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Pathology News

JUNE 1, 2017

Dear Colleagues:

This past Wednesday, May 24, 2017, we had the Department of Pathology Research retreat. I would like at first to express my appreciation and gratitude to Dr. Wendy Mars, director of our Cellular and Molecular Pathology (CMP) Graduate Program, and to all her collaborators, and to the department's administrative staff, for putting together an excellent program highlighting the department's diversity of research activities. Dr. James Musser, from Houston Methodist Hospital, gave an excellent presentation on the mechanisms by which Streptococcus bacteria evolve through genomic alterations to synthesize new toxins that cause a "shock and awe" attack on the patient before the patient has the opportunity to develop any antibodies against them. These infections, often in the form of epidemics, are associated with severe mortality and morbidity. He pointed out the similarities by which cancer cells "progress" to more invasive forms, to the mechanisms by which bacteria evolve acquiring new genotypic features. Presentations by faculty from our department, graduate students, clinical residents and post-doctoral fellows were given in the afternoon, again highlighting the depth and diversity of research in our department. The ensuing poster presentation at the University Club brought out more than 100 posters, presented by trainees and eagerly explained and discussed with faculty that attended by asking questions.

As every year, this is a heart-warming experience. It highlighted something beyond the standard parametric expectations of a Pathology department, it showed our capacity to generate new knowledge. At a time when expense reductions dominate the support of research, there is yet valuable new knowledge to be created. Despite the often expressed concerns from financial circles, this is not "unfunded" research. It is research that thrives by making maximal utilization of the local resources and takes advantage of all 48 hours of the day!

With the Summer coming upon us, we will see many new faces of trainees joining our department. The recruitment of the past Fall, led by Dr. Marie DeFrances and joined by many faculty and residents, was very successful, and many new residents of high caliber and high "hope and enthusiasm" on their faces will again join our department, entrusting us with their education. New clinical fellows will again turn to us for in depth education in subspecialties of their interest. The clinical services of our department, rooted into the urban academic hospitals, have established functioning networks of support with the peripheral hospitals and extend diagnostic care to all the hospitals of UPMC. The balance between the "center" and the "periphery" is crucial, fragile and important to maintain. Our colleagues in lab administration have accomplished wonders of integration, making it possible to sustain the ecology of the central and peripheral interaction and cooperation.

I wish you the best for the upcoming Summer

George K. Michalopoulos Menten Professor and Chair



"Sometimes
the
questions
are
complicated
and the
answers
are
simple."

University and UPMC closed Tuesday, July 4 in celebration of

Independence Day.

Dr. Seuss

Closed Monday, September 4 in observation of Labor Day.

Faculty Highlights



George K. Michalopoulos, M.D., Ph.D.

Chaired Symposium ASIP Annual meeting, "Liver Pathobiology" April 23, 2017.

Satdarshan Paul Monga, M.D.

- Named lecturer Dr. Gerber Memorial Lecture, February 20, 2017, Tulane University.
- Speaker, Presidential Symposium ASIP's annual meeting at EB 2017, Chicago, IL.

Steven Swerdlow, M.D.

- United States Canadian Academy of Pathology Honor: The Harvey Goldman Master Teacher of the Year Award, 2017
- Secretary, American Board of Pathology

Liron Pantanowitz, M.D.

- Member of the College of American Pathologists (CAP) Pennsylvania House of Delegates,
- Executive Council of the Pennsylvania Association of Pathologists (PAP)
- Elected to serve on the Executive Board of the American Society of Cytopathology (ASC).

Parmjeet Randhawa, M.D.

- Elected as Councillor, Renal Pathology Society, January 2017
- Moderator, Concurrent Session: Kidney BK Virus. American Transplant Congress, Chicago, IL, April 29th – May 3rd, 2017.

Miguel Reyes-Mugica, M.D.

- President of the Society for Pediatric Pathology 3/4/17
- President Elect for the International Paediatric Pathology Association, the umbrella organization for all societies of Pediatric Pathology in the World, for the period 2018-2020.



WELCOME NEW FACULTY



Mohamed Imad A. El Hag, M.D., M.S., FCAP, Assistant Professor of Pathology, will join the Division of Transplant Pathology July 1, 2017. Dr. El Hag will finish a fellowship in liver and transplantation pathology at the University of Pittsburgh Medical Center June 30, 2017. He previously did a surgical pathology fellowship at the University of Minnesota before joining UPMC.

Min Han, M.D., Ph.D., Clinical Instructor at Magee Womens Hospital, will join the Department July 1, 2017. Dr. Han is currently completing a residency at Washington University. She will focus on breast and gynecologic pathology.

Ivy John, M.D., Assistant Professor of Pathology, will join the Department at Shadyside Hospital July 1, 2017. She finishes a Bone and Soft Tissue Fellowship at the University of Pittsburgh in June. Prior to this, she did a surgical pathology fellowship at Mayo Clinic in Rochester MN.

Brett M. Lowenthal, M.D., Clinical Instructor, will join the Department at Presbyterian-University Hospital July 1. He will finish a surgical pathology fellowship at the University of California in June. His area of expertise will be in gastrointestinal pathology.

Stephanie Mitchell, Ph.D., Assistant Professor, will join the Section of Laboratory Medicine July 17, 2017. Dr. Mitchell is finishing a fellowship at the Perelman School of Medicine at the University of Pennsylvania in June. She is a clinical microbiologist.

Sarah A. Reuss, M.D., Clinical Instructor, will join the Department at Presbyterian-University Hospital September 1, 2017. She is currently finishing a cytopathology fellowship at Indiana University. Prior to this, she did a surgical pathology fellowship at Indiana University. Her area of expertise will be in gastrointestinal pathology.

Svetlana A. Yatsenko, M.D., Associate Professor of Pathology, joined the Department June 1 as the Director of the Cytogenetics Laboratory at Magee Womens Hospital. Dr. Yatsenko previously held a primary appointment in the Department of Human Genetics here at the University of Pittsburgh.

Huina Zhang, M.D., Ph.D., Clinical Instructor at Magee Womens Hospital, will join the Department July 1. Dr. Zhang is currently Chief Resident Elect in the Department of Pathology and Laboratory Medicine at Loma Linda University in California. She will focus on breast and gynecologic pathology.

Promotions

David Azur, M.D. Promoted to Clinical Associate Professor, Mercy Hospital.



Retirees

Diane Bell, administrative assistant at Magee Womens Hospital has retired after 41 years of service.

Alka Palekar, M.D., Professor of Pathology at Shadyside Hospital, will retire July 1, 2017 after 42 years of service.

Amal Kanbour-Shakir, M.D., Professor of Pathology at Magee Womens Hospital will retire July 1, 2017 after 33 years of service.







Linda Askren, administrative assistant for Transplant Pathology,
Retired May 31, 2017 after 17 years of service.

SURP AND CMP GRADUATE PROGRAM

From the desk of Dr. Wendy M. Mars

CMP and Related News of Note:

The numbers are in! This year there will be 32 NEW students matriculating to either the IBGP or PMI (the new spinoff program) in the fall so soon we will be ACTIVELY seeking mentors who wish to host a graduate student in their lab next year. The best way to assure that the incoming students know you are interested is to contact me (wmars@pitt.edu). Also, students will peruse the project site as well so be sure you have your projects registered on the SOM web site:

https://somgrad.wufoo.com/forms/update-faculty-information/

Since last fall, 7 students have formally graduated and six have formally joined, making our current number of CMP students 26; however, this summer another four students will (likely) be leaving us. On the other hand, we anticipate adding another 4 new students from the MSTP (2) and IBGP (2) parent programs by September, so CMP continues to remain one of the strongest graduate programs within the University School of medicine.

The Pathology Research Seminar and Retreat was held this year on Wednesday, May 24, 2016 from 12-7:00 PM. Our keynote speaker was Dr. James Musser from Methodist Hospital in Houston, who spoke on "Deconvolution of the Molecular Mechanisms Driving Streptococcus Pyogenes Pandemics: The Role of the Muppets". As a reminder, ECU credits are offered for the oral presentation portion of the meeting so remember to turn your information to Amanda Bytzura (bytzuraam@upmc.edu) in order to receive credit. The poster session (refreshments included!) was held at the University Club and the winners were:

Graduate students:

First place: **Jackie Russell** (mentor Paul Monga)

Second place: **Kevin Levine** (mentor Steffi Oesterreich)

Third place four-way tie: **Miranda Culley** (mentor, Steve Chan), **Heejae Kang** (mentor, Peter Lucas), **Greg Logan** (mentor Steve Maracich), **Patrick Wilkinson** (mentor Andy Duncan).

Post-graduate trainee (basic):

First place: **Kelly Koral** (mentor, George Michalopoulos)

Second place: **Timothy Perkins** (mentor, Tim Oury)

Third place: **Bo Ma** (mentor, Alan Wells)

Post-graduate trainee (clinical):

First place: **Soufiane El Hallani** (mentor, Simon Chiosea)

Second place: Oscar Lopez Nunez (mentor, Liron Pantanowitz)

Third place two-way tie: **Alicia Hunt** (mentor, Marina Nikiforova) and **Dane Olevian** (mentor, Reetesh Pai)

Many thanks to all who helped by serving on the retreat committee, but especially to Aaron Bell, Morgan Preziosi, and Kyle Sylakowski who worked so hard to make the poster session so much fun; Chris Szalkuski who helped make arrangements for the keynote address (including lunch), and Amanda Bytzura, our CMP administrator, who was the overall organizer behind the scenes who worked so hard to make it all go smoothly.

The CMP arm of the School of Medicine Summer Undergraduate Research Program (SOM-SURP) will run from May 22 until July 28 this year. We have a total of 5 students participating from across the country, including 1 from an ASIP-sponsored program (SROPP). The SOM-SURP is a highly competitive program. This year there were 535 applicants to the 7 overall SURP programs, with 250 (~47%) indicating an interest in CMP SURP.

SURP isn't the only summer training program in the Pathology Department! This summer we will have several other students working with Pathology faculty. Notably, in addition to several uother undergraduates working with faculty, there will be seven first year medical students working on summer research projects and funded through the Klionsky Pathology fellowship, including 3 from outside Universities! This continues to be one of the strongest recruiting programs we have for the discipline of Pathology. Kudos to Marie DeFrances for organizing a spectacular weekly learning experience for these first year students with clinical members of the Pathology Department!

If you are interested in having issues brought before the CMP committee, please share them with our CMP administrator, Amanda Bytzura (<u>bytzuraam@upmc.edu</u>), or me (<u>wmars@pitt.edu</u>). Also, please continue to make me aware of any outstanding faculty members who are not currently members of CMP but who would be eligible and have a possible interest in joining our program.

Thanks so much!

Wendy M. Mars, Ph.D.

Director, Pathology SURP and CMP graduate program

RESIDENCY AND FELLOWSHIP

From the desk of Dr. Marie DeFrances

Residency Program: New PGY-1 Class – July 2017

Seven new residents have been recruited.

Daniel Buhlinger, MD – Michigan State University

Daniel Geisler, MD – University of Virginia

Blake Gibson, MD – University of Arizona

Lara Graham, MD – University of Cincinnati

Terrell Jones, MD – University of Pittsburgh

Lauren Skvarca, MD, PhD – University of Pittsburgh

Swikrity Upadhyay Baskota, MD – National Academy of Health Sciences, Nepal



Fellowship Program: Fellows – July 2017

Nine fellows have been recruited from outside programs together with six internal candidates. A total of thirteen fellows will begin their training on July 1, 2017; one will begin on August 1, 2017; and one will begin on September 1, 2017.

Jeremie Berdugo, MD (H&N) – University of Montreal – AP residency

Siddharth Bhattacharyya, MD (MGP) – Temple University Hospital – AP/CP residency
Maren Fuller, MD (Ped Path) – Houston Methodist Hospital – AP/CP residency
Alicia Hunt, MD (Heme) – UPMC – AP/CP residency
Liurka Lopez, MD (BST) – University of Puerto Rico School of Medicine – AP residency
Remegio Maglantay, MD (MGP) – SUNY Downstate Medical Center – AP/CP residency
Dane Olevian, MD (SP) – UPMC AP/CP residency
Stell Patadji, MD (Cyto) – UPMC – AP/CP residency
Jansen Seheult, MD (BB) – UPMC – CP residency
William Selove, MD (Heme) – University of Massachusetts Medical School – AP/CP residency
Anne Shepler, MD (NP) – Vanderbilt University Medical Center – AP/CP residency
Russell Silowash, DO (Cyto) – UPMC – AP/CP residency
Sahr Syed, MD (GU) – Rush University Medical Center – AP/CP residency
Diana Thomas, MD, PhD (NP) – UPMC – AP residency
Nour Yadak, MD (TP) – Tennessee Health Science Center – AP/CP residency

Clinical Instructors – July 2017

Four clinical instructors have also been recruited. Three will start on July 1, 2017 and one will start on September 1, 2017.

Min Han, MD, PhD (GYN/Breast) – Washington University – AP/CP residency
Brett Lowenthal, MD (GI) – University of California, San Diego – AP/CP residency
Sarah Reuss, MD (GI) – Indiana University School of Medicine – AP/CP residency
Huina Zhang, MD, PhD (GYN/Breast) – Loma Linda University Medical Center – AP/CP residency

MEDICAL SCHOOL

From the desk of Dr. Marie DeFrances.....

Medical Students

The Pathology Medical Student Interest Group (PMSIG) wrapped up another successful year. The PMSIG received funding from both ICPI and ASCP to support this year's initiatives such as hosting a lunch-and-learn session with Dr. Tim Oury, holding a Resident Panel discussion for students to gather information about applying for and going through Pathology Residency training, and partnering with Healthy Minds to spread awareness to high schoolers about the toxic effects of drugs and alcohol on the body's organs.

Residents Michelle Stram and Dane Olevian served as our department's Pathology Resident- Medical Student Liaisons this academic year. They participated in the SOM MS-3 career night, the medical student research fair, and the PMSIG's Resident Panel, as well as many other important medical student related-activities during the year. Residents Shweta Bhavsar and Michelle Stram are the new liaisons for this coming academic year.

Pitt medical student (and pathology residency applicant) **Terrell Jones** has won the Association for Pathology Informatics President's award for best poster at USCAP 2017 ("Computational Pathology versus Manual Microscopy: Comparison Based on Workflow Simulations of Breast Core Biopsies"). This work is the result of a research rotation with Dr. Jeff Fine at Magee, in collaboration with folks in Computational & Systems Biology.

FOR ACCESS TO WEB PAGE FOR ECU LOG-ON

ECU data for the academic year July 1, 2016 to June 30, 2017 for collection now. Please be sure your info is entered via our Department's web page link.

For faculty with a UPMC network ID, please use this link. Accessing this link off of the UPMC network will bring up a login prompt: https://epssecure.upmc.com/ECUAdmin/auth/index.cfm

For faculty without a UPMC ID, please use this link: https://epssecure.upmc.com/ECUTrack/index.cfm

These links are also available on the Department of Pathology webpage under links at: http://path.upmc.edu/links.htm.

From the home page select which ECU activity is to be logged, and whether the activity is for medical or graduate students. Then fill in all fields on the form with an option for a free-text note at the end. Confirmation will be given and the activity will be entered into the database for submission at the end of the academic term.

For questions or feedback, please contact Thomas Harper at ISD (<u>harperth@upmc.edu</u>). Thank you.



The PIRRT program allows Pathology residents and fellows at the University of Pittsburgh to construct individualized research training experiences with the goal of "fast-tracking" to combined diagnostic and independent research faculty positions. Trainees are generally admitted to the program as first year residents, electing to take their research year after PGY1 or PGY2, or before continuing on to diagnostic fellowship training here. Following integrated PIRRT research training, our trainees have been highly successful in transitioning directly to faculty positions supportive of investigational and diagnostic career development, resulting in NIH K award, R01 and P01 funding. Please join us in welcoming our new PIRRT trainee, Lauren Skvarca, and congratulating our current and former PIRRT fellows on their accomplishments over the past year.

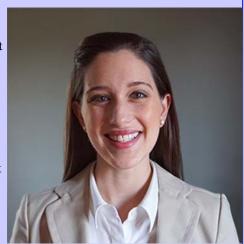
Charleen T. Chu and Tim Oury

PIRRT Co-Directors

Welcome to Lauren, our new PIRRT trainee starting in July!

Lauren Skvarca, MD, PhD (University of Pittsburgh 2017)

Lauren grew up in Cincinnati, Ohio and completed her B.S. in biomedical engineering at Washington University in St. Louis. She then moved to Pittsburgh where she completed her MD and PhD degrees at the University of Pittsburgh/CMU Medical Scientist Training Program. Her graduate work with Neil Hukriede focused on elucidating the mechanisms of renal regeneration during acute kidney injury in zebrafish. During medical school clerkships, she became interested in understanding how complications during pregnancy affect the kidney and can ultimately predispose women to chronic kidney disease later in life. This fueled her interest in placental pathology, and she is currently interested in pursuing an academic career in pediatric and perinatal pathology. When not in the lab, she can be found exploring the many beautiful Pennsylvania state parks with her family.



Updates on current PIRRT trainees:

Tanner Freeman, MD, PhD

Tanner is completing his first year of AP/CP training with plans on beginning his PIRRT research year in July 2017.

Tanner will be joining the laboratory of Peter Lucas MD, PhD for post-doctoral training and career development. Tanner's project will focus on understanding the interaction(s) between the Wnt and NF-κB signaling pathways in the context of hepatocellular carcinoma.

Thomas Pearce, MD, PhD

Tom has spent the previous year working in the laboratory of Rob Turner in the Systems Neuroscience Institute. This year has laid the foundation of a multi-year research program that will investigate the function of motor nuclei in the thalamus, and the reciprocally interconnected primary motor cortex. He has thus far developed, implemented, and trained multiple animals on a battery of behavioral tasks designed to engage various components of the brain's motor control circuitry, and collected a set of interesting behavioral data. The project is now in a very exciting phase as it transitions from behavioral evaluation into invasive neurophysiology. He recently presented some of his basic neuroscience work at the Society for the Neural

- Control of Movement meeting in Dublin, Ireland, and is currently preparing a manuscript for publication. Tom will be continuing this research program over the coming years, both directly and as a mentor to junior trainees. He has also continued his work in the pathology informatics domain, developing software tools for the interpretation of molecular pathological data and for educational purposes. He presented this work at the 2016 Association for Molecular Pathology annual meeting, where he won a Young Investigator Award.
- Beginning in July 2017, Tom will re-join the Residency program for his final year of Anatomic Pathology training. He will then continue on to the Neuropathology fellowship program at the University of Pittsburgh, during which time he will complete his clinical training, as well as continue the basic neuroscience research program he has started.
- Craig's R01 application on brain tumors scored in the 7th percentile, and is highly likely to fund as it is below the general NINDS payline of 12%.

He published 12 papers over the past year, including two senior author studies of mutant IDH1 in gliomas.

Jason Cheng-Hsuan Chiang, MD, PhD

Assistant Member of Pathology, Neurobiology & Brain Tumor Program, St. Jude Children's Research Hospital

- Jason has established an independent translational research laboratory through intramural funding focusing on molecular classification and biomarker discovery for pediatric high-grade and low-grade gliomas and glioneuronal tumors with technologies including DNA methylation, copy number and RNA expression profiling, whole genome, exome and RNA sequencing, and tissue microarray.
- Jason is also an investigator of preclinical drug development for pediatric high-grade gliomas and sub-investigator of clinical therapeutic trials including SJYC07 (CNS tumors in infants and young children) and SJMB12 (risk stratified therapy for medulloblastomas) led by St. Jude Children's Research Hospital.
- Through collaboration with scientists within and outside of St. Jude, Jason is actively involved in basic research regarding oncogenic histone proteins in gliomagenesis.
- Besides research, Jason provides diagnostic and molecular neuropathology consultation services for difficult or challenging pediatric central nervous system tumors. He receives both domestic and international cases.
- Jason has published a review article in *Journal of Pathology* summarizing our current knowledge regarding molecular pathology of pediatric central nervous system tumors.
- He will give a platform presentation titled "BRAF-fused and 1p-deleted Glioneuronal Tumors: a Spectrum of Dissemination" at the Annual Meeting of American Association of Neuropathologists in Orange County, CA this year. The research article has been accepted for publication in Acta Neuropathologica.

Grzegorz (Greg) Gurda, MD, PhD

- Greg is director of the Gundersen Cancer Biobank within the Kabara Cancer Research Institute on the University of Wisconsin-La Crosse Campus, and participating in new bench to bedside initiatives.
- Grzegorz T Gurda; Kate M Serdy; Svetlana A Yatsenko; Aleksandar Rajkovic; Natalie J Carter; Rafay Ahmed; Alexander B Olawaiye; Rohit Bhargava; Esther Elishaev. (2017) Synchronous Bilateral Tubal Serous Carcinomas in a Patient With Exon 13 Duplication and Loss of Function of BRCA1. *International Journal of Gynecological Pathology*, in press.
- Rajni Sharma, Yuting Wang, Li Chen, Grzegorz T. Gurda, Susan Geddes, Edward Gabrielson, Frederic Askin, Qing Kay Li (2016) Utility of a novel triple marker (combination of thyroid transcription factor 1, Napsin A, and P40) in the subclassification of non–small cell lung carcinomas using fine-needle aspiration cases. *Human Pathology* **54**, 8–16

Rebecca J. Leeman-Neill, MD, PhD

Rebecca moved to New York City in July, 2016. Her daughter, Talia Lauren Neill, was born on August 3, 2016.

Rebecca joined Columbia University as Assistant Professor in the Department of Pathology and Cell Biology. She is carrying out her clinical service work in the Division of Hematopathology and beginning mentored research in the laboratory of Dr. Riccardo Dalla-Favera, investigating the molecular pathogenesis of diffuse large B cell lymphoma.

Ed Plowey, MD, PhD

Stanford ADRC Pilot Project Grant to study the role of Pretangle Taupathy in Early Alzheimer Disease

Intramural funding from Stanford University: Junior Faculty Research Award to study the role of Pretangle Taupathy in Early Alzheimer Disease

American Association of Neuropathologists Terry Award for the Best Paper on Neurodegenerative Diseases (2016)

Craig Horbinski, MD, PhD. Associate Professor of Pathology and Neurosurgery, Northwestern University.



The first Pathology Faculty Mentorship event was held on Nov 21, 2016. Dr. Mona Melhem kindly returned from retirement to discuss the process of non-tenure faculty promotions, drawing upon her experiences serving for 8 years on the Standing Committee for non-Tenured Faculty Promotions and Appointments. The seminar was attended by 25 people, half in person and half by webinar. We received 10 evaluations, with average rankings of 1.1-1.2, and some good suggestions such as holding separate sessions targeting clinical and research missions for the future. Special thanks to Mrs. Karen Weber, who stepped in after a brief crash course to provide our audio-visual support!

The next event is in the process of being scheduled, and will focus on preparing portfolios for promotions within the tenure-stream, common sticking points and how to minimize them.

Special thanks also to Drs. DeFrances, Monaco, Triulzi and Duncan, who have agreed to serve on an ad hoc committee to assess needs and plan future events. We will be holding our first meeting on June 21. Please feel free to direct comments to myself or any other member of the committee below:

Charleen Chu, Neuropathology Marie DeFrances, Molecular & Genomic Pathology Sara Monaco, UPMC Shadyside and Children's Hospitals Darryl Triulzi, Transfusion Medicine Andy Duncan, Experimental Pathology

> Charleen T. Chu, MD, PhD Vice Chair, Pathology Faculty Mentorship

PITTSBURGH LIVER RESEARCH CENTER

From the Desk of Dr. Paul Monga....

I am delighted to share the success of Pittsburgh Liver Research Center (PLRC) as reflected by organization, participation and feeling a sense of community. I am grateful for the support and enthusiasm the members of the PLRC have demonstrated during the our first year! The PLRC has seen tremendous growth over the past year, and we look forward to further advances in the coming months. Some of the developments about which we are particularly excited include:

- We plan to host several nationally-known speakers at our seminars this fall, and we will be continuing with the special interest groups. Based on the availability of the majority of members, we have changed the seminar and SIG times to Tuesdays at noon. (Please visit our website, www.livercenter.pitt.edu for the most up-to-date information on events.)
- A new focus group is currently being formed to study Pediatric Cholestatic Liver Disease, and its inaugural meeting is scheduled for late June.
- We are in the process of establishing the PLRC's Biobanking Core, which will be under the direction of Dr. Allan Tsung (Surgery) with Dr. Aatur Singhi (Pathology) as co-director.
- We have received a substantial number of LOIs for our pilot and feasibility grant award applications, and the awardees will be announced in early fall.
- A major effort for the PLRC this fall will be writing and assembling the information to apply for a P30 grant through the NIH to fund the Center.

If the PLRC can be of any assistance to you and your research in liver, please do not hesitate to contact me at smonga@pitt.edu.

Satdarshan Paul Monga, M.D.

Director, PLRC

Professor of Pathology and Medicine



PUBLICATIONS

Nejak-Bowen K, Moghe A, Cornuet P, Preziosi M, Nagarajan S, **Monga SP.** Role and regulation of p65/β-catenin association during liver injury and regeneration: a 'complex' relationship. Gene Expr. 2017 Apr 28.

Chen ZH, Yu YP, Zuo ZH, Nelson JB, Michalopoulos GK, **Monga SP**, Liu S, Tseng G, Luo JH. Targeting genomic rearrangements in tumor cells through Cas9-mediated insertion of a suicide gene. Nat Biotechnol. 2017 May 1. doi: 10.1038/nbt.3843.

Preziosi ME, Singh S, Valore EV, Jung G, Popovic B, Poddar M, Nagarajan S, Ganz T, **Monga SP.** Mice lacking liver-specific β-catenin develop steatohepatitis and fibrosis after iron overload. J Hepatol. 2017 Mar 22. pii: S0168 -8278(17)30146-0. doi: 10.1016/j.jhep.2017.03.012.

Chen ZH, Yu YP, Tao J, Liu S, Tseng G, Nalesnik M, Hamilton R, Bhargava R, Nelson JB, Pennathur A, **Monga SP,** Luketich JD, Michalopoulos GK, Luo JH. MAN2A1-FER Fusion Gene Is Expressed by Human Liver and Other Tumor Types and Has Oncogenic Activity in Mice. Gastroenterology. 2017 Feb 25. pii: S0016-5085(17) 30004-5. doi: 10.1053/j.gastro.2016.12.036.

Tao J, Zhang R, Singh S, Poddar M, Xu E, Oertel M, Chen X, Ganesh S, Abrams M, **Monga SP**. Targeting β -catenin in hepatocellular cancers induced by co-expression of mutant β -catenin and K-Ras in mice. Hepatology. 2016 Dec 16. doi: 10.1002/hep.28975. PMID: 27981621

Okabe Yang J, Sylakowski K, Yovchev M, Miyagawa Y, Nagarajan S, Chikina M, Thompson M, Oertel M, Baba H, **Monga SP**, Nejak-Bowen KN. Wnt signaling regulates hepatobiliary repair following cholestatic liver injury in mice. Hepatology. 2016 Nov. 64 (5): 1652-1666. PubMed PMID: 27533619. PubMed Central PMCID: PMC5074849

Tao J, Xu E, Zhao Y, Singh S, Li X, Couchy G, Chen X, Zucman-Rossi J, Chikina M, **Monga SP.** Modeling a human HCC subset in mice through co-expression of Met and mutant b-catenin. Hepatology 2016 Nov. 64 (5): 1587-1605. PubMed PMID: 27097116; PubMed Central PMCID: PMC5073058 (Accompanying Editorial).

Wang H, Lu J, Edmunds LR, Kulkarni S, Dolezal J, Tao J, Ranganathan S, Jackson L, Fromherz M, Beer-Stolz D, Uppala R, Bharathi S, Monga SP, Goetzman ES, Prochownik EV. Coordinated Activities of Multiple Mycdependent and Myc-independent Biosynthetic Pathways in Hepatoblastoma. J Biol Chem. 2016 Dec 16;291 (51):26241-26251. PubMed PMID:27738108.

S Ravi, KA Pena, **CT Chu**, K Kiselyov. (2016) Biphasic regulation of lysosomal exocytosis by oxidative stress. *Cell Calcium* **60:** 356-362.

AM Gusdon, J Callio, G DiStefano, RM O'Doherty, B Goodpaster, PM Coen & CT Chu. (2017) Exercise Increases Mitochondrial Complex I Activity and DRP1 Expression in the Brains of Aged Mice. *Exp Gerontol* **90:** 1-13. PMID: 28108329

Alenius H., **Shurin M.R.**, Shurin G.V., Beezhold D., Shvedova A.A. Engineered Nanomaterials – Adverse effects on Human Health – Respiratory System, Part Two: Allergy and Asthma. In: Adverse Effects of Engineered Nanomaterials: Exposure, Toxicology, and Impact on Human Health, Second Edition. Editors: B.Fadeel, A.Pietroiusti, A.Shvedova. Elsevier Publ., San Diego, USA, pp. 243-253, March 2017. (ISBN: 9780128091999)

PUBLICATIONS

Bunimovich Y.L., Keskinov A.A., Shurin G.V., **Shurin M.R.** Schwann cells – A new player in the tumor microenvironment. *Cancer Immunology Immunotherapy*, 67: 2017, in press.

Dobrovolskaia M.A., **Shurin M.R.**, Shvedova A.A. Current understanding of interactions between nanoparticles and the immune system. In: "*Immune Effects of Biopharmaceuticals and Nanomedicines*" Bawa R., Szebeni J., Webster T.J., Audette G.F. (Eds.), volume 3, Pan Stanford Publishing, Singapore, 2017, in press.

Gutkin D.W., **Shurin M.R.** Tumor-infiltrating immune cells of myeloid origin. In: Cancer Immunotherapy Principles and Practice, L.H. Butterfield, H.L. Kaufman, and F.M. Marincola (Editors), 2017, in press.

Anani W., **Shurin M.R.** Targeting myeloid-derived suppressor cells in cancer. In: The Microenvironment in Cancer Progression and Cancer Therapy. P.Kalinski (Editor). Springer, New York, 2016, in press.

Dantey K, Schoedel K, Yergiyev O, Bartlett D, **Rao UN**. <u>Correlation of Histological Grade of Dedifferentiation with Clinical Outcome in 55 patients with Dedifferentiated Liposarcomas</u>. Hum Pathol. 2017 Mar 11. pii: S0046-8177 (17)30066-7. doi: 10.1016/j.humpath.2017.02.015. [Epub ahead of print]PMID:28300575

Rao UN, Cieply K, Sherer C, Surti U, Gollin SM.Select item 268081353. Correlation of Classic and Molecular Cytogenetic Alterations in Soft-Tissue Sarcomas: Analysis of 46 Tumors With Emphasis on Adipocytic Tumors and Synovial Sarcoma. Appl Immunohistochem Mol Morphol. 2017 Mar;25(3):168-177. doi: 10.1097/PAI.000000000000294.PMID:26808135

Dantey K, Schoedel K, Yergiyev O, McGough R, Palekar A, **Rao UN**.Select item 278167234. Ossifying fibromyxoid tumor: a study of 6 cases of atypical and malignant variants. Hum Pathol. 2017 Feb;60:174-179. doi: 10.1016/j.humpath.2016.10.012. Epub 2016 Nov 2.

Liapis H, Gaut JP, Klein C, Bagnasco S, Kraus E, Farris AB 3rd, Honsova E, Perkowska-Ptasinska A, David D, Goldberg J, Smith M, Mengel M, Haas M, Seshan S, Pegas KL, Horwedel T, Paliwa Y, Gao X, Landsittel D, Randhawa P: Banff Working Group: Banff histopathological consensus criteria for pre-implantation kidney biopsies. Am J Transplant. 2017 Jan; 17 (1): 140-150.

Loupy A, Haas M, Solez K, Racusen L, Glotz D, Seron D, Nankivell BJ, Colvin RB, Afrouzian M, Akalin E, Alachkar N, Bagnasco S, Becker JU, Cornell L, Drachenberg C, Dragun D, De Kort H, Gibson IW, Kraus ES, Lefaucheur C, Liapis H, Muthukumar T, Nickeleit V, Orandi B, Park W, Rabant M, Randhawa P, Reed EF, Roufosse C, Seshan SV, Sis B, Singh HK, Schinstock C, Tambur A, Zeevi A, Mengel M. The Banff 2015 Kidney meeting report: Current challenges in rejection classification and prospects for adopting molecular pathology. Am J Transplant . 2017 Jan; 17 (1): 28-41

Khan Z, Strom SC. "Hepatocyte transplantation in special populations: Clinical use in children" in Hepatocyte Transplantation: Methods and Protocols, Second ed. Methods Mol Biol. 2017;1506:3-16. PubMed PMID: 27830542.

Khan Z, Orr A, Michalopoulos GK, Ranganathan S. Immunohistochemical analysis of the stem cell marker LGR5 in pediatric liver disease. Pediatr. Dev. Pathol. 2017 Jan/Feb;20(1):16-27. PubMed PMID: 28276299.

PUBLICATIONS

Khan Z, Yokota S, Ono Y, Bell AW, Oertel M, Stolz DB, Michalopoulos GK. Bile duct ligation induces ATZ globule clearance in a mouse model alpha-1 antitrypsin deficiency. Gene Exp. 2017 Feb;17(2)115-127. Pub-Med PMID: 27938510. [COVER IMAGE]

Khan Z, Venkat VL, Soltys KA, Stolz DB, Ranganathan S. A challenging case of severe infantile cholestasis in alpha-1 antitrypsin deficiency. Pediatr. Dev. Pathol. 2017 Mar/Apr;20(2):176-181. PubMed PMID: 28326955.

Russo P, Magee JC, Anders RA, Bove KE, Chung C, Cummings OW, Finegold MJ, Finn LS, Kim GE, Lovell MA, Magid MS, Melin-Aldana H, **Ranganathan S**, Shehata BM, Wang LL, White FV, Chen Z, Spino C; Childhood Liver Disease Research Network (ChiLDReN).. Key Histopathologic Features of Liver Biopsies That Distinguish Biliary Atresia From Other Causes of Infantile Cholestasis and Their Correlation With Outcome: A Multicenter Study. Am J Surg Pathol. 2016 Dec; 40(12): 1601-1615. PubMed PMID: 27776008.

Ranganathan, S. Ningappa M, Ashokkumar C, Higgs BW, Min J, Sun Q, et al. Loss of EGFR-ASAP1 signaling in metastatic and unresectable hepatoblastoma. *Sci. Rep.* 2016 Dec 2; 6: 38347. doi: 10.1038/srep38347. PMID: 27910913.

Bell D, **Ranganathan S**, Tao J, Monga SP. Novel advances in understanding of molecular pathogenesis of hepatoblastoma: A Wnt/beta-catenin perspective. Gene Expression: The Journal of Basic Liver Research. 2017 Feb 10; 17 (2): 141-154. doi: 10.3727/105221616X693639. PMID: 27938502.

Ashokkumar C, Soltys K, Mazariegos G, Bond G, Higgs BW, Ningappa M, Sun Q, Brown A, White J, Levy S, Fazzolare T, Remaley L, Dirling K, Harris P, Hartle T, Kachmar P, Nicely M, O'Toole L, Boehm B, Jativa N, Stanley P, Jaffe R, **Ranganathan S**, Zeevi A, Sindhi R. Predicting Cellular Rejection With a Cell-Based Assay: Preclinical Evaluation in Children. Transplantation. 2017 Jan;101(1):131-140. PubMed PMID: 26950712.

Khan Z, Orr AV, Michalopoulos GK, **Ranganathan S**. Immunohistochemical analysis of the stem cell marker LGR5 in pediatric liver disease. Pediatr Dev Pathol. 2017 Jan-Feb; 20(1): 16-27. PubMed PMID: 28276299.

Katzenstein HM, Furman WL, Malogolowkin MH, Krailo MD, McCarville MB, Towbin AJ, Tiao GM, Finegold MJ, **Ranganathan S**, Dunn SP, Langham MR, McGrahen ED, Rodriguez-Galindo C, Meyers RL. Upfront window vincristine/irinotecan treatment of high-risk hepatoblastoma: A report from the Children's Oncology Group AHEP0731 study committee. Cancer 2017, Feb 17 (Epub ahead of print). PMID: 28211941.

Morowitz MJ, Di Caro V, Pang D, Cummings J, Firek B, Rogers MB, **Ranganathan S**, Clark RSB, Aneja RK. Dietary Supplementation With Nonfermentable Fiber Alters the Gut Microbiota and Confers Protection in Murine Models of Sepsis. Crit Care Med.2017 May;45(5):e516-e523.

Dolezal JM, Wang H, Kulkarni S, Jackson L, Lu J, **Ranganathan S**, Goetzman ES, Bharathi S, Beezhold K, Byersdorfer CA, Prochownik EV. Sequential Adaptive Changes in a c-Myc-Driven Model of Hepatocellular Carcinoma. J Biol Chem. 2017 Apr 21. pii: jbc.M117.782052. doi: 10.1074/jbc.M117.782052. [Epub ahead of print] PubMed PMID: 28432125.

PRESENTATIONS

Charleen Chu, M.D., Ph.D.

Mitochondria in neurodegeneration, March 18, 2017, PLUTO Society 63rd Annual Meeting, Panama City, Panama.

Mitochondrial mechanisms in mutant LRRK2 pathogenesis, April 25, 2017, MCP Seminar Series, Departments of Pathology and Neurology, University of Alabama, Birmingham.

Satdarshan Paul Monga, M.D.

Hepatic catenins, junctions, and cholestasis. Arias Symposia, Boston, MA 11/2016

Wnt/Notch/Yap signaling in intrahepatic cholestasis: Implications in Repair cancer. AASLD, Cholestasis SIG annual program, Boston, MA, 11/2016.

Impaired hepatocyte proliferation triggers biliary/oval cell derived hepatocyte differentiation following hepatobiliary injury. AASLD, Cell Biology SIG annual program, Boston, MA, 11/2016

"Modeling Human Liver Cancer in Mice: Biological and Therapeutic Implications," Gastroenterology Grand Rounds, University of Minnesota, Minneapolis, MN, 12/2016

Parmjeet Randhawa, M.D.

T-cell mediated rejection:Don't forget me. American Society of Nephrology Meeting, Chicago, November 2016.

Up-dates from Banff Working Groups: TCMR/borderline Working Group. Banff-SCT (Societat Catalana De Transplantament) Joint Scientific Meeting, Barcelona, Spain. March 28, 2017

Scoring of inflammation in atrophy (i-IFTA): potential rules and role in chronic TCMR. Banff-SCT (Societat Catalana De Transplantament) Joint Scientific Meeting, Barcelona, Spain. March 30, 2017

Polyomavirus in solid organ transplantation. 6th International Congress on Infections & Transplantation. Varese, Italy, May 20, 2017.

- P. Randhawa, Z. Lyu, L. Pang, G. Zeng, Y. Huang. Expression of T-Cell Mediated Rejection (TCMR) Associated Genes in Native and Renal Allograft Renal Biopsies with Inflamed Scars (i-IFTA). American Transplant Congress, Chicago, IL, April 29 May 3, 2017.
- G. Zeng, L. Pan, Z. Lyu, Y. Huang, and <u>P. Randhawa</u>. Mechanisms of Fibrosis In The Allograft Kidney: RNA-seq Based Analysis using Formalin Fixed Biopsies. American Transplant Congress, Chicago, IL, April 29 May 3, 2017.
- G. Zeng, L. Pan, L. Lyu, Y. Huang, and <u>P. Randhawa</u>. Lack of Specificity of LC-MS/MS Based Urinary Biomarkers for Polyomavirus BK Nephropathy (BKPyVN). American Transplant Congress, Chicago, IL, April 29 May 3, 2017.
- L. Pan, G. Zeng, Z. Lyu, Y. Huang, and <u>P. Randhawa</u>. The Search for a Polyomavirus BK Nephropathy (BKPyVN)-specific Transcriptomic Signature. American Transplant Congress, Chicago, IL, April 29 May 3, 2017.

PRESENTATIONS

Michael Shurin, M.D., Ph.D.

Regulation of tumor growth by the PNS", Invited lecture, Roswell Park Cancer Institute, Buffalo, NY, January 2017.

"Neuroglia as a new player in the tumor microenvironment", Stanley S. Scott Cancer Center Invited Speaker Series, New Orleans, LA, February 2017.

"The role of innervation in the tumor microenvironment", Invited lecture, Medical College of Wisconsin, Milwaukee, WI, February 2017.

"Cancer-PNS-Immune axis: New concept and new data", 5th Intl Conference Cancer Immunotherapy and Immunomonitoring (CITIM), Prague, Czech Republic, April 2017.

"Targeted delivery of chemotherapy to the tumor microenvironment", Third Intl Symposium on Immunotherapy, ICVI and The Royal Society, London, UK, May 2017.

Steven Swerdlow, M.D.

Hess Visiting Professor, "What's new in WHO-ville? The 2016 WHO lymphoma classification", University of Virginia Health System, Charlottesville, VA, February 8, 2017.

"Challenges in Hematopathology – A day in the life of a hematopathologist", Slide seminar, University of Virginia Health System, Charlottesville, VA, February 8, 2017.

Hematology/Oncology Conference, "Challenges in Hemepath Slide Seminar Case Histories", University of Virginia Health System, Charlottesville, VA, February 8, 2017.

"The utility of MEF2B & J chain immunohistochemistry in selected non-Hodgkin and Hodgkin lymphomas", International Lymphoma Study Group meeting, Lausanne, Switzerland, May 8-10, 2017.

"2016 Revised WHO Classification of lymphoid neoplasms", 1st Latin-American Congress of Hematopathology, organized by the SOLAHP (Sociedad Latinoamericana de Hamatopathologiia), Buenos Aires, Argentina. May 18-20, 2017.

"B-cell cutaneous lymphomas" 1st Latin-American Congress of Hematopathology, organized by the SO-LAHP (Sociedad Latinoamericana de Hamatopathologiia), Buenos Aires, Argentina. May 18-20, 2017.

Introduction to Blastoid Large B-cell lymphomas, roundtable discussion & presentations (Swerdlow, SH, Rimsza, L, organizers). International Lymphoma Study Group meeting, Lausanne, Switzerland, May 8-10, 2017.

"General principles of WHO lymphoma classification", and "2016 WHO approach to the small B-cell lymphomas", Diagnosis of lymphoid neoplasms – What is new in the revised WHO classification. Swiss Society of Pathology, Zurich, Switzerland. May 13, 2017.

CME Credit Update

The University of Pittsburgh School of Medicine, Center for Continuing Education for the Health Sciences CME transcripts can be obtained via the Internet at ccehs.upmc.edu. Click on link "Credit Transcripts" enter the required information (last name, last five digits of social security number). The transcript reflects the American Medical Association Category 1 credits or the Continuing Education Units (CEUs) which have been entered into the Center's database. Credits from other institutions can be entered using the option "add/modify" credit information. For questions about the Continuing Medical Education Credits, please contact 412.647.8232.

Educational Credit Unit Update

Just a reminder that the Educational Credit Units (ECUs) are being collected from every faculty member who has been involved with teaching activities of the medical or graduate school programs from **July 1, 2016 to June 30, 2017.** Please see the web-page that has been designed for this purpose and enter teaching activities as they happen. (see directions for access to page on Page 8) Please be sure to update your teaching data as the School of Medicine will be asking for the information in July. If you have any questions please contact Chris Szalkuski at szalkuskict@upmc.edu.

Publication Notification Process Update

This is a reminder the Dean has requested a Notification of Publication form for each manuscript accepted for publication in a peer-reviewed journal. The notification ensures compliance with human and animal research policies, technology transfer/patent guidelines and the requirements for citation of grant support. It also allows for newsworthy publications to be passed onto the University media. Please submit preprint information via the website at: https://pnf.hs.pitt.edu. If you have any questions, please contact Chris Szalkuski at szalkuskict@upmc.edu.