

#### > 5 years

Ina Amarillo Neil Anderson Maksym Artomov Dengfeng Cao Danielle Carpenter Patrick Collins Donald Conrad Joseph Gaut Bella Goyal Nicholas Griffin Ian Hagemann Mai He Jonathan Heusel Kiwook Kim Hannah Krigman Yi-Shan Lee Chang Liu Ta-Chiang Liu Yoshiko Mito Nima Mosammaparast Bijal Parikh Jon Ritter Ilana Rosman Marianna Ruzinova Jennifer Sehn Kelli VanDussen Craig Wilen Bernd Zinselmeyer

## THANK YOU TO ALL!

#### **FITBIT RAFFLE WINNERS**

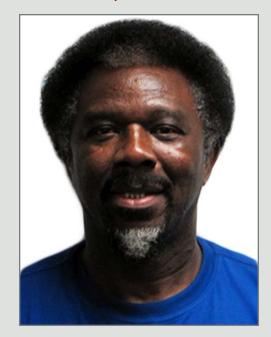
John Ball | Clinical support specialist, Clinical consult office Dijana Durakovic | Senior lab technician, AMP core lab Maria Karlsson | Research lab manager, Gordon lab Sanket Patel | Research technician, Dantas lab Lori Scantlan | Administrative coordinator, LGM



Congratulations and THANK YOU for all that you do!

### Washington University in St. Louis School of Medicine

#### JESSIE HARDGES | AUTOPSY SUPERVISOR | 43 YEARS



Jessie Hardges is our Autopsy Supervisor and has been with the Department of Pathology & Immunology since 1973.

Jessie serves as supervisor and mentor to the autopsy staff, provides expert technical assistance during the autopsy exam, and is a resource to students, trainees, faculty, and staff. During his 43+ years of service Jessie has assisted with the training of over 400 residents, including several of our current faculty members.

Jessie has also been instrumental in implementing several autopsy techniques that have been adopted by other autopsy departments around the country.

Growing up Jessie was a talented athlete and played basketball for Mississippi Valley State University. When he isn't busy assisting our faculty, staff, and trainees, Jessie spends time teaching anatomy to high school students. Jessie has been married to his wife Linda for 38 years and has three children.