

newsletter

Winter 2025





Message from the President

Christina Jamieson, Ph.D. President

Find a home at the SBUR!

Welcome to SBUR 2025! We have a lot of news, new members, new committee members, new committees and ideas to bring our basic urology research community together.

What does the SBUR do? At a recent SBUR committee zoom meeting one of our members put it brilliantly when he said that he had found a home at the SBUR for his work on a relatively rare urologic cancer which does not have its own conference and is a very small community. The SBUR is a welcoming home for scientists who work on such rare and orphan urologic diseases as well as the big three: prostate, bladder and kidney. I thought this was brilliant! It reflects how I've always felt about being part of the SBUR community. We need this now more than ever.

I am honored and grateful to work with everyone here at the SBUR and encourage you to get involved. I would love to hear from you!

Invitation to the SBUR Spring Meeting



Travis Jerde, Ph.D. Vice President Spring Meeting Chair

"On behalf of the SBUR executive committee and the Society of Urological Oncology, we cordially invite all SBUR members to attend **the SBUR Spring Meeting**, which will again be held in conjunction with the AUA annual meeting in Las Vegas. It is always said that what happens in Vegas stays in Vegas. But in this case, we sure hope you can see our great new basic urological research going on, but **take the knowledge and ideas home with you**, to further your own work!

Note that this year, the AUA has moved the SUO/SBUR joint meeting on urological oncology to Sunday morning (27 April): it will be from 8:30 to NOON in Bellini Room 2002. Our committee led by Dr. Adam Kibel, Dr. Chris Jamieson, and myself are proud of our program this year, titled "Novel Breakthroughs in Specific Targeting and Imaging of Urological Metastasis". We are honored to award the Donald S. Coffey Lectureship to long-time SBUR member David McConkey. Dr. McConkey's presentation is entitled "Progress in Identifying Predictive Biomarkers for Bladder Cancer", and promises to be an outstanding synopsis of identifying bladder cancer aggressiveness markers from the field. Our session will also include talks from Drs. Seth Lerner, Lia Jia, Rana McKay, Mark Ball, and Tamara Lotan, all speaking within the translational theme of novel targeting or imaging of urological cancers.

Our SBUR afternoon breakout session will remain focused on benign urology and will be held on Saturday Afternoon, 26 April, and will be from 13:00-15:00 in Bellini room 2103. The title of this session is "The Neurobiological Basis of Benign Urological Diseases". This will dovetail well with the AUA 's Basic Science Symposium morning session on inflammaging held that morning in the same room. Our afternoon breakout will feature novel mechanistic and technological advancements in benign neurourology. Dr. Henneke Verstegen will kick things off with a discussion of neuronal circuitry in CNS control of bladder function. She will be followed by Dr. Todd Purves discussing neuroinvolvement in diabetic pathology in the urinary system. Dr. Praveen Thumbikat will discuss the nervous system's role in the inflammatory response to prostate and bladder infections. In the next session focused on technology, Dr. Johanna Hannon will discuss novel techniques that enhance neuronal functioning in erectile dysfunction, Dr. Margot Damaser will present her new work on integrated circuit designs to improve damaged tissue in stress incontinence, and Dr. Hanyu Xia will show his exciting new tissue clearing light sheet microscopy methodology to visualize the function of sensory nerves in the prostate.

We hope you can make all three of these great sessions, and take part in what is always a robust discussion of our cutting-edge basic science and translational work in urology at our SBUR meetings. **See you in Vegas.**

View Agenda >>

Register here >>

SBUR welcomes the incoming Executive Committee



President
Christina Jamieson, PhD
Associate Professor in Residence, Urology
UC San Diego



Vice President
Travis Jerde, PhD
Associate Professor of Pharmacology and
Toxicology
Microbiology and Immunology, and Urology
Indiana University School of Medicine



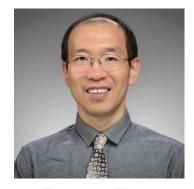
Immediate Past President Shawn E. Lupold, PhD The Catherine Iola and J. Smith Michael Distinguished Professor of Urology Johns Hopkins University School of Medicine



Secretary
Petra Popovics, PhD
Assistant Professor of Biomedical and
Translational Sciences
Macon and Joan Brock Virginia
Health Sciences at Old Dominion
University



Treasurer
Zongbing You, MD, PhD
Professor, Structural and Cellular Biology
Tulane University School of Medicine



Treasurer Elect
Xin Lu, PhD

John M. and Mary Jo Boler Collegiate
Associate Professor
Department of Biological Sciences
University of Notre Dame



Director at Large
W. Nathaniel Brennen, PhD
Associate Professor of Oncology
Johns Hopkins University
School of Medicine



Director at Large
Tanya Stoyanova, PhD
Associate Professor, Molecular and
Medical Pharmacology
University of California, Los Angeles



Director at Large
Qianben Wang, PhD
Banks Anderson, Sr. Distinguished
Professor
Professor of Pathology and Cell Biology
Duke University School of Medicine



Emeritus Member
Timothy L. Ratliff, PhD
Distinguished Professor of Comparative Pathobiology
Robert Wallace Miller Director
Purdue University Center for Cancer Research



Executive Director Marty Roth

Outgoing Executive Committee members

The Society for Basic Urologic Research expresses its sincere gratitude for the invaluable contributions of the **outgoing Executive Committee members**, recognizing their dedication and service in advancing the society's mission.



Director at Large
Daniel Frigo, PhD
Professor, Department of Cancer
Systems Imaging
University of Texas
MD Anderson Cancer Center



Director at Large
Jindan Yu, MD, PhD
Fray F. Marshall Chair in
Biomedical Urologic Research and Professor
Emory University, School of Medicine



Past President
William A. Ricke, PhD
Professor of Urologic Research
Director of Research
University of Wisconsin-Madison

SBUR 2024 Annual Meeting Highlights

The 2024 Annual Meeting of the Society for Basic Urologic Research convened from November 14 to 17, 2024, at the Scottsdale Plaza Resort in Scottsdale, Arizona, bringing together leading researchers, clinicians, and trainees to discuss the latest advancements in urologic research.

The meeting commenced with a Trainee Affairs Symposium on Thursday, November 14, chaired by Drs.

Antonina Mitrofanova and Ayesha Shafi. Sessions focused on mentorship dynamics, featuring talks such as "How to be a Good Mentee" by Dr. Ayesha Shafi and "How to be a Good Mentor" by Dr. Natasha Kyprianou. A panel discussion followed, addressing mentorship challenges and opportunities.

The evening concluded with the AUA Lecture given by Dr. James Mohler, titled "Backdoor Pathway for Intracrine Androgen Metabolism: New Targets for Treatment Directed Against Androgen Receptor Action."

Over the subsequent days, the conference featured six plenary sessions covering diverse topics: new approaches to facilitate urologic research, health disparities in urologic research, cell-cell interactions, transcriptional subtypes, genetic and endocrine basis and emerging therapeutic approaches in the management of urologic disease.



Shawn Lupold, PhD (left) presenting the Distinguished AUA Lecturer recognition to James Mohler, MD (right).

The meeting also honored distinguished contributors to the field. Dr. Gerald Cunha received the Leland W.K. Chung Mentorship Award. His scientific and mentoring achievements were introduced by three of his past mentees: Drs. Simon Hayward, William Ricke and Barbara Foster. Dr. Dan Theodorescu presented the Leland W.K. Chung Lecture, titled "Beyond Sex. The Y Chromosome in Cancer."



Douglas Strand, PhD (left) presenting the Leland W.K. Chung Mentorship Award to Gerald Cunha, PhD (right).

Poster sessions provided a platform for emerging scientists to showcase their research, fostering interactive discussions and potential collaborations. The event culminated with an awards ceremony recognizing outstanding research presentations and contributions to urologic science.

The Fall Meeting Organizing Committee, led by Douglas Strand, PhD (Chair), curated the meeting program. Members: Li Xin, PhD, Qianben Wang, PhD, Shawn Lupold, PhD, Will Ricke, PhD, Xiuping Yu, PhD, Nate Brennan, PhD, Maria Hadjifrangiskou, PhD, Ayesha Shafi, PhD and Anotonina Mitrofanova, PhD.

A meeting report will soon be available in the American Journal of

Clinical and Experimental Urology, the official journal of SBUR.

SBUR 2024 Annual Meeting Awardees



Leland W.K. Chung Mentorship Award Gerald Cunha, PhD



Distinguished Service Award Jill A. Macoska, PhD



Meritorious Achievement Award Gail S. Prins



Young Investigator Award Jianhua Xiong, PhD



Young Investigator Award Petra Popovics, PhD



Young Investigator Award Jawed Siddiqui, PhD



Minority Scholar Award Simpa S. Salami, MD, MPH

Congratulations to all the 2024 Travel Award Winners!



We invited the early-career awardees to respond to two questions: to describe their presentation or poster and to share how attending the meeting has contributed to their career development. Here are the winners and their responses:



Gada Awdalkreem, MBBS, MSc, Purdue University, Travel Award Winner Our poster effectively elucidated the development of the NEPC cell line derived from androgen -sensitive MyC-CaP cell line, it highlighted the intricate processes involved in in vitro treatment and subsequent passages in a syngeneic FVB mice model under ADT therapy, along with the characterization through histological diagnosis and the molecular signature of the NPEC tumors.

I was deeply honored to receive the 2024 travel award from the SBUR committee, which served as a remarkable acknowledgment of our advanced work. Participating in the SBUR conference not only allowed me to present our research but also to introduce myself to esteemed clinicians and scientists specializing in Urology,

particularly in NEPC tumors. This experience facilitated valuable collaborations, expanded my professional network, and provided exposure to cutting-edge research in the field.



research in our field.

Sander Frank, PhD, Fred Hutchinson Cancer Center, Travel Award Winner Our poster focused on trying to better understand the consequences of CDK12 mutation in advanced prostate cancer and identify effective and targeted therapeutic strategies. We analyzed patient tumor sequencing data and developed new cell models which revealed cells adapted to CDK12 loss display a different phenotype than expected, helping to explain why patients have not shown good responses to PARP inhibitors as would be predicted.

The SBUR travel award helped to highlight a project that took many years of hard work. Attending the 2024 SBUR meeting allowed me to meet up with new and established collaborators to foster cooperation and stay abreast of the latest



Krinio Giannikou, PhD, UCSD, Travel Award Winner selected for podium presentation

The awarded poster highlighted our recent work on TSC1-mutant bladder cancer (TSC1mBLCA), which is a distinct molecular subtype with a gene expression profile mirroring syndromic TSC tumors. We demonstrated that nuclear TFE3 drives tumor growth and lysosomal dysfunction, highlighting TFE3 as a key therapeutic target, while bi-steric mTORC1 inhibitors effectively reduce tumor proliferation without disrupting TFE3 activity.

Receiving this award and attending the meeting has been invaluable for networking and engaging with leaders in the field, which has significantly contributed to my growth and aspirations in urology research.



Jennifer Heritz, BS, SUNY Upstate Medical University, Travel Award Winner selected for podium presentation

The development and progression of the most common type of kidney cancer, clear cell renal cell carcinoma (ccRCC), is driven by the activity of the transcription factor Hypoxia-Inducible Factor 2 Alpha (HIF2 α). Using an in-silico approach, we identified the novel Compound-c2 as a selective inhibitor of HIF2 α that disrupts the interaction between HIF2 α and the molecular chaperone Hsp70 to destabilize HIF2 α , ultimately inducing cell death in ccRCC.

Receiving the Travel Award to share my presentation at the meeting allowed me to introduce myself and my work to leaders in the field. I learned a lot from these

successful researchers throughout the meeting, but the opportunity to join the conversation in this way has especially inspired me to continue to try new ideas in the lab and conduct impactful research to follow in their footsteps.



Ashley Jackson, PhD, Nationwide Children's Hospital, Travel Award Winner Childhood urinary tract obstruction (UTO) is met with limited treatment options and represents a leading cause of chronic and end-stage kidney disease in children. We previously reported that UTO triggers a nephroprotective adaptation facilitated by increased uroplakin expression in the renal urothelium. Using complementary in vivo and in vitro experiments, we discovered that NOTCH signaling regulates uroplakin expression in the renal urothelium. Additional studies are needed to determine whether NOTCH activation in renal urothelium is nephroprotective in preclinical UTO models.

The SBUR offers unparalleled networking opportunities and exposure to the latest techniques and concepts in basic urologic research. The intimate evening poster sessions were particularly advantageous for my lab, leading to the development of a promising multidisciplinary collaboration.



Hunain Khawaja, MS, University of Arizona, Travel Award Winner My work aims to explore the role of mechanical forces on prostate epith

My work aims to explore the role of mechanical forces on prostate epithelial differentiation and how those factors can contribute to prostate oncogenesis.

The SBUR annual meeting is an exciting event for me, especially since the focus is on urological sciences. The travel award provided me with resources to share my work with colleagues in urological science and learn about the great work performed in other labs. I am grateful to SBUR for the Travel Award for supporting my research!



Mingyu Liu, MS, The University of Massachusetts Boston, Travel Award Winner selected for podium presentation

We designed a workflow called Super-Enhancer Analysis for Lineages, and identified three AR-dependent super-enhancer subtypes with different aggressive states and lineage states. The molecular classifications defined by super-enhancers could potentially guide therapeutic decisions and aid in identifying key oncogenic drivers in each CRPC subtype.

The SBUR Travel Award provided me the chance to present my research to the prostate cancer research community. I had deep discussions with other researchers and found collaborators for my future work.



Shigin Liu, MD, PhD, UCLA, Travel Award Winner

Metastasis remains the leading cause of prostate cancer-associated deaths, highlighting the urgent need to determine the mechanisms underlying prostate cancer progression. Our study identifies shed Trop2 extracellular domain as a potential liquid biomarker for prostate cancer and demonstrates its role in driving prostate cancer progression through EGFR signaling.

Access to the SBUR community offers me the opportunity to connect with a dynamic network, gain invaluable feedback, and pursue collaborative opportunities that propel my research forward. I firmly believe that the prestige associated with the SBUR Travel Award plays a crucial role in advancing my academic career and taking my



Mostafa Nasr, BS, University of South Florida, Travel Award Winner selected for podium presentation

Induction of the transcription factor, PRDM16, in prostate cancer cells is critical for the initiation of an intrinsic dormancy program that is sustained in the bone marrow microenvironment.

SBUR travel award gave me the opportunity to share my thesis work with the broader community of urologic research, connect with a broad range of skilled investigators, set up interviews for my postdoctoralstudies.



Shaghayegh Nouruzi, PhD, University of British Columbia, Canada, Travel **Award Winner**

My presentation at the SBUR highlighted findings from our recent study published in JCI Insight, "ASCL1 regulates and cooperates with FOXA2 to drive terminal neuroendocrine phenotype in prostate cancer." We demonstrated that the neuronal transcription factor ASCL1 regulates FOXA2, and their interaction orchestrates terminal neuroendocrine differentiation. Importantly, we identified PROX1 as a key target of ASCL1 and FOXA2, which can be a potential therapeutic target in ASCL1high neuroendocrine prostate cancer.

Receiving the Travel Award enabled me to share my work with leading experts in the field and peers, fostering valuable feedback and potential collaborations. This experience has been instrumental in furthering my career goal of becoming an independent investigator in prostate cancer research.



Jude Owiredu, BS, Weill Cornell Medicine, Eula and Donald S. Coffey Innovation Award Finalist

In our efforts to dissect the underlying epigenomic landscape changes dictating prostate tumorigenesis, we have found that the AP-1 superfamily plays a critical role in maintaining a stem-cell like signature in a normal prostate epithelial cell. We aim to uncover the mechanism by which the Androgen Receptor opposes this program to drive terminal epithelial cell differentiation and initiate prostate cancer.

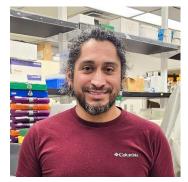
Having the opportunity to showcase our work and meet curious minds in the field has strengthened my resolve to determine efficacious molecular diagnostic targets/markers in early-stage hormone sensitive prostate cancer.



Alexandra L. Polasko, PhD, Stanford University, Travel Award Winner and Eula and Donald S. Coffey Innovation Award Finalist

My SBUR presentation/poster highlighted the characterization and pre-clinical testing of a patient-derived xenograft (PDX) murine model for treatment of BPH, revealing significant differences in growth, proliferation, apoptosis, and molecular profiles between BPH and normal prostate tissues. This model retains features of human BPH tissue and preliminary experiments showed that addition of the stromal signaling molecule, bone morphogenetic protein 5 (BMP5), to normal PDXs increased growth and PSA levels, while the BMP inhibitor, K02288, reduced growth and proliferation in BPH PDXs, demonstrating BMP5 inhibition as a potential novel therapeutic target for BPH.

As a first-time attendee with an engineering background, the SBUR Travel Award and 2024 Fall Meeting provided an invaluable opportunity to integrate into the urology research community. Engaging with physician-scientists and basic urologic researchers not only enhanced my understanding of the utility of my PDX model but also offered critical feedback that is shaping my upcoming K grant application. Research visibility can be challenging to achieve at conferences, especially as an early-career investigator, which is why the travel award and opportunity to present my work through the Coffey Innovation Award, were pivotal in disseminating my latest findings and sparking meaningful discussions for feedback and collaboration.



Felipe Rodriguez-Tirado PhD, Nationwide Children's Hospital, Travel Award Winner selected for podium presentation

Urinary tract obstruction (UTO) triggers a protective adaptation in the renal urothelium, but regulatory mechanisms are unknown. Since UTO exerts mechanical forces on the renal urothelium, I investigated whether the PIEZO1 mechanoreceptor plays a role. By conditionally deleting PIEZO1 in the renal urothelium during UTO, and activating PIEZO1 in renal urothelium organoids, I discovered that PIEZO1 promotes renal urothelium differentiation. While additional studies are needed to uncover PIEZO1-regulated programs in the renal urothelium, these findings represent a major advancement in our understanding of the kidney's response to UTO.

Science must be shared, whether it's within the scientific community or outside. The SBUR travel award assures the opportunity to attend a high-level scientific meeting, promoting network connection and essential feedback for early researchers.



Galina Semenova, MD, PhD, Fred Hutchinson Cancer Center, Travel Award Winner selected for podium presentation

I was honored to present my recent work on the development of combinatorial antibody-drug conjugate (ADC) therapies for advanced prostate cancer at the SBUR Annual Meeting. The therapeutic strategies I proposed leverage the synergistic interactions between ADC targets and payloads, maximizing tumor response to ADC combinations.

It was critically important for me to receive feedback to this novel approach to prostate cancer therapy from SBUR community scientists. The recognition of my work by the SBUR Committee, along with the opportunity to discuss my findings at

the meeting, encouraged further development of the project and inspired new collaborative research.



Nikhila Suresh, PhD, Purdue University, Travel Award Winner

My research explores how inflammation influences epithelial differentiation in benign prostate hyperplasia (BPH). We identified a transitional cell cluster in inflamed prostates with a dual basal-luminal identity, driving prostate growth and offering new insights into inflammation-induced tissue remodeling in aging men.

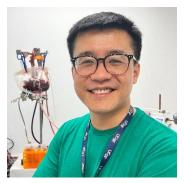
The SBUR trainee travel award has served as a supporting fund to translate scientific discoveries into impactful contributions to urological disease research. Presenting my work and receiving expert feedback has refined my research focus and strengthened skills critical for building a strong research profile and exploring diverse career pathways.



Daniel Triner, MD, PhD, University of Michigan, Travel Award Winner and Eula and Donald S. Coffey Innovation Award Finalist

Our research is focused on developing a patient derived organoid platform for rapid drug testing, identification of markers of treatment response, and understand treatment resistance mechanisms.

Attending this conference was instrumental in my development as a surgeon scientist from networking to learning of the exciting developments in basic urologic research.



Heiko Yang, MD, PhD, UCSF, Travel Award Winner

We created a low-cost normothermic ex vivo kidney perfusion device to study intact kidneys outside the body. We hope to use this platform as a new tool for urologic discovery.

Supporting my ability to attend this conference gave me the opportunity to share my work and establish connections with other researchers in the field.



Chenming Ye, BS, University of Georgia, Travel Award Winner selected for podium presentation

My study has demonstrated biological vectors to deliver CRISPR machinery for targeting androgen receptor in prostate cancer cells. We have developed a technology to encapsulate Cas9 ribonucleoprotein complex efficiently into extracellular vesicles for delivery, potentially providing a novel strategy for treatment of castration resistant prostate cancer.

This travel award provided me an opportunity to share my data with the community and connect many experts in the field, and it served as a step stone to build up my academic career in prostate cancer research.



with greater assurance.

Songqi Zhang, MS, University of Massachusetts Boston, Travel Award Winner My poster, "Lysine methylation of FOXA1 alters its chromatin binding and represses E2F signaling," examines the impact of FOXA1 methylation on prostate cancer progression. This research highlights the molecular mechanisms by which methylation at lysine 270 affects FOXA1's chromatin binding, alters androgen receptor signaling, and represses E2F-driven tumor growth, providing insights into therapeutic strategies for castration-resistant prostate cancer.

The Travel Award has not only provided me with the opportunity to share my findings at a prestigious platform but has also greatly boosted my confidence in my research. Presenting my work to experts in the field and receiving valuable feedback has reinforced my commitment to advancing cancer research and has empowered me to pursue my career goals

Gerardo Javier Sanchez, BS, UCLA, Travel Award Winner selected for podium presentation Mr. Sanchez did not provide the requested information.

ANNOUNCEMENTS

Membership Benefits:

Join or renew your membership! The Society for Basic Urologic Research was created to advance and promote the knowledge of basic scientific research in the field of urology by fostering interdisciplinary communication across a broad array of researchers and urologic topics. Please go to the link below for more information: https://sbur.memberclicks.net/Membership

IMPORTANT! The SBUR Requests your input on sponsors for the SBUR Spring and Annual Meetings in 2025. Please let us know if you have any contact information for companies or organizations who might be interested in having a presence at future SBUR meetings via Email to info@SBUR.org. We have an active society of scientists, physicians, and physician scientists eager to engage with industry and organizations to advance therapies for patients. These sponsorships facilitate speaker travel and cover registration costs, enhancing the program by enabling more invited speakers and providing additional funds for travel awards, as well as for coffee breaks, meals, and receptions.

Save the date for the 2025 SBUR Fall Meeting in Orlando, Florida!



Newsletter edited by Petra Popovics, Ph.D., SBUR Secretary