

CURRICULUM VITAE

Sheryl S. Justice, Ph.D.

PRESENT TITLE & AFFILIATION

Assistant Professor, Department of Pediatrics and Urology
Center for Microbial Pathogenesis
The Research Institute at Nationwide Children's Hospital
Center for Microbial Interface Biology, College of Medicine
The Ohio State University
Columbus, Ohio

CITIZENSHIP/ VISA STATUS

United States Citizen

OFFICE ADDRESS

The Research Institute at Nationwide Children's Hospital
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Columbus OH 43205
(614) 722-4196
Sheryl.Justice@nationwidechildrens.org

EDUCATION

UNDERGRADUATE TRAINING

1986	University of Missouri- Kansas City	B.S. With Distinction
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GRADUATE TRAINING

1994	University of Missouri-Kansas City	M.S. Biochemistry
2001	University of Connecticut	Ph.D. Molecular Biology and Biochemistry

POSTGRADUATE TRAINING

2001-2006	Washington University in Saint Louis	Postdoctoral Training Molecular Microbiology
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ACADEMIC APPOINTMENTS

2011- Present	Assistant Professor of Urology The Ohio State University School of Medicine
2006- Present	Principal Investigator Center for Microbial Pathogenesis The Research Institute at Nationwide Children's Hospital
2006- Present	Assistant Professor of Pediatrics Center for Microbial Interface Biology The Ohio State University School of Medicine

SERVICE

ACADEMIC RESPONSIBILITIES

2009-2013	Doctoral Thesis Committee (Chair) Forrest Raffel, Integrated Biomedical Graduate Program (Mason)
2009-2014	Doctoral Thesis Committee (Member) Dominique Limoli, Integrated Biomedical Graduate Program (Wozniak)
2009-2012	Doctoral Thesis Committee (Member) Matthew Swearingen, Microbiology (Ahmer)
2009-2012	Masters Thesis Committee (Member) Mona Oden, Molecular, Cellular and Developmental Biology (McCarthy)
2007	Graduate Faculty Representative Yongang Zhang, Ecology
2009	Graduate Faculty Representative Pooja Manery, Oral Biology
2010	Graduate Faculty Representative Erik Hill, Biochemistry
2011	Graduate Faculty Representative Ying Xu, Molecular, Cellular and Developmental Biology
2014	Graduate Faculty Representative Mohini Bhattacharya, Microbiology
2010-2012	Medical Fellow Supervisory Oversight Committee (Chair) Jodi Gustave, Pediatric Pulmonary Medicine (Bakaletz)
2012-Present	Medical Fellow Supervisory Oversight Committee (Member) Joshua Watson, Pediatric Infectious Disease (Schwaderer/Hains)

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- 2012-2013 Medical Fellow Supervisory Oversight Committee (Member)
Brian Becknell, Pediatric Nephrology (McHugh)
- 2012 Undergraduate Honors Thesis Committee (Member)
Kurtis Host, Microbiology (Wozniak)

INSTITUTIONAL ACTIVITIES

- Center for Microbial Pathogenesis Website Committee
The Research Institute at Nationwide Children's Hospital
- Finance and Sponsored Projects Collaboration Group
The Research Institute at Nationwide Children's Hospital
- Research Institute Academic Award Committee
The Research Institute at Nationwide Children's Hospital
- Research Leadership Program
The Research Institute at Nationwide Children's Hospital
- Research Institute Research Celebration Committee
The Research Institute at Nationwide Children's Hospital
- Research Institute Research Retreat Committee
The Research Institute at Nationwide Children's Hospital
- Research Institute Storeroom Renaming
The Research Institute at Nationwide Children's Hospital
- Research Information Technology Advisory Council
The Research Institute at Nationwide Children's Hospital
- Organizing Committee Chair of Infectious Disease Consortium
Work in Progress
The Research Institute at Nationwide Children's Hospital
- Organizing Committee Chair of Infectious Disease Consortium
Symposium and Intramural Awards
The Research Institute at Nationwide Children's Hospital
- Urology Chief Search Committee
Nationwide Children's Hospital

NATIONAL ACTIVITIES

- 2013 International Symposium
"Clinical and Scientific Advances in Urinary Tract Infections"
Host and Co-Organizer

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RESEARCH SUPPORT

COMPLETED RESEARCH SUPPORT

F 32 DK10168

“Mechanism of UPEC evasion of host immunity”

PI: Sheryl Justice, PhD

The purpose of this investigation is to determine virulence factors and mechanisms that UPEC use to evade the host immunity to establish residency in the bladder.

Date: 4/1/2001 – 4/1/2004

\$150,000

NCHRI Intramural Clinical and Translational Award- Trainee Support

“Bacterial virulence of uropathogens and the relationship to urinary tract infections in the pediatric population”

PI: Douglas Storm, MD

Role: Mentor

The purpose of this investigation is to determine the effect of urinary tract function on the bacterial traits required for establishment of urinary tract infections.

Date: 7/1/2009 – 6/30/2010

\$4,490

NCHRI Intramural Clinical and Translational Award- Trainee Support

“Effect of LPS and peptidoglycan on cytokine elicitation by pediatric urinary bacterial isolates”

PI: Ashay Patel, MD

Role: Mentor

The purpose of this investigation is to identify the bacterial factors that modulate the host innate immune response that can be used as biomarkers for risk for recurrent UTIs and ascent to the kidney.

Date: 9/1/2010 – 6/30/2011

\$4,600

NCHRI Outstanding Graduate Student Award

PI: Shareef Dabdoub

Role: Mentor

This was an award to cover Mr. Dabdoub’s stipend based upon scientific merit.

Date: 1/1/2011 – 12/31/2011

\$35,038

Contracts:

AstraTech Corporation

“Effectiveness of LoFric catheters to improve the microbial milieu in patients with neurogenic bladders”

PI: Sheryl Justice, PhD

The purpose of this investigation is to determine the effect of LoFric catheter use on the frequency and severity of urinary tract infections in patients with neurogenic bladders.

Dates: 1/1/2010 – 5/30/2013

\$21,800

ONGOING RESEARCH SUPPORT

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1 R01 AI092117-01A1 (NIH)

“Novel calcium release mechanisms regulates dendritic cell functions”

PI: Santiago Partida-Sanchez, PhD

Co-Investigator: Sheryl Justice, PhD

The major goals of this project are to identify mechanisms of activation of Ca²⁺ release via TRPM2 channel, and elucidate how this pathway impacts DC Ca²⁺-dependent functions during inflammation, immunization and cellular inflammatory infiltration to the mucosa using a mouse model of urinary tract infection.

Dates: 1/1/2010 – 6/30/2015

\$1,250,000

1 R01 DC013313-0 (NIH)

“Disease severity of otitis media: biofilms, invasion and host responses”

PI: Sheryl Justice, PhD

PI: Kevin Mason, PhD

The purpose of this study is to explore the consequences of fluctuations in essential heme-iron availability on NTHI physiology, biofilm development, invasion and disease severity.

Dates: 12/1/2013 – 11/30/2018

\$1,250,000

National Institutes on Deafness and Other Communication Disorders

“Omic administrative supplement for disease severity of otitis media: biofilms, invasion and host responses”

PI: Kevin Mason, PhD

PI: Sheryl Justice, PhD

The purpose of this study is to further explore the consequences of fluctuations in essential heme-iron availability on NTHI physiology and disease severity.

Dates: 9/1/2014 – 8/31/2015

\$70,000

OSU/NSF Booster Grant

PI: Sheryl Justice, PhD

PI: Kevin Mason, PhD

This grant provides a small, one-time award up to \$2,500 to purchase critical reagents to explore a specific hypothesis, participant fees, small equipment, core services, etc. to advance the investigators research program.

Dates: 7/1/2014 – 6/30/2015

\$2,500

NCHRI Intramural Clinical Translational Award

“*Escherichia coli* Nissle 1917 for the prevention of recurrent pediatric urinary tract infections”

PI: Sheryl Justice, PhD

The purpose of this FDA approved study is to investigate the safety of ingestion of the probiotic Nissle 1917.

Dates: 08/1/2014 – 7/31/2016

\$4,000

Trainee Support:

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Thrasher Young Investigator Award

“Targeted pathogen replacement with novel probiotic treatment for prevention of recurrent UTIs in children”

PI: Elizabeth Lucas, MD

Role: Mentor

The purpose of this study is to determine the efficacy of Nissle 1917 against multiple known uropathogens and the effect of probiotic treatment on the intestinal microbiota.

Dates: 6/1/2012 – 3/31/2015

Infectious Disease Translational Fund

“Effect of heme-iron restriction of *Haemophilus* on the host immune response and disease severity of otitis media:

PI: Rachael Hardison

Role: Mentor

The purpose of this fund is to support the study of the effect of heme-iron restriction of *Haemophilus* on the host immune response and disease severity of otitis media. The central hypothesis is that heme-iron restriction impacts pathogenesis of NTHI through suppression of inflammatory cytokine production and altered host immune responses during experimental OM.

Dates: 3/11/2015 – 12/31/2015

\$4,000

PENDING GRANTS

National Institutes of Health

“Nissle probiotic protects against infection-mediated adverse perinatal outcomes”

PI: Sheryl Justice, PhD

The purpose of this study is to investigate the ability of a new *E. coli* based probiotic to prevent pregnancy-associated bacteriuria and placental inflammation.

Dates: 4/1/2015 – 3/30/2019

\$1,634,734

Resubmitted 3/5/2015

First Submission: 30%

Patents:

RINCH 2009-013

“Automated Analysis of Multi-Color Flow Cytometry Data by Principle Component Analysis and Clustering”

Disclosure Date – 08/25/2009

Investigators – Sheryl Justice and Shareef Dabdoub

No patent applications filed.

RINCH 2011-008

“IL-6 and IL-17 as Predictors for Risk of Adverse Perinatal Outcomes Following Maternal UTI”

Disclosure Date – 05/26/2011

Investigators – Sheryl Justice and Santiago Partida-Sanchez

- 1) US Provisional Patent Application Serial No. 61/535,056 filed 09/15/2011, entitled, “Risk Predictors for Adverse Perinatal Outcomes”; (Converted)
- 2) International PCT Patent Application Serial No. US 2012/055749, filed 09/17/2012, published on 03/21/2014 as US2012/040551, entitled, “Risk Predictors for Adverse Perinatal Outcomes”

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RINCH 2012-030 (Joint with USC)

“Immunotherapeutic Method for Preventing Uropathogenic *Escherichia coli* from Infecting Host Epithelial Cells”

Disclosure Date – 09/06/2013 (based on date of first receipt of Provisional)

Investigators – Sheryl Justice and Steven Goodman

- 1) US Provisional Patent Application Serial No. 61/702,641 filed 09/18/2012, entitled, “Compositions and Methods for the Prevention of Microbial Infections” (Abandoned in favor of filing second Provisional)
- 2) US Provisional Patent Application Serial No. 61/881,317 filed 09/23/2013, entitled “Compositions and Methods for the Prevention of Microbial Infections” (Pending; deadline for conversion is 09/23/2014).
- 3) US Patent Publication No. US2015/0086542 A1, published on 3/26/2015, entitled “Compositions and Methods for the Prevention of Microbial Infections”

RINCH 2013-022

“The Use of LPS Serotypes as a Predictor of Disease Severity”

Disclosure Date – 05/22/2013

Investigator – Sheryl Justice

- 1) US Provisional Patent Application Serial No. 61/915,562 filed 12/13/2013, entitled “LPS Serotypes for Determining Severity of Urinary Tract Infection” (Pending; deadline for conversion is 12/13/2014)

RINCH 2014-029

“Host Protein Response to Otitis Media”

Disclosure Date – 09/13/2014

Investigators – Sheryl Justice, Kevin Mason and Alistair Harrison

- 1) US Provisional Patent Application Serial No. 62-048,953 filed 9/11/2014

PUBLICATIONS

ARTICLES IN PEER REVIEWED JOURNALS

1. Stader J, **Justice SS** and Wei S. (1992) The use of hybrid proteins to isolate kinetic export intermediates NATO ASI series, Dynamics of Membrane Assembly. *Series H: Cell Biology*. 63:265-276.
2. Stader J and **Justice SS**. (1994) Export and trimerization pathways of maltoporin overlap in the inner membrane of *Escherichia coli*. *Journal of Molecular Biology*. May 13;238(4):555-562. PMID:8176745. (IF: 6.018)
3. **Justice SS**, Garcia-Lara J and Rothfield LI. (2000) Cell division inhibitors SulA and MinC/MinD block septum formation at different steps in the assembly of the *Escherichia coli* division machinery. *Molecular Microbiology*. July 37(2):410-423. PMCID:PMC10931335. (IF: 6.339)
4. Schilling JD, Martin SM, Hunstad DA, Patel KP, Mulvey MA, **Justice SS**, Lorenz RG and Hultgren SJ. (2003) CD-14- and toll-like receptor-dependent activation of bladder epithelial cells

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- by lipopolysaccharide and type 1-piliated *E. coli*. *Infection and Immunity*. March 71(3):1470-80. PMID:PMC148872. (IF: 3.875)
5. **Justice SS**, Hung CS, Theriot JA, Fletcher DA, Anderson GG, Footer MJ and Hultgren SJ. (2003) From the cover: Differentiation and developmental pathways of uropathogenic *E. coli* in urinary tract pathogenesis. *Proceedings of the National Academy of Sciences, USA*. 101(5):1333-1338. PMID:PMC337053. (IF: 10.452)
 - Cover Art
 - PNAS Top 100 downloads of 2004
 - Editorial Highlight: Science Editors Choice, Feb 13, 2004
 - Editorial Highlight: Biophotonics News, February 2004
 - Faculty of 1000. In F1000Prime, 09 Mar 2004;
DOI:10.3410/f.1017716.203386.F1000Prime.com/1017716#eval203386
 6. Hunstad DA, **Justice SS**, Hung CS, Lauer SR and Hultgren SJ. (2005) Suppression of bladder epithelial cytokine responses by uropathogenic *Escherichia coli*. *Infection and Immunity*. July 73(7):3999-4006. PMID:PMC1168571. (IF: 3.933)
 - Faculty of 1000. In F1000Prime, 29 Jul 2005;
DOI:10.3410/f.1027098.327590.F1000Prime.com/1027098#eval327590
 7. **Justice SS**, Hunstad DA, Reiss Harper J, Duguay A, Pinkner JS, Bann J, Frieden C, Silhavy TJ and Hultgren SJ. (2005) Periplasmic peptidyl prolyl *cis-trans* isomerases are not essential for viability but are required for pilus biogenesis in *Escherichia coli*. *Journal of Bacteriology*. Nov 187(22):7680-7686. PMID:PMC1280321. (IF: 4.167)
 - Faculty of 1000. In F1000Prime, 11 Nov 2005;
DOI:10.3410/f.1028964.343453.F1000Prime.com/1028964#eval343453
 8. **Justice SS**, Lauer SR, Hultgren SJ and Hunstad DA. (2006) Maturation of intracellular *Escherichia coli* communities requires SurA. *Infection and Immunity*. Aug 74(8):4793-4800. PMID:PMC1539609. (IF: 4.004)
 9. **Justice SS**, Hunstad DA, Seed PC and Hultgren SJ. (2007) Filamentation by *E. coli* subverts innate defenses during urinary tract infections. *Proceedings of the National Academy of Sciences, USA*. Dec 26;103(52):19884-19889. PMID:PMC1750882. (IF: 9.643)
 - Editorial Highlight: Nature Reviews in Microbiology Feb 2007
 - Editorial Highlight: The Journal of Urology Dec 2007
 - Highlight: Small Things Considered, American Society for Microbiology
 10. Dabdoub S, **Justice SS** and Ray WC. (2010) A dynamically masked Gaussian can efficiently approximate a distance calculation for image segmentation. *Advances in Experimental Medicine and Biology*. 696:425-432. PMID:21431582. (IF: 1.093)
 11. Anderson GG, **Justice SS**, Hultgren SJ and Seed PC. (2010) Polysaccharide capsule and sialic acid-mediated regulation promote intracellular bacterial communities during cystitis. *Infection and Immunity*. Mar 78(3):963-975. PMID:PMC2825929. (IF: 4.098)
 - Faculty of 1000. In F1000Prime, 09 Mar 2010;
DOI:10.3410.f.2393967.2027068.F1000Prime.com/2393967#eval2027068
 12. Li B, Smith P, Horvath Jr. DJ, Romesburg FE and **Justice SS**. (2010) SOS regulatory elements are essential for UPEC pathogenesis. *Microbes and Infection*. Aug 12(8-9):662-668.

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PMID:20435157. (IF: 3.101)

13. Dabdoub SM, Ray WC and **Justice SS**. (2011) FIND: a new software tool and development platform for enhanced multicolor flow analysis. *BMC Bioinformatics*. May 10;12:145. PMID:PMC3119067. (IF: 2.751)
14. Horvath Jr. DJ, Li B, Partida-Sanchez S, Hunstad DA, Hultgren SJ and **Justice SS**. (2011) Morphological plasticity promotes resistance to phagocyte killing of uropathogenic *Escherichia coli*. *Microbes and Infection*. May 13(5):426-437. PMID:PMC3071881. (IF: 3.101)
 - Editorial Highlight: Journal of Urology January 2012
15. Spencer JD, Schwaderer A, DiRosario J, McHugh KM, McGillivray G, **Justice SS**, Carpenter A, Baker P, Harder J and Hains DS. (2011) Ribonuclease 7: a potent antimicrobial peptide within the human urinary tract. *Kidney International*. Jul 80(2):174-180. PMID:21525852. (IF: 6.606)
16. Storm DW, Koff SA, Horvath Jr. DJ, Li B and **Justice SS**. (2011) An *In vitro* analysis of the bactericidal activity of *Escherichia coli* Nissle 1917 against pediatric uropathogens. *Journal of Urology*. Oct 186(4 Suppl):1678-1683. Epub 2011 Aug 19. PMID:21855931. (IF: 3.746)
17. Vogel AR, Szelestey BR, Raffel FK, Sharpe SW, Gearinger RL, **Justice SS** and Mason KM. (2012) SapF-mediated heme iron utilization enhances persistence and coordinates biofilm architecture of *Haemophilus*. *Frontiers in Cellular and Infection Microbiology*. Apr 3;2:42. doi:10.3389/FCIMB.2012.00042. Epub 2012 Apr 3. PMID:PMC3417626.
18. Goodman S, Oberfell KP, Jurcisek JA, Novotny LA, Downey JS, Ayala EA, Tjokro N, Li B, **Justice SS** and Bakaletz LO. (2011) Biofilms can be dispersed by focusing the immune system on a common family of bacterial nucleoid associated proteins. *Mucosal Immunity*. Nov 4(6):625-637. Epub June 29, 2011. PMID:21716265. (IF: 6.963)
 - Top 10 downloads for July and August 2011
19. Dabdoub SM, VanderBrink BA, **Justice SS** and Ray WC. (2012) Quantitating pathogenic biofilm architecture in biopsied tissue. **Proceedings of IEEE/ACM VisWeek, Workshop on Visual Analytics in Healthcare**. pp 49-52.
20. Bolton M, Horvath Jr. DJ, Li B, Cortado H, Newsom D, White P, Partida-Sanchez S and **Justice SS**. (2012) Intrauterine growth restriction is a direct consequence of localized maternal uropathogenic *Escherichia coli* cystitis. *PLoS One*. 7(3):e33897. PMID:PMC3309957. (IF: 4.092)
 - Highlight: HealthCanal.com <http://www.healthcanal.com/pregnancy-childbirth/27779-Potential-Biomarkers-Linked-Urinary-Tract-Infection-Related-Pregnancy-Complications-Identified.html>
 - Highlight: Infection Control Today. <http://www.infectioncontroltoday.com/news/2012/03/potential-biomarkers-linked-to-utirelated-pregnancy-complications-identified.aspx>
 - Highlight: Total E-clips, Foundation for Biomedical Research
 - Highlight: Doctor Tipster, <http://www.doctortipster.com/8874-study-identifies-markers-of-adverse-effects-of-uti-during-pregnancy.html>
 - Highlight: Medical News. <http://www.news-medical.net/news/20120323/Investigators-identify-proteins-that-may-indicate-fetus->

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[at-risk-for-UTI-induced-prematurity.aspx](#)

21. Storm DW, Patel AS, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. (2012) Relationship among bacterial virulence, bladder function and patterns of urinary tract infection in children. *Journal of Urology*. Jul 188(1):236-41. Epub 2012 May 15. PMID:22595065. (IF: 3.746)
 - Editorial Highlight: This month in Pediatric Urology Jul:188(1):4
22. **Justice SS***, Li B, Downey J, Dabdoub SM, Brockson ME, Probst GD, Ray WC and Goodman SD. (2012) Aberrant community architecture and attenuated persistence of uropathogenic *Escherichia coli* in the absence of individual IHF subunits. *PLoS One*. 7(10):e48349. doi:10.1371/journal.pone.0048349. Epub 2012 Oct 25. PMCID:PMC3485042. (IF: 4.092)
 - Co-corresponding Author
23. Szelestey BR, Heimlich DR, Raffel FK, **Justice SS*** and Mason KM (2013) *Haemophilus* responses to nutritional immunity: epigenetic effects on biofilm architecture, persistence and disease severity. *PLoS Pathogens*. 9(10):e1003709. doi: 10.1371/journal.ppat. 1003709. Epub 2013 Oct 10. PMCID: PMC3795038. (IF: 8.136)
 - Co-corresponding Author
 - Recommended by Weekend Read: Nature Reviews in Microbiology
24. Becknell B, Spencer JD, Carpenter AR, Chen X, Ploeger S, Kline J, Ellsworth P, Li B, Proksch E, Schwaderer AL, Hains DS, **Justice SS*** and McHugh KM (2013) Expression and antimicrobial function of Beta-defensin 1 in the lower urinary tract. *PLoS One*. 8(10):e7714. doi: 10.1371/journal.pone.0077714. PMCID:PMC3804605. (IF: 3.7230)
 - Co-corresponding Author
25. Spencer JD, Schwaderer AL, Eichler T, Wang H, Kline J, **Justice SS**, Cohen DM and Hains DS (2014) An endogenous Ribonuclease inhibitor regulates the antimicrobial activity of Ribonuclease 7 in the human urinary tract. *Kidney International*. May 85(5):1179-1191. doi: 10.1038/ki.2013.395. Epub head of print Oct 9, 2013. PMID:24107847. (IF: 7.916)
26. Devaraj A, **Justice SS**, Bakaletz LO and Goodman SD (2015) DNABII proteins play a central role in UPEC biofilm structure. *Molecular Microbiology*. doi:10.1111/mmmi.12994. PMID:25757804. (IF:5.03)
27. Lucas EJ, Baxter C, Singh C, Mohamed AZ, Li B, Zhang J, Jayanthi VR, Koff SA, VanderBrink B and **Justice SS** (2015) Comparison of the microbiological milieu of patients using either hydrophilic or conventional PVC catheters for clean intermittent catheterization. *Under review*.
28. Patel AS, Mohamed AZ, Storm DW, Singh C, Horvath Jr. DJ, Li B, Zhang J, Koff SA, Mason KM and **Justice SS** (2015) *Escherichia coli* lipopolysaccharide serotype correlates with the magnitude of IL-6 and disease severity of urinary tract infections. *In revision*.
29. Harrison A, Dubois LG, St. John-Williams L, Moseley MA, Hardison RL, Heimlich DR, Stoddard A, Kerschner JE, **Justice SS**, Thompson JW, and Mason KM. (2015) Comprehensive proteomic and metabolomics signatures of acute otitis media. *Pending submission 3/2015*.
30. Basar M, **Justice S**, Guzeloglu-Kayisli O, Schatz F, Lockwood CJ and Kayisli UA. (2015) Protective role of *E. coli* Nissle 1917-based probiotic against uropathogenic *E.coli* (UPEC) strain-mediated inhibition of progesterone receptor expression and cell survival in decidual cells. *Pending submission*.

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INVITED ARTICLES

1. Rothfield LI and **Justice SS**. (1997) Bacterial Cell Division: the cycle of the ring. *Cell*. 88:581-584. PMID:9054497. (IF: 34.366)
2. Rothfield LI, **Justice SS** and Garcia-Lara J. (1999) Bacterial cell division. *Annual Review in Genetics*. 33:423-448. (IF: 10.065)
3. **Justice SS**, Hunstad DA, Cegelski L and Hultgren SJ. (2008) Morphological plasticity as bacterial survival strategy. *Nature Reviews Microbiology*. Feb 6:162-168. PMID:18157153. (IF: 14.310)
 - Highlight: Science Forums <http://blogs.scienceforums.net/ecoli/2008/03/18/filamentous-bacteria/>
4. Hunstad DA and **Justice SS**. (2010) Intracellular lifestyles and immune evasion strategies of uropathogenic *Escherichia coli*. *Annual Review in Microbiology*. Oct 13;64:203-221. PMID20825346. (IF: 12.415)
5. Storm DW, Patel AS, Koff SA and **Justice SS**. (2011) Novel management of urinary tract infections. *Current Opinions in Urology*. Jul 21(4):325-333. PMID:21519273. (IF: 2.590)
6. Horvath Jr. DJ, Dabdoub SM, Li B, VanderBrink BA and **Justice SS**. (2012) New paradigms of urinary tract infections: Implications for patient management. *Indian Journal of Urology*. Apr 28(2):154-158. PMID:PMC3424889.
7. **Justice SS** and Hunstad DA. (2012) UPEC Hemolysin: More than just for making holes. *Cell Host and Microbe*. Jan 19; 11(1):4-5. PMID:PMC3267088. (IF: 13.500)
8. **Justice SS**, Harrison A, Becknell B and Mason KM. (2014) Bacterial differentiation, development and disease: mechanisms for survival. *FEMS Microbiology Letters*. 360(1):1-8. PMID:PMC4227932. (IF:2.723)
9. Scott V, Haake DA, Churchill BM, **Justice S** and Kim JH. (2015) Intracellular bacterial communities: A novel etiology for recurrent urinary tract infections and persistent lower urinary tract symptoms. *Resubmitted to Urology 3/2015*

BOOK CHAPTERS

1. **Justice SS**, Dodson KW, Chapman MR, Barnhart MM and Hultgren SJ. Assembly of adhesive organelles on gram negative bacteria in protein secretion pathways in bacteria. Kluwer Academic Press New York. 2003.
2. Olson P, **Justice SS** and Hunstad DA. *Escherichia coli* in urinary tract infections. in Medical Molecular Microbiology. Elsevier Academic Press. 2014.

ABSTRACTS

1. **Justice SS** and Stader JA. "The use of LamB- β -Galactosidase hybrid protein in the isolation of LamB export intermediates". NATO ASI Series Dynamics of Membrane Assembly. France. (1991)

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2. **Justice SS** and Stader JA. "Isolation of protein export intermediates utilizing LamB- β -Galactosidase hybrid proteins". American Society of Microbiology General Meeting. New Orleans, LA. (1991)
 - a. **Selected from the abstracts for plenary presentation**
3. **Justice SS** and Stader JA. "Initiation of trimerization occurs in the inner membrane of *Escherichia coli*". American Society of Microbiology General Meeting. Dallas, TX. (1992)
4. **Justice SS**, Harper-Reiss J, Bann J, Rizzitello A, Silhavy TJ and Hultgren SJ. "Periplasmic prolyl isomerases are essential for pilus biogenesis in *Escherichia coli*". American Society for Microbiology General Meeting. Salt Lake City, UT. (2002)
5. Hung C, **Justice SS**, Theriot J, Fletcher D, Anderson G, Footer M and Hultgren SJ. "UTI proceeds following a novel pathway of bacterial differentiation". American Society for Microbiology General Meeting. Washington, DC. (2003)
6. Hung C, **Justice SS**, Theriot J, Fletcher D, Anderson GG, Footer M and Hultgren SJ. "Differentiation and developmental pathways of uropathogenic *E. coli* in urinary tract pathogenesis". Gordon Research Conferences. "Molecular Mechanisms of Microbial Adhesins". New Orleans, LA. (2003)
7. **Justice SS**, Hung C, Theriot J, Fletcher D, Anderson GG, Footer M and Hultgren SJ. "Differentiation and developmental pathways of uropathogenic *E. coli* in urinary tract pathogenesis". Microbial Pathogenesis and Host Response. Cold Spring Harbor, NY. (2003)
 - a. **Selected from the abstracts for a plenary presentation**
8. **Justice SS**, Hung C, Theriot J, Fletcher D, Anderson GG, Footer M and Hultgren SJ. "Differentiation and developmental pathways of uropathogenic *E. coli* in urinary tract pathogenesis". Cell-Cell Bacteria Communications-ASM Conference. Banff, Canada. (2004)
9. Hunstad DA, **Justice SS**, Lauer SR and Hultgren SJ. "Characterization of the *surA* mutant in uropathogenic *Escherichia coli*". 42nd Infectious Diseases Society of America. Boston, MA. (2004)
10. Hunstad DA, **Justice SS**, Lauer SR and Hultgren SJ. "Deficient piliation and virulence in the uropathogenic *E. coli surA* mutant". St. Jude/PIDS Microbial Research Conference. Memphis, TN. (2005)
11. **Justice SS**, Seed PC, Hunstad DA, Lauer SR, Walker JN and Hultgren SJ. "Inhibition of cell division by SulA is essential for persistence of uropathogenic *Escherichia coli* in the bladder". Prokaryotic Development-ASM Conference. Vancouver, Canada. (2005)
12. Hunstad DA, **Justice SS**, Pinkner JS and Hultgren SJ. "Mutation in *surA* Abolishes Virulence in Uropathogenic *Escherichia coli*". Microbial Pathogenesis and Host Response. Cold Spring Harbor, NY. (2005)
13. **Justice SS**, Seed PC, Hunstad DA, Lauer SR, Walker JN and Hultgren SJ. "Inhibition of cell division by SulA is essential for persistence of uropathogenic *Escherichia coli* in the bladder". Microbial Pathogenesis and Host Response. Cold Spring Harbor, NY. (2005)
14. **Justice SS**, Hunstad DA, Seed PC and Hultgren SJ. "Filamentation by *E. coli* subverts innate

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- defenses during urinary tract infection". Midwest Microbial Pathogenesis Conference. Chicago, IL. (2006).
15. Li B, **Justice SS**, Hunstad DA, Seed PC and Hultgren SJ. "Filamentation by *E. coli* subverts innate defenses during urinary tract infection". Columbus Children's Research Institute Annual Research Conference. Columbus, OH. (2007).
 16. Li B and **Justice SS**. "Genetic tools for analyzing individual bacterial gene expression". 14th Annual Midwest Microbial Pathogenesis Conference. Chicago, IL. (2007)
 17. Li B and **Justice SS**. "Subversion of innate defenses during urinary tract infection". Center for Microbial Pathogenesis Annual Research Conference, The Ohio State University College of Medicine. Columbus, OH. (2007)
 18. Horvath Jr. DJ, Li R, Partida-Sanchez S and **Justice SS**. "Analysis of innate immune response to Uropathogenic *Escherichia coli* in a murine cystitis model". 14th Annual Midwest Microbial Pathogenesis Conference. Chicago, IL. (2007)
 19. Dabdoub SM, **Justice SS** and Ray WC. "Exploiting biological coherence in classification and segmentation". Ohio Collaborative Conference in Classification and Segmentation. Oxford, OH. (2007).
 20. Dabdoub SM, **Justice SS** and Ray WC. "Exploiting biological coherency in classification and segmentation". 14th Annual Midwest Microbial Pathogenesis Conference. Chicago, IL. (2007).
 21. Li B, Smith P, Horvath Jr. DJ, Romesberg FE and **Justice SS**. "SOS regulatory elements are essential for UPEC pathogenesis". The Center for Microbial Pathogenesis Research Day. Columbus, OH. (2008).
 22. Li B and **Justice SS**. "SOS regulatory elements are essential for UPEC pathogenesis". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH (2008).
 23. **Justice SS**, Li B, Smith P, Horvath Jr. DJ and Romesburg FE. "SOS response is essential for UPEC pathogenesis". 15th Annual Midwest Microbial Pathogenesis Conference. Madison, WI. (2008).
 24. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Characterization of kinetics of innate immune response to uropathogenic *Escherichia coli* in a murine cystitis model". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2008)
 25. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Mucosal immune responses in genitourinary tissues following a urinary tract infection". The Center for Microbial Pathogenesis Research Day. Columbus, OH. (2008)
 26. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Characterization of kinetics of innate immune response to uropathogenic *Escherichia coli* in a murine cystitis model". The Ohio State University Medical School Research Day. Columbus, OH. (2008)
 27. Dabdoub SM, **Justice SS** and Ray WC. "Exploiting biological coherency in classification and segmentation". Ohio Collaborative Conference on Bioinformatics, The Ohio State University Medical School Research Day. Columbus, OH. (2008)

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28. Anderson GG; **Justice SS**; Hultgren SJ and Seed PA. "Exopolysaccharide capsule and sialic acid signaling contribute to key intracellular and extracellular pathways used by uropathogenic *Escherichia coli* during experimental cystitis". Journal of Women's Health. Vol. 8, New Rochelle: Mary Ann Leibert Inc. (2008): 1251-1251.
29. Szelestey BR, **Justice SS** and Mason KM. "Morphological plasticity during heme starvation and biofilm development in nontypeable *Haemophilus influenzae*". American Society for Microbiology-General Meeting. Philadelphia, PA. (2009).
30. Szelestey BR, **Justice SS** and Mason KM. "Morphological plasticity during heme starvation and biofilm development in nontypeable *Haemophilus influenzae*". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2009)
31. Li B, Smith P, Horvath Jr. DJ, Romesburg F and **Justice SS**. "SOS response is essential for UPEC pathogenesis." American Society for Microbiology-Ohio Branch meeting. Granville, OH. (2009).
32. Li B, Horvath Jr. DJ, Romesberg FE and **Justice SS**. "SOS regulatory elements are essential for UPEC pathogenesis". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2009)
33. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Activated murine RAW 267.4 cells induce UPEC filamentation *in vitro*". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2009)
34. Horvath Jr. DJ, Li B, Partida-Sanchez S, and **Justice SS**. "Activated murine RAW 267.4 cells induce UPEC filamentation *in vitro*". The Ohio State University Medical School Research Day. Columbus, OH. (2009)
35. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Activated murine RAW 267.4 cells induce UPEC filamentation *in vitro*". American Society for Microbiology-Ohio Branch Meeting. Granville, OH. (2009)
36. Dabdoub SM and **Justice SS**. "Alternate methods for visualization and analysis of flow cytometry data". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2009)
37. Dabdoub SM, **Justice SS** and Ray WC. "Exploiting biological coherence in classification and segmentation". American Society for Microbiology-Ohio Branch meeting. Granville, OH. (2009)
38. Storm DW, **Justice SS**, Horvath DJ, Li B and Koff S. "Bacterial virulence of pediatric uropathogens and its relationship to urinary tract infections in children". 16th Annual Midwest Microbial Pathogenesis Conference. West Lafayette, IN. (2009)
39. Li B, Bolton M, Horvath Jr. DJ, Partida-Sanchez S and **Justice SS**. "Maternal UTI-mediated preterm birth: a mouse model". 16th Annual Midwest Microbial Pathogenesis Conference. West Lafayette, IN. (2009)
40. Horvath, Jr. DJ, Li B, Partida-Sanchez S, Hunstad DA, Hultgren SJ and **Justice SS**. "Filamentous morphology of uropathogenic *Escherichia coli* inhibits phagocytosis". 16th Annual Midwest

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- Microbial Pathogenesis Conference. West Lafayette, IN. (2009)
41. Dabdoub SM, **Justice SS** and Ray WC. "Counting Bacteria: Fluorescent image segmentation in colony member enumeration". 16th Annual Midwest Microbial Pathogenesis Conference. West Lafayette, IN. (2009)
 42. Storm DW, Horvath Jr. DJ, Patel A, Li B, Koff SA and **Justice SS**. "Lower urinary tract function alter microbiological environment". Midwest Microbial Pathogenesis Conference. St Louis, MO. (2010)
 43. Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Pediatric uropathogens and their virulence traits: A cytokine analysis." The Ohio Branch Meeting of the American Society for Microbiology. Proctor & Gamble. Mason, OH. (2010)
 44. Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Pediatric uropathogens and their virulence traits: A cytokine analysis.". Section on Urology- American Academy of Pediatrics National Conference and Exhibition. San Francisco, CA. (2010)
 45. Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Pediatric uropathogens and their virulence traits: A cytokine analysis". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2010)
 46. Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "An *in vitro* analysis of *Escherichia coli* Nissle 1917: A new therapy to treat recurrent pediatric urinary tract infections". Section on Urology-American Academy of Pediatrics National Conference and Exhibition. San Francisco, CA. (2010)
 47. Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Pediatric uropathogens and their virulence traits: A cytokine analysis". The Ohio State University Medical School Research Day. Columbus, OH. (2010)
 48. Song KJ, Post DM, Baker BD, **Justice SS**, Gibson BW and Munson RS. "Overexpression of second sialytransferase gene (HD0053) is involved in the sialylation of lipooligosaccharide in *Haemophilus ducreyi*". American Society for Microbiology-General Meeting. San Diego, CA. (2010)
 49. Song JK, Post DM, Baker BD, **Justice SS**, Gibson BW and Munson Jr. RS. "Overexpression of a second sialytransferase gene (HD0053) is involved in the sialylation of lipopolysacchride in *Haemophilus ducreyi*". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2010)
 50. Song JK, Post DM, Baker BD, **Justice SS**, Gibson BW and Munson Jr. RS. "Overexpression of a second sialytransferase gene (HD0053) is involved in the sialytion of lipopolysacchride in *Haemophilus ducreyi*". The Center for Microbial Interface Biology Research Retreat. Columbus , OH.(2010)
 51. Song JK, Post DM, Baker BD, **Justice SS**, Gibson BW and Munson Jr. RS. "Overexpression of a second sialytransferase gene (HD0053) is involved in the sialylation of lipopolysacchride in *Haemophilus ducreyi*". The Ohio State University Medical School Research Day. Columbus, OH. (2010)

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52. Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Defining the molecular mechanisms of inflammatory cell mediated uropathogenic *Escherichia coli*". Midwest Microbial Pathogenesis Conference. St Louis. MO. (2010)
53. Horvath Jr. DJ, Li B and **Justice SS**. "Novel Mechanism of *sulA* induction during cystitis." The Ohio Branch Meeting of the American Society for Microbiology. Proctor & Gamble. Mason, OH. (2010)
54. Horvath Jr. DJ, Li B and **Justice SS**. "Novel mechanism of *sulA* induction during cystitis". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2010)
55. Horvath Jr. DJ, Li B and **Justice SS**. "Novel mechanism of *sulA* induction during cystitis". The Center for Microbial Interface Biology Research Retreat. Columbus, OH. (2010)
56. Horvath Jr. DJ, Li B and **Justice SS**. "Novel mechanism of *sulA* induction during cystitis". The Ohio State University Medical School Research Day. Columbus, OH. (2010)
57. Dabdoub SM, **Justice SS** and Ray WC. "Counting bacteria: Image segmentation in colony member enumeration". The Center for Microbial Pathogenesis Research Day. Columbus, OH. (2010)
58. Dabdoub SM, **Justice SS** and Ray WC. "Counting bacteria: Image segmentation in colony member enumeration." The Ohio Branch Meeting of the American Society for Microbiology. Mason. OH. (2010)
59. Dabdoub SM, **Justice SS** and Ray WC. "Counting bacteria: Image segmentation into colony member enumeration". The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2010)
60. Dabdoub SM, **Justice SS** and Ray WC. "Counting bacteria: Image segmentation in colony member enumeration". The Ohio State University Medical School Research Day. Columbus, OH. (2010)
61. Dabdoub SM, **Justice SS** and Ray WC. "Aesthetics and understanding in molecular motion". IEEE Visualization Conference. Salt Lake City, UT. (2010)
62. Dabdoub SM and **Justice SS**. "Let computers do the math: Automatic population discovery in flow cytometry analysis". Midwest Microbial Pathogenesis Conference. St Louis, MO. (2010)
63. Bolton M, Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Maternal UTI-mediated preterm birth: a mouse model." The Research Institute at Nationwide Children's Hospital Research Day. Columbus, OH. (2010)
64. Bolton M, Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Maternal UTI-mediated preterm birth: A mouse model". The Ohio State University Medical School Research Day. Columbus, OH. (2010)
65. Bolton M, Horvath Jr. DJ, Li B, Partida-Sanchez S and **Justice SS**. "Maternal UTI-mediated Preterm Birth: A Mouse Model". 48th Annual Meeting of the Infectious Diseases Society of America. Vancouver, British Columbia, Canada. (2010)

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66. Bolton M, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Pediatric uropathogens and their virulence traits: A cytokine analysis". The Center for Microbial Interface Biology Research Retreat. Columbus, OH. (2010)
67. Szelestey BR, Dabdoub SM, **Justice SS** and Mason KM. "Heme availability influences biofilm development and architecture by nontypeable *Haemophilus influenzae*". Center for Microbial Interface Biology Meeting, The Ohio State University. Columbus, OH. (2011)
68. Spencer JD, Schwaderer A, DiRosario J, McHugh K, Baker P, **Justice SS** and Hains D. "Ribonuclease 7: A potent antimicrobial peptide in the human kidney and urinary tract". Research Week at The Research Institute at Nationwide Children's Hospital. Columbus, OH. (2011)
69. Spencer J, Schwaderer A, DiRosario J, McHugh K, Baker P, **Justice SS** and Hains D. "Ribonuclease 7: a potent antimicrobial peptide in the human kidney and urinary tract". American Society of Pediatric Nephrology. Denver, CO. (2011)
70. Patel A, Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Lower urinary tract functions alter microbiological environment". Research Week at The Research Institute at Nationwide Children's Hospital. Columbus, OH. (2011)
71. Patel A, Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Lower urinary tract functions alter microbiological environment". The Ohio State University Medical College Research Day. Columbus, OH. (2011)
72. Patel A, Storm D, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Lower urinary tract function alters microbiological environment". The Ohio Branch of the American Society for Microbiology. Athens, OH. (2011)
73. Li B, Downey JS, Goodman SD and **Justice SS**. "Double stranded DNA binding protein IHF affects UPEC pathogenesis". The Ohio State University Medical College Research Day. Columbus, OH. (2011)
74. Li B, Downey JS, Goodman SD and **Justice SS**. "Double stranded DNA binding protein IHF affects UPEC pathogenesis". The Ohio Branch of the American Society for Microbiology. Athens, OH. (2011)
75. Li B, Downey JS, Goodman SD and **Justice SS**. "Double stranded DNA binding protein IHF affects UPEC pathogenesis". Research Week at The Research Institute at Nationwide Children's Hospital. Columbus, OH. (2011)
76. Li B, Downey J, Dabdoub S, Brockson ME, Probst GD, Goodman SD and **Justice SS**. "Homodimers of IHF retain function during the pathogenesis of uropathogenic *Escherichia coli*". Midwest Microbial Pathogenesis Conference. Ann Arbor, MI. (2011)
77. Kozlovich C, Patel A, Storm DW, Horvath Jr. DJ, Li B, Koff SA and **Justice SS**. "Lower urinary tract function alters microbiological environment". Midwest Microbial Pathogenesis Conference. Ann Arbor, MI. (2011)
78. Horvath Jr. DJ, Cortado H, **Justice SS** and Partida-Sanchez S. "Resident macrophages are required for control of urinary tract infection in mice". Research Week at The Research Institute

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- at Nationwide Children's Hospital. Columbus, OH. (2011)
79. Horvath Jr. DJ, Cortado H, **Justice SS** and Partida-Sanchez S. "Resident macrophages are required for control of urinary tract infections in mice". The Ohio Branch of the American Society for Microbiology. Athens, OH. (2011)
 80. Horvath Jr. DJ, Cortado H, **Justice SS** and Partida-Sanchez S. "Resident macrophages are required for control of urinary tract infection in mice". The Ohio State University Medical College Research Day. Columbus, OH. (2011)
 81. Dabdoub SM, Ray WC and **Justice SS**. "FIND: A new software tool and development platform for enhanced multicolor flow analysis". The Ohio State University Medical College Research Day. Columbus, OH. (2011)
 82. Dabdoub SM, Ray WC and **Justice SS**. "FIND: A new software tool and development platform for enhanced multicolor flow analysis". The Ohio Branch of the American Society for Microbiology. Athens, OH. (2011)
 83. Dabdoub SM, Ray WC and **Justice SS**. "Quantitative analysis and comparison of intracellular biofilms in *E. coli* induced cystitis". The Center for Microbial Interface Biology Research Retreat. Columbus, OH. (2011)
 84. Dabdoub SM, Ray WC and **Justice SS**. "FIND: A new software tool and development platform for enhanced multicolor flow analysis". Research Week at The Research Institute at Nationwide Children's Hospital. Columbus, OH. (2011)
 85. Dabdoub SM, Ray WC and **Justice SS**. "Quantitative analysis and comparison of intracellular biofilms in *E. coli* induced cystitis". Midwest Microbial Pathogenesis Conference. Ann Arbor, OH. (2011)
 86. Becknell B, Meadows A, Li B, Hains DS, Schwaderer AL, **Justice SS** and McHugh KM. "Regulation of murine beta-defensin-1 (mBD-1) antimicrobial peptide in response to gram-negative bladder infection." Pediatric Academic Societies Annual Meeting. Boston, MA. (2011)
 87. Szelestey BR, Raffel FK, **Justice SS** and Mason KM. "Transient heme-iron restriction primes altered biofilm architecture and enhanced fitness of nontypeable *Haemophilus influenzae* *in vivo*". The Ohio Branch of the American Society for Microbiology. Mason, OH. (2012)
 88. Kozlovich CE, Singh C, Baxter C, Li B, Patel A and **Justice SS**. "Characteristics of lower urinary tract infection pathogens in a clinical trial of LoFric catheter in a clean intermittent catheterization patients". The Ohio Branch of the American Society for Microbiology. Mason, OH. (2012)
 89. Kozlovich CE, Li B and **Justice SS**. "Reactive species produced by murine macrophages induce filamentation of uropathogenic *Escherichia coli*". 19th Annual Midwest Microbial Pathogenesis Conference. Medical College of Wisconsin. Milwaukee, WI. (2012)
 90. Heimlich DR, Szelestey BR, Raffel FK, **Justice SS** and Mason KM. "Transient heme-iron restriction perpetuates enhanced biofilm architecture that influences persistence of Nontypeable *Haemophilus influenzae* and disease severity". 19th Annual Midwest Microbial Pathogenesis Conference. Medical College of Wisconsin. Milwaukee, WI. (2012)

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91. Lucas EJ, Li B and **Justice SS**. "Targeted replacement of uropathogens with Probiotic Nissle 1917". Midwest Society for Pediatric Research Annual Meeting. Columbus, OH. (2012)
92. Kozlovich CD, Singh C, Baxter C, Li B and **Justice SS**. "Characteristics of lower urinary tract infection pathogens in a clinical trial of LoFric catheter in clean intermittent catheterization patients". Midwest Society for Pediatric Research Annual Meeting. Columbus, OH. (2012)
93. Szelestey BR, Raffel FK, **Justice SS** and Mason KM." Transient heme-iron restriction primes altered biofilm architecture and enhanced fitness of nontypeable *Haemophilus influenzae in vivo*". Research Day at the Research Institute at Nationwide Children's. Columbus, OH. (2012)
94. Devaraj A, **Justice SS** and Goodman SD. "Characterizing the role of IHF subunits in Uropathogenic *Escherichia coli* (UPEC) biofilm structure and function." The Center for Microbial Interface Biology Research Retreat. Columbus, OH. (2012)
95. Kozlovich CE, Singh C, Baster C, Li B and **Justice SS**. "Characteristics of pathogens in myelomeningocele patients who use clean intermittent catheterization." Midwest Society for Pediatric Research. Columbus, OH. (2012)
96. Kozlovich CE, Li B and **Justice SS**. "Reactive species produced by murine macrophages induce filamentation of uropathogenic *Escherichia coli*." Midwest Microbial Pathogenesis Conference. Milwaukee, WI. (2012)
97. Becknell B, Carpenter A, Schwaderer A, Hains DS, **Justice SS** and McHugh KM. "The best offense is a good defense: Expression and function of beta defensins in the infected kidney and urinary tract". Midwest Society for Pediatric Research. Columbus, OH. (2012)
98. Lucas EJ, Li B and **Justice SS**. "Targeted replacement of uropathogens with Probiotic Nissle 1917". Pediatric Academic Societies Annual Meeting. Washington, DC. (2013)
99. Lucas EJ, Li B and **Justice SS**. "Targeted replacement of uropathogens with Probiotic Nissle 1917". 12th Annual Trainee Research Day. The Ohio State University, Columbus, OH. (2013)
100. Lucas EJ, Li B and **Justice SS**. "Targeted replacement of uropathogens with probiotic Nissle 1917." NIAID/IDSA Infectious Diseases Research Careers Meeting. National Institutes of Health. Bethesda, MD. (2013)
101. Lucas EJ, Li B and **Justice SS**. "Targeted replacement of uropathogens with probiotic Nissle 1917". ID Week. San Francisco, CA. (2013)
102. Cortez H, Horvath D, Beceiro S, Li B, **Justice S** and Partida-Sanchez S. "Nonclassical monocyte-derived macrophages are essential for preventing pyelonephritis upon urinary tract infection in mice". Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)
103. Becknell B, Spencer JD, Carpenter A, Chen X, Singh A, Ploeger S, Kline J, Ellsworth P, Li B, Proksch E, Schwaderer A, Hains DS, **Justice SS** and McHugh K. "Expression and antimicrobial function of beta-defensin 1 in the lower urinary tract". Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)

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104. Mohamed AZ, Li B, Jayanthi VR and **Justice SS**. “Immunomodulatory capacity accurately predicts disease severity caused by different strains of Uropathogenic *Escherichia coli*”. Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)
105. Lucas EJ, Li B and **Justice SS**. “Targeted replacement of uropathogens with probiotic Nissle 1917”. Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)
106. Devaraj A, **Justice SS** and Goodman SD. “Characterizing the role of IHF subunits in Uropathogenic *Escherichia coli* (UPEC) biofilm structure and function”. Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)
107. Baxter C, Singh C, Mohamed AZ, Lucas E, Li B, Jayanthi VR, Koff SA, VanderBrink B and **Justice SS**.” Comparison of bacterial properties with hydrophilic catheters and PVC catheters of patients performing clean intermittent catheterization”. Clinical and Scientific Advances in Urinary Tract Infections International Symposium. Columbus, OH. (2013)
108. Lucas EJ, Baxter C, Singh C, Mohamed AZ, Li B, Zhang J, Jayanthi VR, Koff SA, VanderBrink B and **Justice SS**. “Changes in urinary microbiology milieu of neurogenic bladder patients with use of a hydrophilic catheter as compared to conventional PVC catheters”. The Research Institute at Nationwide Children’s Hospital Annual Retreat. Columbus, OH. (2013)
109. Baxter C, Singh C, Mohamed AZ, Lucas EJ, Li B, Jayanthi VR, Koff SA, VanderBrink B and **Justice SS**. “Comparison of bacterial properties with hydrophilic catheters and PVC catheters of patient performing clean intermittent catheterization”. Magnet Nursing Conference. Orlando, FL. (2013)
110. Lucas EJ, Baxter C, Singh C, Mohamed AZ, Li B, Jayanthi VR, Koff SA, VanderBrink B and **Justice SS**. “Effect of catheter type on the microbiological milieu of patients with neurogenic bladder”. (Platform Presentation) ID Consortium. Columbus, OH. (2013)
111. Harrison A, Dubois LG, Hardison RL, Heimlich DR, **Justice SS**, Thompson JW, Mason KM. (2014). “Quantitative assessment of host proteins within the middle ear during experimental otitis media: An unbiased proteomic study”. 21st Ann. Midwest Microbial Pathogenesis Mtg. Chicago, IL. (2014)
112. Hardison R, **Justice SS** and Mason KM. “Nutritional conditioning promotes intracellular bacterial community formation by *Haemophilus*”. 21st Ann. Midwest Microbial Pathogenesis Meeting. Chicago, IL. (2014)
113. Hardison R, Heimlich D., **Justice S**, and Mason K. “Nutritional conditioning promotes intracellular bacterial community formation by *Haemophilus*”. (Podium presentation) Ohio Branch American Society for Microbiology Meeting. Columbus, OH. (2014)
114. Davaraj A, **Justice SS**, Bakaletz LO and Goodman SD. “The structure of UPEC biofilm depends on the DNABII family of proteins”. 2014 Center for Microbial Interface Biology Symposium. Columbus, OH. (2014)
115. Davaraj A, **Justice SS**, Bakaletz LO and Goodman SD. “The structure of UPEC biofilm depends on the DNABII family of proteins”. 21st Annual Midwest Microbial Pathogenesis

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Conference. Chicago, IL. (2014)

116. Basar M, **Justice S**, Guzeloglu-Kayisli O, Schatz F, Lockwood CJ and Kayisli UA. “Protective role of *E. coli* Nissle 1917-based probiotic against uropathogenic *E. coli* (UPEC) strain-mediated inhibition of progesterone receptor expression and cell survival in decidual cells”. Society for Gynecological Investigators, Florence, Italy. (2015)

EDITORIALS AND REVIEW ACTIVITIES

JOURNAL REVIEWER

Guest Editor	mBio
Editorial Reviewer	Frontiers in Cellular and Infection Microbiology
Ad hoc Reviewer	African Journal of Microbiology Research British Microbiology Research Canadian Journal of Microbiology Cell Host and Microbe Cellular Microbiology Clinical Infectious Diseases Current Opinions in Microbiology European Journal of Nutrition FEBS Letters Immunopharmacology and Immunotoxicology Infection and Immunity International Journal of Medical Microbiology International Journal of Microbiology Research International Journal of Oral Science Journal of Bacteriology Journal of Clinical Infectious Diseases Journal of Clinical Investigations Journal of Clinical Microbiology Journal of Medical Microbiology Journal of Nucleic Acids Investigation Journal of Oral Science Journal of Visualized Experiments Life Sciences mBio Microbes and Infection Microbiology Molecular Microbiology Mucosal Immunology Nucleic Acids Research Pediatric Nephrology PLoS One PLoS Pathogens Science Translational Medicine Veterinary Microbiology Virulence

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Grant Reviewer College of Medicine Student Research Scholarship
Guy's and St. Thomas' Charity (United Kingdom)
Kings Health Partners Research and Development Challenge Fund (United Kingdom)
Medical Research Council (United Kingdom)
National Institute for Diabetes and Kidney Disorders, Director's Challenge, Session ZRGi-EMNR-C(55)R
National Institute for Child Health and Human Development, Session ZRG1-EMNR-C58
Ohio Plant Biotechnology Consortium
Research into Ageing Fund at Age UK
Wellcome Trust/DBT India Alliance (India)

TEACHING

COURSES TAUGHT

1988 – 1990 Graduate Teaching Assistant, University of Missouri-Kansas City. Courses: Anatomy and Physiology Laboratory, Microbiology Laboratory

2001 – 2003 Instructor, Medical Microbiology Laboratory, Washington University in St. Louis

2006 – 2012 Instructor, Microbiology 724; one lecture

2013 – present Instructor, Microbiology 7240; two lectures

2007 Instructor, IBGP 706; one lecture

2007 Instructor, Biophysics 702; one lecture

2008 Co-Course Director (Samantha King), Instructor IBGP 851; five lectures

2009 – 2011 Co-Course Director (Stephanie Seveau), Microscopy Journal Club

2010 – 2011 Instructor, Microbial Pathogenesis Journal Club

2013 Instructor, IBGP 7400; two lectures

2014 Instructor, IBGP 7240; one lecture

2014 Instructor, Anatomy Research Seminar

2014 Instructor, GBS 763 Bacterial & Fungal Pathogenesis in the Immunology and Microbiology Graduate program curriculum at the University of Alabama

LECTURES

LOCAL/ REGIONAL LECTURES

2009 “Pathogenesis of urinary tract disease” National Kidney Foundation of Ohio

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Symposium, 2009 Kidney Conference, Columbus, Ohio

2011 “UTI’s in search of therapeutic regimens” Young Scientist Seminar Series, The Research Institute at Nationwide Children’s Hospital, Columbus, Ohio

2011 “Intrauterine growth restriction is a direct consequence of localized maternal cystitis” Center for Microbial Interface Biology Research Retreat, The Ohio State University, Columbus, Ohio

NATIONAL/ INTERNATIONAL LECTURES

1999 “FtsZ polymerization” Mechanism of assembly and effect of cell division inhibitors” University of Connecticut, Farmington, Connecticut

2002 “The Periplasmic *cis-trans* prolyl isomerase, SurA, is essential for the pathogenesis of UPEC” Department of Microbiology, University of Connecticut, Farmington, Connecticut

2003 “Differentiation of *E. coli* leads to evasion of host-immune responses during urinary tract infections” Department of Molecular Biology and Biotechnology, Sheffield University, Sheffield, England

2005 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” School of Life Sciences, Arizona State University, Tempe, Arizona

2005 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” Department of Microbiology, University of Mississippi Medical Center, Jackson, Mississippi

2005 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” Department of Biology, Indiana University, Bloomington, Indiana

2005 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” Department of Veterinary Microbiology, Iowa State University, Ames, Iowa

2006 “Strategies implemented by UPEC for host colonization and evasion of innate immunity” Center for Microbial Pathogenesis, Columbus Children’s Research Institute, Columbus, Ohio

2006 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” Department of Biological Sciences, Virginia Tech, Blacksburg, Virginia

2006 “Strategies implemented by UPEC for evasion of host innate immunity and colonization” Department of Microbiology, University of Colorado Health Sciences Center, Denver, Colorado

2006 “Strategies implemented by UPEC for evasion of host innate immunity and

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- colonization” Department of Biology, University of Texas, Arlington, Texas
- 2007 “Filamentous UPEC is essential for pathogenesis” Department of Microbiology, Miami University, Oxford, Ohio
- 2009 “Morphological plasticity for subversion of phagocyte killing” American Society for Microbiology , General Meeting, Philadelphia, Pennsylvania
- 2009 “Filamentous UPEC evade phagocyte killing” Midwest Microbial Pathogenesis Conference, Lafayette, Indiana
- 2010 “Morphological plasticity, stress responses, and target geometry in immune subversion by UPEC” University of Illinois, Urbana-Champaign, Illinois
- 2010 “Exploring the interaction of bacterial phenotype and urinary tract function in the development of renal damage from UTIs” MidWest Pediatric Nephrology Regional Conference- UTIs and VUR in Children: Best Practices and Future Directions, Columbus, Ohio
- 2011 “Consequences of host-pathogen interactions of uropathogenic *E. coli* virulence and fetal growth” Department of Biology, Indiana University and Purdue University if Indiana, Indianapolis, Indiana
- 2011 “Uropathogenic *Escherichia coli* subversion in innate immunity” Division of Pediatric Urology, Children’s National Medical Center, Washington DC
- 2011 “Novel strategies for the management of urinary tract infections: A microbiologist’s perspective” Division of Pediatric Urology, Children’s National Medical Center, Washington DC
- 2011 “The mechanism of virulence of UPEC : Analysis of single cells in 3-D communities” Department of Molecular, Microbial and Structural Biology, University of Connecticut, Farmington, Connecticut
- 2011 “Consequences of host-pathogen interactions on uropathogenic *E. coli* virulence” Department of Biochemistry and Molecular Biology, Wright State University, Dayton, Ohio
- 2011 “Consequences of host-pathogen interactions on uropathogenic *E. coli* virulence” Department of Microbiology, Miami University, Miami, Ohio
- 2013 “New approaches for management of Urinary Tract Infections” Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio
- 2013 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Microbiology and Immunity, Tulane University School of Medicine, New Orleans, Louisiana
- 2013 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Pathology, University of Utah, Salt Lake City, Utah

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- 2013 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Microbiology and Immunology, Wake Forrest School of Medicine, Winston-Salem, North Carolina
- 2014 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Microbiology/Immunology, University of Buffalo, Buffalo, New York
- 2014 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Microbiology, University of Alabama at Birmingham, Birmingham, Alabama
- 2014 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Molecular Microbiology, Washington University, St Louis, Missouri
- 2014 “Consequences of host-pathogen interactions on UPEC persistence and disease sequelae” Department of Microbiology and Immunology, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma
- 2015 “Intracellular bacterial communities: Implications and approaches for management of UTI” Surgical Grand Rounds, University of California, Los Angeles, Los Angeles, California

MENTORED TRAINEES

High School Students

- 2011 Ravi “Mayruan” Ravindran
Upper Arlington High School
- 2011 Young Summer Scientist
 - 2011 National Merit semifinalist
- 2012-2014 Jingwen “Kathy” Zhang
Thomas Worthington High School
- 2012 International Intel Science Fair Finalist
- 2014 Faith White
Chaminade Julianne Catholic High School

Undergraduate Students

- 2007-2010 Travis Casper
Computer Sciences
The Ohio State University
- 2011-2013 Cory Kozlovich
Biology
Miami University
- 2011 Miami of Ohio Research Enrichment
 - 2012 Miami of Ohio Research Enrichment

CURRICULUM VITAE

Medical Fellows

- 2009-2010 Douglas Storm
Pediatric Urology
Nationwide Children's Hospital
Currently a Pediatric Urology Surgeon, University of Iowa
- 2009 Recipient of award for the best presentation, 57th James C. Kimbrough Urological Seminar
 - 2010 Finalist for best presentation , AAP National Conference
 - 2010 Selected from abstract for plenary presentation, AAP National Conference
- 2009-2011 Michael Bolton
Pediatric Infectious Disease
Nationwide Children's Hospital
Currently Section Chief, Pediatric Infectious Disease, Baton Rouge, Louisiana
- 2010 Finalist for poster competition, Research Institute at Nationwide Children's Research Day
 - 2010 Recipient of Travel Award, 28th Annual Meeting of the Infectious Diseases Society of America
 - Selected from abstracts for plenary presentation, 48th Annual Meeting of the Infectious Diseases Society of America
- 2010-2011 Ashay Patel
Pediatric Urology
Nationwide Children's Hospital
Currently a Pediatric Urology Surgeon, Little Rock, Arkansas
- 2011-2012 Chandra Singh
Pediatric Urology
Nationwide Children's Hospital
Currently Chief, Christian Medical College, India
- 2011-2013 Brian Becknell
Pediatric Nephrology
Nationwide Children's Hospital
Currently an Assistant Professor, Pediatric Nephrology, Nationwide Children's Hospital
- 2012 Recipient of Kenney Award for Best Presentation by a Fellow, Midwest Society for Pediatric Research
 - 2012 Selected from abstracts for a plenary presentation, Midwest Society for Pediatric Research
- 2012-2013 Ahmad Mohamed
Pediatric Urology
Nationwide Children's Hospital
Currently a surgeon at the University of Kentucky
- 2012-2014 Elizabeth Lucas
Pediatric Infectious Disease

CURRICULUM VITAE

Nationwide Children's Hospital

Currently a Staff Physician at Nationwide Children's Hospital

- 2012-2015 Thrasher Young Investigator Award
- 2012 Selected from abstracts for a plenary presentation, Midwest Society for Pediatric Research
- 2013 Selected from abstracts as "exemplary" to participate in Allan Yates Distinguished Research Scholars Panel, 12th Annual Research Day, The Ohio State University
- 2013 Selected for Presentation, 2013 Pediatric Academic Societies Annual Meeting
- 2013 Selected to Participate in the NIH NAIAD/IDSA Symposium
- 2014 Selected to Participate in the NIH NAIAD/IDSA Symposium

Medical Students

2009-2013

Blake Szelestey

Wright State University

- 2011 Selected from abstracts for plenary presentation, Center for Microbial Interface Biology Retreat
- 2012 Selected from abstracts for plenary presentation, Ohio Branch of the American Society for Microbiology

2013

Chloe Williams

Michigan State

- MSU Research Enhancement

Doctoral Students

2007-2011

Dennis Horvath, Jr.

Integrated Biomedical Sciences

The Ohio State University

Currently a Postdoctoral Fellow, Vanderbilt University

- 2009 Recipient of Travel Award for Best Poster Presentation, Imaging and Flow Cytometry Research Day Conference
- 2009 Selected from the abstracts for plenary presentation, Ohio Branch Meeting of the American Society for Microbiology
- 2011 Selected from the abstracts for plenary presentation, Ohio Branch Meeting of the American Society for Microbiology

2007-2011

Shareef Dabdoub

Biophysics

The Ohio State University

Currently a Postdoctoral Fellow, The Ohio State University

- 2009 Invited Presentation, Research Institute at Nationwide Children's Research Day
- 2009 Selected from the abstracts for plenary presentation, Ohio Branch Meeting of the American Society for Microbiology
- 2011 Selected from the abstracts for plenary presentation, Ohio Branch Meeting of the American Society for Microbiology
- 2011 Finalist for poster competition, Research Institute at Nationwide Children's Research Day
- Outstanding Graduate Student Award, The Ohio State University

CURRICULUM VITAE

2014- Present

Rachael Hardison

BioMedical Sciences Graduate Program

The Ohio State University

- 2014 Oral Presentation at the Annual Meeting of the Ohio Branch of the American Society for Microbiology
- 2014 Travel Award, The Research Institute Infectious Disease Consortium
- 2015 Research Award, The Research Institute Infectious Disease Consortium
- 2015 Travel Award, The Research Institute Trainee Association
- 2015 Travel Award, The Ohio State University Biofilm Trainee

Rotation Students

2007

Dennis J. Horvath, Jr (IBGP).

2007

Shareef Dabdoub (Biophysics)

2008

Mona Oden (Molecular, Cellular, and Developmental Biology)

2010

Elizabeth Patterson (IBGP)

2010

Kristen Greathouse (Nursing)

PROFESSIONAL MEMBERSHIPS & ACTIVITIES

1988- Present

Member, American Society of Microbiology

2011-Present

Member, Sigma Xi

Updated 6/17/2015