

# Department of Urology

University of Tennessee Health Science Center

# History Of The Department of Urology

- The University of Tennessee Department of Urology residency educational program became officially accredited as a three-year Urological training program in 1945.
- Dr. Thomas D. Moore became the first Chairman of the UT Department of Urology.
- In 1939 Dr. TD Moore and his wife Ruth built what was then considered to be a large home on some property located on the periphery of Memphis. They named the home and the property “Graceland” in honor of Mrs. Moore’s aunt Grace Toof.
- They sold “Graceland” in 1957 to this guy.



# Elvis Purchased Graceland March 1957

1. Elvis paid \$102,500 for Graceland – an equivalent of about \$924,000 today.

2. When Elvis purchased Graceland, the property was just shy of 14 acres and a little over 10,000 square feet. Today the mansion occupies over 17,500 square feet.

3. Graceland has five sets of stairs.

4. Graceland is the second most-visited home in the United States, with more than 700,000 visitors annually.

5. The original owners, the Moores, gave Graceland its name, in honor of Mrs. Moore's aunt, Grace Toof.

# Department of Urology

A. CLINICAL

B. RESIDENT  
EDUCATION

C.  
RESEARCH

D. SERVICE

# Full time Adult and Pediatric Faculty

- 1. Dr. Robert W. Wake -Professor/Chairman/ Program Director
- 2. Dr. Chris Ledbetter - Associate Professor and Program Director
- 3. Dr. Anthony Patterson - Professor and Chief of VA Urology
- 4. Dr. John Carraher - Assistant Professor of Urology
- 5. Dr. Ava Saidian - Assistant Professor of Urology
- 6. Dr. Nikhil Gopal - Assistant Professor of Urology
- 7. Dr. Jennifer Valli PhD- Instructor Sexual Therapy
- 8. Dr Dana Giel- Fellowship Director for Pediatric Division
- 9. Dr Mary E. Killian - Assistant Professor of Pediatric Urology
- 8. Dr Gerald Jerkins - Part-Time Professor of Pediatric Urology

# Clinical Faculty

\*Dr. Mark  
Greenberger

Dr. Walter  
Rayford

\*Dr. David  
Gubin

Dr. Rowena  
DeSouza

Dr. Rusty  
Shappley

\*Dr. Vance  
Shappley

\*Dr. Zach  
Corr

\*Dr. Les  
McGowan

# Urology Clinics For Our Faculty

- 1. Main Private Practice Clinic through University of Tennessee Regional One Physicians (UTROP).  
East office location at 6555 Quince Avenue 5 floor. We have clinic 5 days per week at this location.
- 2. Clinics at ROH two days per week
- 3. Clinics at MUH ½ day per week.
- 4. Clinics at the VA hospital FIVE days a week all day.
- 5. Clinics at LeBonheur 5 days per week this includes a clinic in Jackson, Tennessee.



# The hospitals that we serve

\*Regional One Health

\*VA Hospital

\*Methodist Health Systems

\*Baptist Healthcare

\*LeBonheur Children's Hospital/St.  
Jude Hospital

# RESIDENT EDUCATIONAL PROGRAM

## Department Chairmen

- 1945-1954 - Dr. T. D. Moore
- 1954-1969- Dr Sam Raines
- 1969-1972- Dr. Albert Biggs
- 1972-1999- Dr. Clair Cox
- 1999-2003- Dr. Mitchell Steiner
- 2003-Current- Dr. Robert W. Wake

# Resident Education Continued

- We currently have a total of 15 residents ( 3 per year).
- Since 1946 we have graduated 222 residents from our educational program.

From 1997 through 2022 our program has realized a 100% PASS RATE on Part 1 (written exam) and Part 2 (oral exam) of the American Board of Urology Exams.

1997-1998	Hollabaugh, Kneib, Samm	Pass
1998-1999	Carraher, Gubin, Hollier	Pass
1999-2000	Delnay, Greenberger, Idom	Pass
2000-2001	Blankenship, Mayher, Weld	Pass
2001-2002	Donato, Goodwin, Guilliams	Pass
2002-2003	Albert, Alpert, Sher	Pass
2003-2004	Buchanan, LaCour, Rueff	Pass
2004-2005	Canon, Chauhan, Thomas	Pass
2005-2006	Bullen, Chichakli, Giel	Pass
2006-2007	Andress, Brightbill, Dang	Pass
2007-2008	DiBlasio, Kincaid, Malcolm	Pass
2008-2009	Giem, Hughes, Ledbetter	Pass
2009-2010	Morris, Vance	Pass
2010-2011	Kropf, Norwood	Pass
2011-2012	Bramhatt, Mehrzain	Pass
2012-2013	Kurta, Walls	Pass
2013-2014	Dunn, Henry, Tojuola	Pass
2014-2015	Corr, Mutter	Pass
2015-2016	Hartsell, Lau, Pettibone	Pass
2016-2017	Bear, Murphy, Welser	Pass
2017-2018	Black, Boemer, Strain	Pass
2018-2019	Bloch, Gowdey, Schexnayder	Pass
2019-2020	O'Hanlon, Tourville, Zapata	Pass
2020-2021	Probst, Sharadin	Pass
2021-2022	Legg, Houston, Maatman	Pass
2022-2023	Dewan, Heitman, Libby	Pass

# Resident Education Continued

Each Urology AUA section ( like the SESAJA) selects residents from those who achieve the highest In-Service exam scores for that particular year to compete against the other sections nationally.

One of our residents has been selected every year by the AUA committee to compete in the National “Resident Knowledge Bowl Competition”.

# Resident Wellness Activities

- 1. Yearly “Family Fall party” at Dr Patterson’s farm for all residents and all their families.
- 2. Yearly “Holiday Karaoke Party” at Dr Wake’s house for all residents, faculty nurses, MA’s and everyone with their families and friends.
- 3. We celebrate and acknowledge all resident birthdays as a group

Any changes anticipated  
for the faculty?

Anyone leaving?

What do your residents do  
after graduation?

Private Practice or  
Fellowships?



# PRIVATE PRACTICE VERSUS FELLOWSHIP/ACADEMICS

75% OF OUR GRADUATING RESIDENTS GO  
INTO PRIVATE PRACTICE

25% OF OUR GRADUATING RESIDENTS DO  
FELLOWSHIPS/ACADEMICS

What are the Strengths of your program ?

What are the Weaknesses of your Program?

Before this. I want to ask if any of you are aware of a survey presentation at the 2016 AUA meeting in San Diego. Over 300 applicants from last years match responded to the survey. The results reveled the top 9 things that applicants look

for when choosing an educational program.

TOP THREE ANSWERS ??

## TOP THREE MOST IMPORTANT THINGS TO APPLICANTS ?

1. Operative Experience
2. Interaction with the residents (are they happy/content)?
3. Relationship between Faculty and Residents .

Other 6 answers in descending order of importance..

geographic location, resident lifestyle Institution prestige, faculty reputation, placement of graduates, and research opportunities .

# POSITIVES

1. High Case Volumes ( index cases reached by end of Uro-3 year).
2. Family Atmosphere very conducive to learning.
3. Team approach to all we do including learning.
4. Excellent Resident support from Department University leadership (Dean and Chancellor), Our GME office and Hospital partners.
5. Daily access to faculty( including Chairman and PD) for teaching and mentoring.
6. Resident involvement in educational program. ( peer selected residents actively involved in our monthly faculty meetings)
7. Very STRONG Pediatric Urology exposure.
8. Very busy VA hospital providing major case and clinic volumes to increase overall major case volumes.
9. Robotic Simulator lab.
10. Excellent City ( very low cost of living) , outstanding restaurants ,Greenbelt for those who enjoy outdoor living , Professional BB team, AAA Baseball team, minor league hockey, major medical community.

## NEGATIVES

1. We really do not have any glaring weaknesses. We always strive to get better with resident input.
2. We are interviewing for a Ph.D researcher to improve research opportunities.
3. Further recruitment goals will be discussed during your interview.

	Feb 2023	Feb 2022	Feb 2021	Jan 2020	Jan 2019	Jan 2018	Jan 2017	Jan 2016	Jan 2015
Programs									
Positions Offered	386	365	357	354	339	325	319	295	296
Positions Filled	383	365	357	353	330	314	317	294	295
Positions Open	3	0	0	1	9	11	2	1	1
Applicants									
Registrations	551	601	528	484	434	436	477	468	493
Lists Submitted	508	556	481	441	389	402	422	417	433
Ranked by Programs	482	534	461	430	368	369	385	373	388
Matched	383	365	357	353	330	314	317	294	295
Not Matched	125	191	124	88	59	88	105	123	138
Averages and Match Results									
Average Applications	332	82	77	74	71	70	68	65	63
Average Interviews Taken by Applicants	12	11	12	13	13	11	11	10	10
Average Offers	9	8	9	13	14.85	13.78	11.77	11.35	12.23
Senior Medical Students (US & CAN)	81%	70%	80%	83%	91%	86%	82%	77%	77%
Previous Graduates (not Seniors) (U.S. & CAN) Matched	64%	51%	66%	78%	78%	43%	47%	47%	43%
International Medical Students and Graduates	33%	19%	24%	32%	58%	24%	33%	17%	31%
Women Matched	81%	72%	85%	86%	83%	75%	75%	68%	68%





















# Medical Student Education

- 1. Department participates in medical student Urology interest group
- 2. Junior Internship offered for M4 students who are trying to match in Urology. Including students from other medical schools.
- 3. Have students for career exploration rotations
- 4. Participate in M3 student lectures



# Urology Department Research and Scholarly Activities

- 1. Faculty are committee members on numerous NCCN panels such as early detection prostate cancer panel, renal cancer, testicular and bladder cancer NCCN panels.
- 2. Collaborating with Dr. Georgi Petkov Professor & Chair the Department of Pharmaceutical Sciences. We have received a Urology P20 grant for benign bladder research and we working now to obtain an O'Brian Urology Center here. Only 3 currently exist in the country.
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- 3. We remain in compliance with our mandated resident and faculty research and scholarly activities as monitored by our RRC and ACGME.
- 4. We continue to strive to increase our research production for our Department.

# HUMAN URINARY BLADDER MYOGENIC MECHANISMS BY ION CHANNELS

John Malysz<sup>1</sup>, Eric S. Rovner<sup>2</sup>, Robert Wake<sup>3</sup>, and Georgi V. Petkov<sup>1,3</sup>

<sup>1</sup>Department of Pharmaceutical Sciences, College of Pharmacy, University of Tennessee Health Science Center, Memphis, TN; <sup>2</sup>Department of Urology, Medical University of South Carolina, Charleston, SC; <sup>3</sup>Department of Urology, College of Medicine, University of Tennessee Health Science Center, Memphis, TN



## ABSTRACT

The goal of this NIH P20 grant is to establish the Developmental Center for Human Urinary Bladder Myogenic Mechanisms by Ion Channels in Health and Disease (DC-HUB) focused on the role of detrusor smooth muscle ion channels in overactive bladder (OAB) etiology and related detrusor overactivity (DO). The DC-HUB Center is based at the University of Tennessee Health Science Center (UTHSC) where the proposed studies will benefit from the robust clinical and basic science environment. Dr. Georgi V. Petkov - an established investigator with multidisciplinary training in biochemistry, physiology, pharmacology, electrophysiology, and urological research - provides project leadership by serving as the DC-HUB Center Director. A major strength of this strategic program on ion channel research that puts UTHSC at the forefront is the conduct of this research in collaboration with an impressive cadre of clinical scientists including faculty and urology residents. Dr. Robert Wake, a well-established UTHSC clinical urologist, is coordinating the urology team effort. The collaboration is supported by Dr. Eric Rovner, an internationally renowned OAB urology expert and his clinical team based at the Medical University of South Carolina. This project makes regular use of human bladder specimens to study ion channel function and correlate basic science findings with patient clinical profiles. It uses bladder tissues both from patients without an OAB clinical history (controls) and from subjects with OAB or urodynamically proven DO (idiopathic/neurogenic). These novel investigations within the DC-HUB Center provide fertile ground for future establishment of a George M. O'Brien Urology Research Center at UTHSC. This will have a major impact on improving healthcare with strong potential to better understand OAB etiology and provide novel therapeutic approaches to help OAB/DO patients. This research is highly significant given OAB/DO prevalence and the need for new therapies.

## OVERALL AIMS OF THE DEVELOPMENTAL CENTER FOR HUMAN URINARY BLADDER (DC-HUB) MYOGENIC MECHANISMS BY ION CHANNELS IN HEALTH AND DISEASE

- **Aim 1:** Create a multidisciplinary collaborative structure to facilitate effective communication and interactions among program members, integrate all research endeavors, and establish an Administrative Core to coordinate DC-HUB activities.
- **Aim 2:** Hold regular, monthly meetings and workshops among DC-HUB members to further develop our working hypotheses and design our research strategies.
- **Aim 3:** Establish research projects for the DC-HUB multidisciplinary collaborative program.
- **Aim 4:** Establish an Educational Enrichment Program through a website-based portal at UTHSC, open to the public, that will pool and share information about the Educational Enrichment Program and research results among DC-HUB program members.
- **Aim 5:** Develop a research plan and prepare a George M. O'Brien Urology Research Center (U54), multi-PI, or a Program Project (P01) application.

**FUNDING:** NIDDK P20DK123971 to GVP

## ADMINISTRATIVE CORE AND AIMS OF DC-HUB



**Georgi V. Petkov, PhD**  
Principal Investigator  
/Center Director



**Robert Wake, MD**  
Clinical Collaborator/  
Associate Director



**John Malysz, PhD**  
Co-Investigator/  
Associate Director

### The specific aims of the Administrative Core are:

- **Aim 1:** To maintain oversight of activities in the scientific project. This will include facilitating interactions among investigators, supporting investigators in their research, and disseminating results as they become available to the scientific community.
- **Aim 2:** To maintain oversight of the Educational Enrichment activities. This will include establishing and maintaining a Center website and coordinating diverse educational opportunities for students and other faculty.
- **Aim 3:** To manage the overall budget and reporting requirements of the Center. The Administrative Core will track all project expenses, make periodic budget audits, and coordinate all internal and NIDDK report submissions.

## INTERNAL ADVISORY BOARD OF DC-HUB



**Jay H. Fowke, PhD**  
Dept. of Preventive  
Medicine Division of  
Epidemiology  
College of Medicine  
UTHSC



**Alex M. Dopico, MD, PhD**  
Dept. of Pharmacology  
College of Medicine,  
UTHSC



**Jonathan H. Jaggard, PhD**  
Dept. of Physiology  
College of Medicine,  
UTHSC

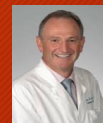
## EXTERNAL ADVISORY BOARD OF DC-HUB



**Alan J. Wein, MD,  
PhD (Honorary):**  
Dept. of Urology  
Univ. of Pennsylvania  
Philadelphia, PA



**Karl-Erik Andersson,  
MD, PhD**  
Institute for Regenerative  
Medicine, Wake Forest Univ.  
Winston-Salem, NC

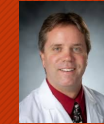


**Thomas E. Keane, MD**  
Dept. of Urology  
Medical Univ.  
of South Carolina  
Charleston, SC

## KEY COLLABORATORS OF DC-HUB



**Eric S. Rovner, MD**  
Clinical Collaborator  
Dept. of Urology  
Medical Univ. of South  
Carolina  
Charleston, SC



**J. Todd Purves, MD, PhD**  
Clinical Consultant  
Dept. of Surgery,  
Division of Urology  
Duke Univ. School of Medicine,  
Durham, NC

## OBJECTIVE AND GOAL OF DC-HUB

- To organize a multidisciplinary collaborative program based at the University of Tennessee Health Science Center (UTHSC)
- To illuminate the roles of ion channels and their regulatory mechanisms in the human urinary bladder under normal and benign pathological conditions.

## CENTRAL HYPOTHESIS

- Specific myogenic Kv (Kv2 and Kv7) and TRP (TRPA1 and TRPV2) channels are key regulators of urinary bladder physiology, and changes in their expression, function or regulation lead to DO/OAB. We further hypothesize that pharmacological or genetic manipulation of bladder specific Kv and TRP channels could provide safe and effective therapies for DO/OAB.

## SPECIFIC RESEARCH AIMS

- **Aim 1: Elucidate the function and regulation of Kv channels in human detrusor physiology and pathophysiology**
  - *Aim 1.1: Elucidate the expression and function of the Kv2 and Kv7 channel family members in human DSM (from control non-OAB and OAB patients).*
  - *Aim 1.2: Elucidate the functional links between  $\beta$ 3-AR/PDE4, and their roles in the regulation of Kv2 and Kv7 channels in DSM from control (non-OAB) and OAB patients.*
- **Aim 2: Elucidate the role of TRP channels in human detrusor physiology and pathophysiology**
  - *Aim 2.1: Determine the molecular expression of TRPA1 and TRPV2 channel in human DSM from control non-OAB and OAB patients.*
  - *Aim 2.2: Elucidate the cellular roles of TRPA1 and TRPV2 channels in DSM single cells isolated from control and OAB patients.*
- **Aim 3: Elucidate the *in vivo* role of Kv and TRP channels in control animals and animal models of voiding dysfunction**
  - *Aim 3.1: Determine in vivo effects of Kv channel modulators on the micturition pressure and voiding parameters.*
  - *Aim 3.2: Determine in vivo efficacies of TRPA1 and TRPV2 modulators*

# Service

- Participants in the Yearly “Health Fair” at Swift Trucking Company.
- Prostate Cancer Awareness week participants as speakers for local community and church organizations.
- Support Faculty and Resident Missionary Trips mainly through IVUMed.
- Plan to participate in the Education of High School students Initiative recently started at UTHSC, managed by Drs Walker and Patel.

# Urology Summary and Future Goals

- 1. Our Clinical enterprise is doing very well with plans for continued growth. This growth may include the addition of a fellowship trained Female/Neuro-Urologist and a Reconstructive Urologist.
- 2. We plan to continue development of our MRI directed targeted fusion prostate biopsy program and develop a formal “Focal Ablation Treatment Center for Prostate Cancer”
- 3. Develop a Comprehensive Men’s Health Center involving all specialties who have an interest.
- 4. Our Resident Educational Program remains in excellent standing with our RRC and ACGME.
- 5. Expand our Collaborative Research efforts with other Departments and Colleges at UTHSC and beyond.

THANK YOU FOR THE OPPORTUNITY

QUESTIONS ?