



2018 Pathology Trainee Research Day

Pathology Trainee Research Day: Schedule

Wednesday, May 2nd, 2018

8:00 a.m. – 4:00 p.m.

Location: Hill University Ball Rooms A,B,C (3rd floor)

- 8:00-8:45 Registration/Set up for Poster Session
8:50-8:55 Introduction/ Welcome
Rajeev Samant Ph.D., Professor, (MCP) Pathology
- 9:00-10:00 Poster Session #1
- Oral Presentations #1
Oral presentations will be for 15 min with up-to 5 additional minutes for questions and answers.
- 10:00-10:20 **Emma Dean**
10:20-10:40 **Daniel J. Silberger**
10:40-11:00 **Ashish Kurundkar**
- 11:00-12:00 Alumni Speaker (Introduction by Craig Maynard Ph.D., Assistant Professor, Pathology)
My life with T cells
Laurie Harrington, Ph.D., Associate Professor,
Department of Cell, Developmental and Integrative Biology
The University of Alabama at Birmingham
- 12:00-1:00 Lunch Break
- Data Blitz
Data Blitz will be for 3 min with up-to 2 additional minutes for questions and answers.
- 1:00-1:05 **Kellie Regal**
1:05-1:10 **Vinayak Khattar**
1:10-1:15 **Kaushlendra Tripathi**
1:15-1:20 **Mateus Mota**
1:20-1:25 **Bo Chen**
1:25-1:30 **Sumit Agarwal**
- 1:30-2:30 Poster Session #2
- Oral Presentations #2
Oral presentations will be for 15 min with up-to 5 additional minutes for questions and answers.
- 2:30-2:50 **Ann Hanna**
2:50-3:10 **Chang Hyun Byon**
3:10-3:30 **Chirag Patel**
- 3:30-3:45 Closing Remarks
George J. Netto, M.D.
Professor and Chair
Robert and Ruth Anderson Endowed Chair in Pathology

Presentation of Oral, Data Blitz and Poster Presentation Awards.

Presentation of the Betty Pritchett Spencer Award for Cancer Research

From the PTRD Organizers

Acknowledgements

One of the ways to mold trainees capable of continuing the legacy of the Pathology Department is to hold research competitions that involve collegial interactions such as the Pathology Trainee Research Day. The experience that they gain from a highly competitive environment has potential to turn them into successful scientists.

Although the organizing the 13th Annual Pathology Trainee Research Day was trainee driven, success could not have happened without the willing participation of several faculty and staff.

We are grateful to the following faculty Dr. Yang Yang, Dr. Yabing Chen, Dr. Lalita Shevde-Samant, Dr. Human Fatima, Dr. Rakesh Patel, Dr. Rajasekharan Soorappan, Dr. Douglas Hurst, Dr. Joanne Murphy, Dr. Shannon Bailey, Dr. Pat Bucy, Dr. Selvarangan Ponnazhagan, Dr. Balu K. Chacko, Dr. Silvio Litovsky, Dr. Scott Ballinger and Dr. Robert W. Hardy for reviewing the proffered abstracts.

We also would like to recognize our judges for: *Poster Session 1* - Dr. Soory Varambally, Dr. Rakesh Patel, Dr. Doug Hurst, Dr. Shannon Bailey, Dr. Adam Wende, Dr. Jianhua Zhang, Dr. Brandi McCleskey, Dr. Robin Lorenz, Dr. John Smith, Dr. Robin Hatton, Dr. Silvio Litovsky, Dr. Rajasekaran Namakkal Soorappan, Dr. Craig Maynard, Dr. Thomas Winokur, Dr. John Chatham and Dr. Laurie Harrington and *Poster Session 2* - Dr. Peter Anderson, Dr. Jianhua Zhang, Dr. Xu Feng, Dr. Lalita Shevde-Samant, Dr. Wenjing Cao, Dr. Pat Bucy, Dr. Anna Yemelnova, Dr. Malay Basu, Dr. Manjula Garapati, Dr. Shuko Harada, Dr. Gregory Davis, Dr. Yabing Chen, Dr. Huma Fatima, Dr. Joanne Murphy-Ullrich, Dr. Selvarangan Ponnazhagan and Dr. Ralph Sanderson.

We would like to thank the **Department of Pathology** for kindly sponsoring the annual Pathology Trainee Research Day. We truly appreciate **Dr. Robert Pritchett, III** for his continuous support in the form of the Betty Pritchett Spencer Travel Award for outstanding cancer related research conducted by a trainee in the Department of Pathology. This very generous donation encourages our trainees in their research endeavors and elevates the prestige of Pathology Trainee Research Day for attendees and trainees alike.

We appreciate the efforts Ms. Kathy Coleman and Ms. Cynthia Brown for making all the behind the scene arrangements.

Last but not least, thanks to all participants for making PTRD 2018 a success!

Our Sponsors



Dr. Robert Pritchett, III

Content

- Residents and Fellows

1. **Leukemia Cutis in an Infant with Platelet-Derived Growth Factor Receptor Mutation**
Mohammed Rigi, Casey Wang, Fady Mikhail, Peter Pavlidakey* (poster #21)
2. **Comparison of AJCC Anatomic and Clinical Prognostic Stage Groups in Breast Cancer: Analysis of 3322 Cases from a Single Institution**
Ashish Kurundkar, Xiaoqing Gao, Kui Zhang, Jacob P. Britt, Gene P. Siegal, Shi Wei*
3. **Pathology report of nonneoplastic nephrectomized renal parenchyma: a revisit**
Bo Chen, Isam-Eldin Eltoum, Huma Fatima* (poster #38)
4. **Spindle epithelial tumor with thymus-like differentiation: A next-generation sequencing study**
Diana Morlote, Zoran Gatalica, Jeffrey Swensen, Michelle Ellis, Carlos Prieto-Granada, Shuko Harada, Andrew Folpe, Todd M. Stevens* (poster #30)
5. **Primary Hepatic Amyloidosis: An Act of Deception**
Chirag R. Patel, Neha Hingorani, Sameer Al Diffalha, Mohamed G. Shoreibah*

- PostDoctoral Fellows, Researchers and Scientists

1. **High fat diet and time-restricted feeding at night regulate autophagy in the mouse liver**
Jason Craver, Telisha Millender-Swain, Peng Li, Shannon Bailey*, Jianhua Zhang* (poster #16)
2. **Dynamic regulation of O-GlcNAcylation of synaptic and trafficking proteins and implication in Parkinson's diseases**
David Westbrook, Anil G. Jegga, Sheng Wang, Willayat Y. Wani, Xiaosen Ouyang, John C. Chatham, Wei-Jun Qian, Victor M. Darley-Usmar, Jianhua Zhang* (poster #28)
3. **Roles of androgen receptor splice variants in resistance mechanisms of castration-resistant prostate cancer**
Joo Hyoung Lee, Hong Wang, and Selvarangan Ponnazhagan* (poster #32)
4. **Regulation of Vascular Aging by Runx2 Transcription Factor**
Yong Sun, Lu Hung and Yabing Chen* (poster #24)
5. **Aromatic side chain in tyrosine 49 is crucial for extracellular secretion and TRAIL binding of osteoprotegerin**
Hong Wang, Joo Hyoung Lee, and Selvarangan Ponnazhagan* (poster #34)

6. **Pioneer transcription factor BATF controls chromatin accessibility and CTCF-mediated chromatin architecture in CD4⁺ T cells**
Duy Pham, Carson E. Moseley, Daniel Savic, Richard Myers, Barbara L. Kee, Robin D. Hatton, and Casey T. Weaver* (poster #8)
7. **Pancreatic Cancer Resistance to TRAIL Therapy: The role of PARP-1**
Fei Xu, Yong Sun, Shanzhong Yang, Tong Zhou, Jay McDonald, and Yabing Chen,* (poster #13)
8. **TRIP13, a target of miR192, facilitates colorectal cancer progression through WNT/ β -catenin signaling**
Sumit Agarwal, Balabhadrapatruni V. S. K. Chakravarthi, Darshan S. Chandrashekar, Rong jun Guo, Pran Datta, Sooryanarayana Varambally, Upender Manne* (poster #19)
9. **Evidence for 8-nitro-cGMP as a novel hypoxic vasodilator released by red blood cells**
Khandaker A. Ahmed, Kiyoung Kim, Rakesh P. Patel* (poster #26)
10. **Heparanase inactivates PTEN and enhances its secretion in multiple myeloma**
Rada Amin, Kaushlendra Tripathi, Shyam K. Bandari, Ralph D. Sanderson* (poster #7)
11. **Chemoexosomes secreted by myeloma cells enhance osteoclast formation and promote aggressive bone disease**
Shyam K. Bandari, Rada Amin, Kaushlendra Tripathi, Zhengi Shi, Xu Feng, Elizabeth E. Brown, Ralph D. Sanderson* (poster #35)
12. **Increased Glucose Availability Attenuates Cardiac Ketone Body Utilization During Diabetes**
Manoja K. Brahma, Chae-Myeong Ha, Andrew J. Paterson, Martin E. Young and Adam R. Wende* (poster #5)
13. **O-GlcNAcylation of Runx2 is critical for vascular calcification**
Chang Hyun Byon, Jack M. Heath, Xia Mao, Yong Sun, Susanna Xu, Louis J. Dell'Italia, Silvio H. Litovsky, Hui Wu and Yabing Chen*
14. **Lack of cardiomyocyte Stromal Interaction Molecule 1 (STIM1) recapitulates the phenotype of the diabetic heart**
Helen E. Collins, Martin E. Young, John C. Chatham* (poster #1)
15. **Roles of Isoform Specific Pyruvate Dehydrogenase Kinases in Modulating Cardiac Adaptations to Pressure Overload-Induced Heart Failure**
Chae-Myeong Ha, Manoja K. Brahma, Zhihuan Sun, and Adam R. Wende* (poster #9)
16. **Identification of structural determinants of BMP-2 degradation to reduce proteasomal degradation and enhance secretion**
Vinayak Khattar, Hong Wang, Soniya Bastola, and Selvarangan Ponnazhagan* (poster #17)

17. **Oral nitrate reductase activity declines with age: implications for age-associated decrease in vascular nitric oxide bioavailability**
Kiyoung Kim, Khandaker A. Ahmed, Marcos M. Bamman, William Van Der Pol, Elliot J. Lefkowitz, Casey Morrow, Pamela V. O'Neal and Rakesh P. Patel* (poster #12)
 18. **Impaired C2C12 Myoblasts Proliferation and Differentiation in Response to Repeated Heat Shock**
Gobinath Shanmugam, Daniel Bolus, Madhusudhanan Narasimhan and Rajasekaran Namakkal-Soorappan, * (poster #4)
 19. **UALCAN: An integrated data-mining platform to facilitate the comprehensive analysis of cancer transcriptome**
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 20. **Heparanase upregulation leads to cancer stemness and aggressive tumor growth in vivo**
Kaushlendra Tripathi, Vishnu C. Ramani, Shyam K. Bandari, Rada Amin , Joseph P. Ritchie, Mark D. Stewart , Ralph D. Sanderson * (poster #18)
 21. **Complement factor H mutation (cfhW1206R) and Adamts13-/- play a synergistic role in pathogenesis and outcome of thrombotic microangiopathy in mice**
Liang Zheng, Shi Wei, and X. Long Zheng* (poster #2)
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Tesh Lama Sherpa, Victor Lin, and Lalita A. Shevde-Samant* (poster #29)

6. **T cell-dependent antibodies toward commensals reduce susceptibility to inflammatory bowel disease**
Ashley E. Landuyt, Barbara J. Klocke, and Craig L. Maynard* (poster #31)
7. **Merlin Deficiency Impacts Breast Cancer Cell Metabolism**
Mateus S. V. Mota, William P. Jackson, Sarah K. Bailey, Rajeev S. Samant, Lalita A. Shevde-Samant* (poster #37)
8. **Antiretroviral Therapy Synergistically Increases High-Fat Diet Induced Glucose Intolerance and Chronic Inflammation**
Mark E. Pepin, Lindsey E. Padgett, Ruth E. McDowell, Ashley R. Burg, Manoja K. Brahma, Cassie Holleman, Teayoun Kim, David Crossman; Olaf Kutsch, Hubert M. Tse, Adam R. Wende*, and Kirk M. Habegger* (poster #15)
9. **Endothelial N-glycan hypoglycosylation leads to increased monocyte adhesion: a role for α -mannosidases**
Kellie Regal-McDonald, A. Wayne Orr, and Rakesh P. Patel* (poster #36)
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Dianna Xing, Victor M. Darley-Usmar, and Gloria A. Benavides* (poster #33)
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Guochun Zhu, Wei Chen, Joel Jules, Jue Wang, and Yi-Ping Li* (poster #20)

- Undergraduate Students

1. **Glucose-Dependent Tomm20 Suppression in Heart Failure**

Yulianna A. Jimenez, Mark E. Pepin, Chae-Myeong Ha, Manoja K. Brahma,
and Adam R. Wende* (poster #27)

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