

Urology

Division Details

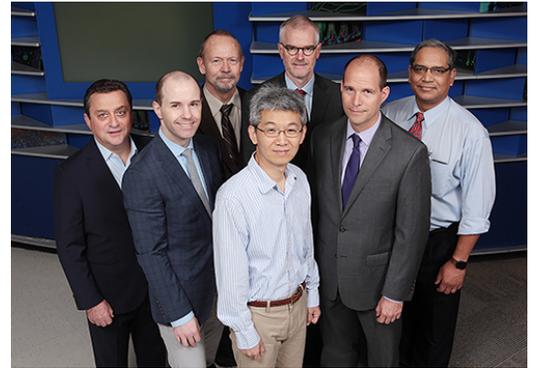
RESEARCH AND TRAINING DETAILS

| | |
|----------------------------------|-----------|
| Faculty | 6 |
| Joint Appointment Faculty | 2 |
| Research Fellows and Post Docs | 1 |
| Total Annual Grant Award Dollars | \$339,300 |

CLINICAL ACTIVITIES AND TRAINING

| | |
|-----------------------|--------|
| Clinical Fellows | 4 |
| Inpatient Encounters | 320 |
| Outpatient Encounters | 12,718 |

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Row 1: A Strine, J-S Park, B VanderBrink

Row 2: E Minevich, C Sheldon, W DeFoor, P Reddy

Division Highlights

W. Robert DeFoor, MD, MPH

[Dr. DeFoor, MD, MPH](#), is the lead author of a study that compared the use of two types of catheters in children on clean intermittent catheterization (CIC) for neurogenic bladder : uncoated conventional catheters and coated hydrophilic catheters. The study looked at the incidence of urinary tract infection (UTI), difficulty passing the catheter, urethral injury, and patient satisfaction. The study theorized that patients using the hydrophilic catheter would experience fewer urethral complications and UTIs. Findings included a significantly decreased number of UTI's in patients using the coated hydrophilic catheter. In addition, most patients who used hydrophilic catheters were happy with the results, and many asked to continue using them after the study concluded. Based on the study results, hydrophilic catheters are now offered as an option for patients on CIC who have problems with infections while using conventional catheters.

Joo-Seop Park, PhD

[The Park lab](#) found a novel mechanism that regulates nephron progenitors, and published their findings in *Development*. They discovered that Notch signaling is necessary and sufficient for downregulation of Six2, a key transcription factor required for maintenance of nephron progenitor cells. This is an unexpected finding as it was previously believed that Notch signaling regulated a later stage of nephrogenesis by promoting the formation of proximal tubules and repressing the formation of distal tubules. On the contrary, they found that Notch signaling has a direct impact on the cell fate decision of nephron progenitors when each nephron begins to develop. This work presents a paradigm-shifting revision of the current model of Notch signaling in nephrogenesis.

Chung E, Deacon P, Marable S, Shin J, Park JS. [Notch signaling promotes nephrogenesis by downregulating Six2](#). *Development*. 2016;143(21):3907-13.

Division Publications

1. Chung E; Deacon P; Marable S; Shin J; Park JS. **Notch signaling promotes nephrogenesis by downregulating Six2.** *Development (Cambridge)*. 2016; 143:3907-3913.
2. Warrick JI; Walter V; Yamashita H; Chung E; Shuman L; Amponsa VO; Zheng Z; Chan W; Whitcomb TL; Yue F. **FOXA1, GATA3 and PPAR gamma Cooperate to Drive Luminal Subtype in Bladder Cancer: A Molecular Analysis of Established Human Cell Lines.** *Scientific Reports*. 2016; 6:38531.
3. Boysen WR; Ellison JS; Kim C; Koh CJ; Noh P; Whittam B; Palmer B; Shukla A; Kirsch A; Gundeti MS. **Multi-Institutional Review of Outcomes and Complications of Robot-Assisted Laparoscopic Extravesical Ureteral Reimplantation for Treatment of Primary Vesicoureteral Reflux in Children.** *The Journal of Urology*. 2017; 197:1555-1560.
4. Greenfield SP; Cheng E; DeFoor W; Kropp B; Rushton HG; Skoog S; Carpenter M. **Vesicoureteral Reflux and Antibiotic Prophylaxis: Why Cohorts and Methodologies Matter..** *The Journal of Urology*. 2016; 196:1238-1243.
5. Jr DWR. **Challenges in Predicting Renal Outcomes in Boys with Posterior Urethral Valves.** *The Journal of Urology*. 2016; 196:639-640.
6. Lee Z; Schulte M; Defoor WR; Reddy PP; Vanderbrink BA; Minevich EA; Liss Z; Corbyons K; Noh PH. **A Non-Narcotic Pathway for the Management of Postoperative Pain Following Pediatric Robotic Pyeloplasty.** *Journal of Endourology and Part B, Videourology*. 2017; 31:255-258.
7. Wang Y; Li J; Kolon TF; Olivant Fisher A; Figueroa TE; Banihani AH; Hagerty JA; Gonzalez R; Noh PH; Chiavacci RM. **Genomic copy number variation association study in Caucasian patients with nonsyndromic cryptorchidism.** *BMC Urology*. 2016; 16:62.
8. Concodora CW; Reddy PP; VanderBrink BA. **The Role of Video Urodynamics in the Management of the Valve Bladder.** *Current Urology Reports*. 2017; 18:24.
9. Nokoff NJA; Palmer BB; Mullins AJD; Aston CEC; Austin PE; Baskin LF; Bernabe KH; Chan Y-MI; Cheng EYK; Diamond DAJ. **Prospective assessment of cosmesis before and after genital surgery.** *Journal of Pediatric Urology*. 2017; 13:28.e1-28.e6.
10. Lo YH; Chung E; Li Z; Wan YW; Mahe MM; Chen MS; Noah TK; Bell KN; Yalamanchili HK; Klisch TJ. **Transcriptional Regulation by ATOH1 and its Target SPDEF in the Intestine.** *Cellular and Molecular Gastroenterology and Hepatology*. 2017; 3:51-71.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

| Investigator | Title | Sponsor | ID | Dates | Amount |
|----------------------------------|---|-------------------------------|-----------------|-------------------------------|-----------|
| Joo-Seop Park, PhD | Cell Fate Regulation of Nephron Progenitors | National Institutes of Health | R01 DK100315 | 01/01/2014 - 12/31/2018 | \$339,300 |
| Total Annual Grant Award Dollars | | | | | \$339,300 |
