

UW Medicine

PATHOLOGY

**UNIVERSITY OF WASHINGTON
DEPARTMENT OF PATHOLOGY**

QUARTERLY NEWSLETTER

AUTUMN 2019



a year's overview

A MESSAGE FROM THE CHAIR



Charles E. Alpers, MD
Professor and Interim Chair
Nelson Fausto-Ann De Lancey
Endowed Professor
Department of Pathology

Dear Colleagues and Friends of Pathology,

Welcome to the latest edition of our Department's newsletter. As we come to the close of an exciting year, we are mindful of the major changes we will be experiencing in 2020.

Looking back to the year past, some of the major events we have experienced include the graduation of seven residents and 17 fellows from our clinical training programs, the graduation of six PhD students from our M3D graduate program and six MD PhD students from the medical scientist training program.

Our clinical programs welcomed four new faculty. Welcome Rebeca Alvarez, Anshu Bandhlish, Michael Haffner, and Ata Moshiri!

Early this year, the decision was made to convert to a new laboratory information system (Beaker), which will go live October 3, 2020, in conjunction with a University of Washington medical system implementation of the Epic electronic health record system. Substantial effort on the part of all of our clinical faculty, trainees, and staff will be required to make this a success.

Major research milestones included the launch of the Dog Aging Project in November, under the leadership of Dan Promislow and Matt Kaeberlein, which was widely covered by the national media (see page 4).

The heart regeneration program entered a new phase towards eventual commercialization by creation of a working partnership relationship with a private corporation, Sana Biotechnology, Inc. Chuck Murry remains the scientific leader of this program, and has taken a partial leave of absence to facilitate this effort.

Individual milestones include (but are not limited to) the appointment of Jen Davis as head of the Center for Cardiovascular Biology, and the election of Ray Monnat to Fellowship of the American Association for the Advancement of Science.

a year's overview

A MESSAGE FROM THE CHAIR (CONT)

Our biggest news came on November 14, when the UW Board of Regents voted unanimously to approve the proposal to consolidate the Departments of Pathology and Laboratory Medicine. This academic year will be the last for the Department of Pathology as most of us have experienced it. The consolidation will offer us many new opportunities as we confront the challenges of changing medical and research landscapes. Many details of the process, including the name of the new department, are still actively evolving. Stay tuned!

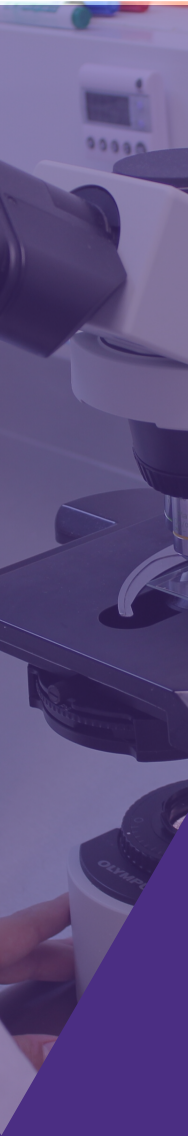
Lastly, a plea from the Chair to consider the Department as you make your plans for philanthropy. We have many needs and different endowments which help us meet them. If you want to support our junior faculty, please consider donating to the Martin-Reichenbach Fund, named for our long-serving distinguished faculty, George Martin and Dennis Reichenbach. The fund has just now attained sufficient size to be on the cusp of making its first awards to junior faculty to support their development and their pilot research endeavors.

Alumni of any of our clinical training programs may wish to donate to the funds that support educational (Pathology Resident Education Fund) and research (Pathology Resident Research Fund) needs of trainees. Currently, these funds support resident research projects and travel to meetings. Alumni of the Department's graduate programs may wish to support the Graduate Student Support Fund, which provides similar support to graduate training, particularly for first-year trainees. There are 15 other endowments supporting specific activities in the Department. All can be reached at UW Foundation (see the button below). Please support our community and help ensure its future.

I close by wishing all members of our community—faculty, trainees, students, administrative staff, hospital staff, alumni, family and friends—a joyous holiday season and a happy, healthy, and rewarding new year.

Charlie
Charles E. Alpers, MD

Donate



GEORGE MARTIN- DENNIS REICHENBACH ENDOWMENT

Join us in honoring George Martin and Dennis Reichenbach's deep and lasting commitment to research, education, and the development of new leaders for the discipline of pathology.

So far we've raised \$744,205!

No depiction of the strength of our Department would be complete without noting the impact Dennis and George have had on generations of graduate students, postdoctoral students, and junior faculty.

By supporting the George Martin-Dennis Reichenbach Endowment, you are not only honoring the amazing impact of two exceptional scientists, you are enabling early career pathologists to pursue their research interests that fall outside of the traditional focus areas of federal funding programs.

In the spirit of the indelible impact Drs. Martin and Reichenbach continue to have on our field, this endowment's purpose is to foster innovative research and better inform our fight against disease.



George M. Martin, MD, & Dennis D. Reichenbach, MD

Click below to donate or visit
bit.ly/UWPathEndowment

Donate

IN THE NEWS

Official Launch of the Dog Aging Project

Congratulations to the Dog Aging Project on their official launch in November 2019! Headed by UW Pathology faculty Dr. Daniel Promislow and Dr. Matthew Kaeberlein, the Dog Aging Project's goal is to understand how genes, lifestyle, and environment influence aging. The Dog Aging Project asked for nominations for dogs and got an astounding response (73,000 nominated dogs as of December 2). Visit their website at dogagingproject.org to learn more and see a selection of media coverage.

[Learn More](#)

Dr. Matthew Kaeberlein (L) with Chloe and Dobby. Dr. Daniel Promislow (R) with Frisbee. Photo by Tammi Kaeberlein

UW, UC Berkeley, and UW San Francisco secure \$106 Million Gift for the Weill Neurohub

We are thrilled that UW, UC Berkeley (Berkeley), and UC San Francisco (UCSF) have received a \$106 million dollar gift from the Weill Family Foundation and launched the Weill Neurohub. UW News says the Weill Neurohub is “an innovative research network that will forge and nurture new collaborations between neuroscientists and researchers working in an array of other disciplines — including engineering, computer science, physics, chemistry and mathematics — to speed the development of new therapies for diseases and disorders that affect the brain and nervous system.” UW Neuropathology faculty had a key role in securing this donation and will be actively engaged in projects supported by this program.

[Read More](#)

Save the date!

Join us for the annual departmental retreat on Friday, Sept 11 and Saturday, Sept 12 at Semiahmoo Resort with keynote speaker David Louis, MD Benjamin Castleman Professor of Pathology, Harvard Medical School

ANNOUNCEMENTS



Congratulations to Dr. Jennifer Davis, who was promoted to head of the Center for Cardiovascular Biology this fall.



Dr. Melissa Upton was included in [The Pathologist's 2019 Power List](#), featuring 100 of the industry's top trailblazers.

GRANTS

Some recently awarded grants to faculty

NanoString, Alzheimer's Disease Panel Grant Award, was awarded to Drs. C. Dirk Keene and Caitlin Latimer.

The laboratory headed by Dr. Behzad Najafian received five years of support from NIH/NCATS (U54, Project P.I. Najafian) to study cardiac and arteriolar lesions in Fabry Disease.

Dr. Alexander R. Mendenhall's UW Edge grant pilot for investigating the effects of environmental toxicants on allele expression bias and developing allele specific sequencing technology was awarded.

Dr. Eric Huang received \$50,000 Early Phase Clinical Research Support P30 grant from Fred Hutch (PI)

Cimino, P.J. MD, PhD

Seattle Translational Tumor Research, Pilot (PI: Eric Holland) 10/15/19–10/14/20

Leveraging low-pass whole genome sequencing for risk-stratification of adult glioma

The goal of this project is to develop a low-seq protocol to classify glioma associated Somatic Copy Number Alterations subtypes, which will allow for real-time patient risk-stratification for clinical decision making and clinical trial enrollment. Role: Co-Investigator

GRANTS (CONT)

Some recently awarded grants to faculty

Cimino, P.J. MD, PhD (cont)

NIH/NCI (PI: Eric Holland) 9/1/19–8/31/24

Biology and therapy of C11orf95-RELA fusion-driven ependymoma

We will use a combination of novel mouse models and human neuro stem cell systems with readouts of single cell analysis, immunology, tumor microenvironment, systems biology, and data visualization to understand the biology of this fusion protein. Role: Co-Investigator

NIH/NHGRI (PI: Bomsztyk) 9/2019-8/2021

PIXUL-FFPE: High throughput platform for chromatin and DNA sample preparation from formalin fixed paraffin embedded (FFPE) tissue samples. Role: Co-Investigator

Darvas, Martin, PhD

NIH/NIA (PI: Promislow) 8/1/19–6/30/20

Establishing the Companion Dog as a Model for Alzheimer's Disease

This proposal capitalizes on the NIA-funded Dog Aging Project U19 in order to establish the necessary groundwork for the companion dog as a powerful model for Alzheimer's disease discovery. Role: Co-Investigator

NIH/NIA (PI: Darvas, Funk, Johnston) 9/1/19–5/31/24

Modulation of Alzheimer's disease by Herpes simplex virus infection

The goal of this project is to see if HSV-1 infection alters the transcriptional regulatory networks of mice over time and characterize differences in neuropathology that result from HSV-1 infection. Role: PI

R21 AG060142-01A1 (PI: Jing Zhang) 9/1/19–5/31/21

NIH/NIA

Targeted drug delivery via CNS cell specific exosomes in neurodegenerative diseases

This study aims to develop a novel targeted drug delivery system that uses membrane vesicles derived from cells with the ultimate goal of treating Alzheimer's, Parkinson's, and related diseases. Role: Co-Investigator

NIH/NIA (PI: Cecilia Lee) 9/1/19–8/31/24

Aging eyes and aging brains in studying Alzheimer's disease: Modern ophthalmic data collection in the Adult Changes in Thought (ACT) study

The investigators propose to examine the effect of structural and functional changes in retina and longitudinal severity of ophthalmic diseases on Alzheimer's disease and related neuropathology. Role: Co-Investigator

GRANTS (CONT)

Some recently awarded grants to faculty

Keene, C. “Dirk”, MD, PhD

NIH/NIA

(PI: Promislow)

8/1/19–6/30/20

Establishing the Companion Dog as a Model for Alzheimer's Disease

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NIH/NIA

(PI: Cecilia Lee)

9/1/19–5/31/24

Aging eyes and aging brains in studying Alzheimer's disease: Modern ophthalmic data collection in the Adult Changes in Thought (ACT) study

The investigators propose to examine the effect of structural and functional changes in retina and longitudinal severity of ophthalmic diseases on Alzheimer's disease and related neuropathology.

Zhang, Jing, MD, PhD

NIH/NIA

(PI: Zhang)

8/15/2019–4/30/2020

Comparing Peptide Biomarkers for Alzheimer's Disease in Asians and non-Asians in the US

This study aims to use novel mass spectrometry-based technologies to identify and validate key biomarkers related to AD pathogenesis in human cerebrospinal fluid and blood, as well as identify a potential source of confounding factors, by examining whether Asian race affects CSF marker level.

PUBLICATIONS

Read highlights from our Department's publications by clicking the link below!

Read

ACCOMPLISHMENTS

Some recent accomplishments by members of the Department

- UW Cytology received two abstract awards at this year's American Society of Cytopathology Annual Meeting held in Salt Lake City.
 - a. Quality Improvement in Cytology Abstract Award. "Cell-Free DNA from supernatant as an alternative source for molecular diagnostics on cytology specimens" Authors: Marie Perrone, Rebeca Alvarez, Tawnie Vo, Moon-Wook Chung, David Chhieng, Eric Konnick, Eric Huang
 - b. Advances in Thyroid Cytology Award: "Raman spectroscopy is a novel approach in evaluating thyroid nodules." Authors: Eric Huang, Marcos Soares de Oliveira, Michael Campbell, James Chan
- Organization for the Study of Sex Differences (OSSD) Chair invitation: Joel Berletch is a Research Assistant Professor of Pathology and has been invited to serve as the Chair for the 2021 OSSD annual meeting.
- Dr. Raymond J. Monnat, Jr. was elected to be a Fellow of the American Association for the Advancement of Science, one of six from UW and one of three from the School of Medicine. [Read more on UW's website.](#)
- Dr. Chuck Murry spun out part of the UW Heart Regeneration Program (HRP) into a new company, Sana Biotechnology, in November 2019. This moved 12 scientists from Pathology into Sana, and he will be serving as a part-time Senior Vice President of Sana for the next year. The goal is to get stem cell work performed at HRP into clinical trials.
- Institute for Stem Cell and Regenerative Medicine (ISCRM) hosted its Scientific Advisory Board in November 2019. Leading stem cell scientists reviewed ISCRM's scientific progress, recruitment efforts, fundraising, state relations efforts and public outreach. They were laudatory regarding ISCRM's accomplishments, and challenged ISCRM to find its next success in clinical translation, i.e. what is the next Heart Regeneration Program?
- Dr. Mendenhall was invited to give a talk at the UC Boulder Integrated physiology department seminar on Randomness in biology: variable gene expression as well as a talk at the National Gerontological Society of America (GSA) meeting in Austin on intrinsic noise, loss of heterozygosity, and aging.
- Dr. Rosana Risques presented at the Association for Molecular Pathology Annual Meeting.

ACCOMPLISHMENTS (CONT)

Some recent accomplishments by members of the Department

- Dr. Melissa Upton presented at the 26th Annual Washington Clinical Laboratory Conference, sponsored by WA State ASCLS on the topic of "ASCP Choosing Wisely, Effective Test Utilization, and National Pathology Quality Registry"
- Dr. Kaeberlein organized and chaired the Gerontological Society of America Annual Meeting Biological Sciences Section in Austin, TX. [Read more here.](#)
- Dr. Kaeberlein gave a public lecture in Austin, TX along with Dr. Kate Creevy (Texas A&M) about the Dog Aging Project "Living in Dog Years: The Science of How Dogs Age and the Implications for Human Aging". [Read more here.](#)
- Dr. Kaeberlein received the National Institute on Aging Nathan W. Shock Award and gave the Nathan Shock Lecture at NIA on October 17.
- Dr. Kaeberlein gave the Keynote Lecture at the Molecular Biology of Ageing conference in Groningen, Netherlands on October 12. [Read more here.](#)
- Dr. Kaeberlein participated in an expert panel on the topic of "Geroscience" at the Targeting Metabesity conference in Washington DC on October 15. [Read more here.](#)
- Dr. Kaeberlein featured in NewScientist and Science Magazine discussing the implications of a conserved epigenetic clock that provides insights into the aging process in both dogs and humans. [Read NewScientist here](#) or [Science Magazine here.](#)
- Dr. P.J. Cimino presented "Moving towards molecular grading of adult gliomas" as an invited speaker at the University of Washington Neurological Surgery Grand Rounds on October 9, 2019. He also presented "Copy number alteration profiling in IDH-mutant astrocytoma supersedes traditional histological grading for determining patient prognosis" at the Seattle Translational Tumor Research (STTR) Program Scientific Retreat on October 24, 2019.
- Dr. C.D. Keene presented "ACT Neuropathology: Overview and Progress to Date" and "ACT U19 Neuropathology Core" at the Adult Changes in Thought Annual Meeting, Seattle, WA, August, 12, 2019.

ACCOMPLISHMENTS (CONT)

Some recent accomplishments by members of the Department

- Dr. Keene presented “ADC –NeuroBiobank Working Group to Advance Brain Donation and Utilization for ADRD Research” at the Alzheimer’s Disease Centers Fall Meeting, St. Louis, MO, October 11, 2019.
- Dr. Keene presented “UW Precision Neuropathology Core: Integrating traditional methods with quantitative approaches to advance brain science”, University of Minnesota Lab Medicine and Pathology Grand Rounds, October 23, 2019, in Minneapolis, MN
- Dr. Keene presented “Diagnostic sensitivity and specificity of chronic traumatic encephalopathy” at the Neuropathological Diagnosis of Chronic Traumatic Encephalopathy (CTE): Next Steps Workshop at NIH in Bethesda, MD. November 6, 2019.



(L-R) Jill Camp (Assistant Director of Finance), Dr. Charles Alpers (Chair), Megan Barker (M3D Graduate Program Advisor), and Dr. William Mahoney, Jr. (Associate Dean of Student and Postdoctoral Affairs)

**We had a
wonderful time
at our tropical
holiday party
this year!**

AWARDS

Quality Improvement in Cytology Abstract Award (American Society of Cytopathology Annual Meeting). Title: *Cell-Free DNA from supernatant as an alternative source for molecular diagnostics on cytology specimens*. Authors: Marie Perrone, Rebeca Alvarez, Tawnie Vo, Moon-Wook Chung, David Chhieng, Eric Konnick, Eric Huang

Advances in Thyroid Cytology Award (American Society of Cytopathology Annual Meeting). Title: *Raman spectroscopy is a novel approach in evaluating thyroid nodules*. Authors: Eric Huang, Marcos Soares de Oliveira, Michael Campbell, James Chan

2019 Building Bridges Awards (BBA)

The Departments of Pathology (DoP) and Laboratory Medicine (Lab Med) will support pilot project(s) that facilitate partnerships in either of two categories:

1. Partnerships between at least two faculty (DoP or Lab Med) that bridge between the basic and clinical sciences. At least one faculty applicant must be at a junior level of appointment.
 2. Partnerships between at least one Laboratory Medicine and at least one Pathology faculty member (in any Divisions), one of whom should be at a junior level of appointment.
- Drs. Dintzis and Bryant: *Improving the accuracy and time to diagnosis of invasive fungal sinusitis using machine learning* (\$17,020)
 - Drs. Soong and Risques: *Pelvic High-Grade Serous Carcinomas in BRCA-Carriers* (\$19,910)
 - Drs. Chen and Paulson: *Functional genomics paradigm in pleomorphic rhabdomyosarcoma* (\$20,000)
 - Drs. Fink and Polyak: *Arbidol for Suppression of West Nile Virus* (\$20,000)
 - Drs. Koch and Stewart: *Parkinson's disease-related protein in Inflammatory Bowel Disease* (\$9500)

Fall 2019 Accountable Care Organization (ACO)

Accountable Care Organization (ACO) Pilot Grant program is a trainee research support opportunity for UW Medicine Pathology Residents and Fellows providing financial support for projects using existing or novel methods that demonstrably improve quality, safety, service, and/or access while containing the cost of care.

Dr. Elizabeth Parker: *Diagnostic utility of Raman spectroscopy in differentiating thyroid nodules and identifying thyroid cancers* (\$5,144.10)

Dr. Trent Irwin: *Keratin 17 as a novel biomarker in distinguishing urothelial neoplasia from benign urothelial mucosa in biopsy and urine cytology specimens* (\$6,000)

DEGREES AWARDED

Congratulations to everyone who received their degree in 2019!

Molecular Medicine and Mechanisms of Disease (M3D) PhD Program

Lauren Abell
Macarena Aloï
Warren Anderson
Nik Jorstad
Michelle Krutein
Yevgeniy Yuzefpolskiy

Medical Scientist Training Program (MSTP)

Gabrielle Barsh
Luke Dang
Michael Doud
Sivakanthan Kasinathan
John Rose
Shawn Yu

Residency and Fellowship Program

Residents for Anatomic & Clinical Pathology: Drs. Daniel Anderson, Dustin Bosch, Kathryn Christofersen, Thomas Long, Rugvedita Parakh, Annie Samraj.

Resident for Clinical Pathology: Dr. Ashley Eckel

Fellows: Dr. John Gross (Bone & Soft Tissue Pathology), Dr. Rebeca Alvarez (Cytopathology), Dr. Jeannie Stubblefield (Clinical Chemistry), Dr. Kimberly Starr (Clinical Microbiology), Dr. Gregory Cheeney (Dermatopathology), Dr. Farshaad Bilimoria (Forensic Pathology), Dr. Yongjun Liu (GI & Hepatic Pathology), Dr. Jessica Rogers (GI & Hepatic Pathology), Dr. Garrison Pease (Genitourinary Pathology), Dr. Megan Ketcham (Hematopathology), Dr. Paul Simonson (Hematopathology), Dr. Andres Moon (Molecular Genetic Pathology), Dr. Alysa Poulin (Pediatric Pathology), Dr. Tiffany Shao (Renal Pathology), Dr. Sarah Rooney (Breast/Gyn Pathology), Dr. Angelica Lerma (Surgical Pathology), Dr. Paula Jenkins Colon (Surgical Pathology)



UPCOMING EVENTS

Faculty Retreat

September 11 & 12 at Semiahmoo Resort with keynote speaker David Louis, MD. Benjamin Castleman Professor of Pathology, Harvard Medical School

Rotation Talks for M3D Recruitment

Winter Quarter (March 16, 2020 from 2:30 – 4:30 @ South Lake Union, Brotman Auditorium) and Spring Quarter (June 9, 2020 from 2:30 – 4:30 @ Fred Hutch, Thomas Building, B Suite)

M3D Recruitment

M3D Student Poster Presentation and Dinner (February 6, 2020 from 4:30 – 6:30 @ Fred Hutch Arnold Building, Behnke Suites)

Interview Day on February 7, 2020 @ South Lake Union (AM) and UW Health Sciences Building (PM)

Recruitment Dinner (February 7, 2020 from 4:30 – 7:00 @ UW Burke Museum)

Spring Retreat for M3D Students and Faculty

June 17, 2020 from 8am-7pm @ UW Waterfront Activities Center, Great Room

Annual Meeting

[Organization for the study of Sex Differences](#) (OSSD) annual meeting. May 4-7 2020.

Mini-Symposium on Protein Design

March 30, 2020 at the Fred Hutchinson Cancer Center. Free and open to all interested parties - stay tuned for details!

For upcoming events, visit our calendar
pathology.washington.edu/events

See Calendar

Follow us on social media to keep up with
department news and events!

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