Urology

Division Details

RESEARCH AND TRAINING DETAILS

<table>
<thead>
<tr>
<th>Faculty</th>
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<tr>
<td>Joint Appointment Faculty</td>
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<tr>
<td>Research Fellows and Post Docs</td>
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<tr>
<td>Total Annual Grant Award Dollars</td>
<td>$339,300</td>
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CLINICAL ACTIVITIES AND TRAINING

<table>
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<tr>
<th>Clinical Fellows</th>
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<tr>
<td>Inpatient Encounters</td>
<td>320</td>
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<tr>
<td>Outpatient Encounters</td>
<td>12,718</td>
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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.


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.


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.


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

<table>
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<tr>
<th>Investigator</th>
<th>Title</th>
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<td>Cell Fate Regulation of Nephron Progenitors</td>
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<td>R01</td>
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