## Kayihura Manigaba, Pharm.D.; BCIDP

University of Florida College of Pharmacy Department of Pharmacotherapy and Translational Research E-mail: <u>kmanigaba@gmail.com</u>

### **Academic Credentials**

| 06/2012 – 05/2016 | University of Tennessee College of Pharmacy (UTCOP), Memphis, TN <b>Doctor of Pharmacy</b> , <i>Graduated with High Honors</i> |
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| 08/2008 – 05/2012 | Philander Smith College, Little Rock, AR<br>Bachelor of Science in Chemistry, Summa Cum Laude with Distinction                 |

#### **Post-graduate Education**

| 06/2017 – 06/2018 | Postgraduate Year Two (PGY2) Infectious Diseases Specialty         |
|-------------------|--|
|                   | Residency  |
|                   | American Society of Health-System Pharmacists (ASHP) Accredited    |
|                   | University of Florida (UF) Health Shands Hospital; Gainesville, FL |
|                   | Program Director: Veena Venugopalan, Pharm.D., BCPS, AQ-ID         |
|                   |  |

06/2016 – 06/2017 **Postgraduate Year One (PGY1) Pharmacy Residency** ASHP Accredited, UF Health Shands Hospital; Gainesville, FL Program Director: Carrie Lagasse, Pharm.D., BCPS

### **Professional Licensure and Certification**

- 07/2019 Present Board-Certified Infectious Diseases Pharmacist (BCIDP)
- 07/2016 Present Florida Pharmacy License #55047
- 05/2017 Teaching Certificate UF College of Pharmacy, Gainesville, FL
- 08/2013 American Pharmacists Association (APhA) Pharmacy Based Immunization Delivery Certificate

### **Professional Experience**

| 12/2021 – Present | <b>Clinical Pharmacist – Infectious Diseases</b><br>UF Health Shands Hospital, Gainesville, FL |
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| 12/2021 – Present | <b>Clinical Assistant Professor</b><br>UF College of Pharmacy, Gainesville, FL                 |
| 09/2016 – 12/2021 | <b>Clinical Assistant Professor (Courtesy)</b><br>UF College of Pharmacy, Gainesville, FL      |

| 08/2019 – 08/2021 | Clinical Pharmacy Manager<br>North Florida Regional Medical Center (NFRMC), Gainesville, FL               |
|-------------------|---|
| 12/2018 – 08/2019 | Advanced Clinical Pharmacist-Infectious Diseases<br>NFRMC, Gainesville, FL                                |
| 08/2018 – 11/2018 | Infectious Diseases Clinical Pharmacist<br>Jackson North Medical Center, Jackson Health System, Miami, FL |
| 07/2017 – 07/2018 | <b>Clinical Staff Pharmacist, Acute Care Surgery</b><br>UF Health Shands Hospital, Gainesville, FL        |
| 07/2016 - 06/2018 | Clinical Staff Pharmacist, Adult Medicine<br>UF Health Shands Hospital, Gainesville, FL                   |

# **Teaching Activities**

# University of Florida College of Pharmacy

| 12/2021 – Present | PHA5164L: 3PD Skills Lab<br>Module: Inpatient Rounding   |
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| 12/2021 – Present | PHA5166L: 2PD Skills Lab   |
| 12/2021 – Present | PHA5787C: Patient Care V Endocrinology and Reproductive<br>Module: Sexually Transmitted Infections   |
| 12/2021 – Present | <b>PHA5784C: Patient Care IV Gastrointestinal and Renal Disorders</b><br>Modules: Management of Intra-abdominal Infections<br>Communicating with patients when an error occurs |
| 07/2019 – Present | PHA5782C: Patient Care II Introduction to Infectious Diseases,<br>Hematology, and Oncology<br>Modules: Fosfomycin; Nitrofurantoin; Polymixin                                   |
| 12/2021 – Present | <b>APPE and Pharmacy Residents Preceptor</b><br>Infectious Diseases Rotation, UF Health Shands Hospital  |
| 04/2018           | PHA4933: Medications and Health<br>Module: Infections and Antibiotics  |
| 04/2018           | <b>PHA 5841: HIV Elective</b><br>Module: HIV Prevention: Post-Exposure Prophylaxis (PEP) and Pre-<br>exposure Prophylaxis (PrEP)   |
| 02/2018           | PHA4933: Medications and Health<br>Module: Sexually Transmitted Diseases (STD's) Instructor  |
| 11/2017           | PHA5788C Patient Care VI   |

**Capstone Facilitator** 

- 08/2017 **PHA5788C Patient Care VI** Module: Skin and Musculoskeletal Disorders: Viral Skin Infections
- 11/2016 **PHA5113: Personalized Medicine** Module: Pharmacogenomics Applications in Infectious Diseases
- 09/2019 08/2021 APPE Preceptor Hospital Practice Rotation. NFRMC, Gainesville, FL
- 07/2019 08/2021 Pharmacy Residents Preceptor Research Rotation NFRMC, Gainesville, FL
- 01/2019 08/2020 APPE and Pharmacy Residents Preceptor Infectious Diseases Rotation Infectious Diseases Rotation, NFRMC, Gainesville, FL
- 12/2017 Vancomycin Pharmacokinetic Consultation Training for Pharmacists Pharmacy Department. UF Health Shands Hospital, Gainesville, FL
- 10/2017 Skin Disorders Patient Case Teaching Assistant UF College of Pharmacy, Gainesville, FL
- 09/2017 06/2018 Infectious Diseases Rotation Preceptor (APPE and Residents) UF Health Shands Hospital, Gainesville, FL
- 09/2017 Pharmacokinetics Case Teaching Assistant UF College of Pharmacy, Gainesville, FL
- 08/2016 12/2016 **PHA5163L: Professional Skills lab III, Teaching Assistant** UF College of Pharmacy, Gainesville, FL

#### Publications

#### **Peer-Reviewed**

| 10/2023 | Alshaer MH, Williams R, Mousa MJ, et al. Cefepime Daily Exposure and<br>the Associated Impact on the Change in Sequential Organ Failure<br>Assessment Scores and Vasopressors Requirement in Critically III<br>Patients Using Repeated-Measures Mixed-Effect Modeling. Crit Care<br>Explor. 2023;5(11):e0993. Published 2023 Oct 27. |
|---------|--|
| 1/2023  | Alshaer, M. H., Maranchick, N., Alexander, K. M., <b>Manigaba, K</b> .,<br>Shoulders, B. R., Felton, T. W., Mathew, S. K., & Peloquin, C. A. (2023).<br>Beta-lactam target attainment and associated outcomes in patients with   |

bloodstream infections. International journal of antimicrobial agents, 61(3), 106727.

- 05/2022 Hernando, K., Waite, L., Bairagdar, N., **Manigaba, K**., Teelucksingh, K., Dunn, R., & Casiano-Colon, A. (2022). A waterfall of susceptibility results: impact of microbiology testing cascade for MDROs. Diagnostic microbiology and infectious disease, 104(1), 115731.
- 12/2021 Bairagdar N, Antigua A, Al-Said M, Barnett K, **Manigaba K.** A new frontier: navigating hospital pharmacy practice during the COVID-19 pandemic. Journal of Research in Pharmacy ; 25(6):823-827, 2021.
- 12/2020 **Manigaba K,** Hawks J, Kima M. Remdesvir-warfarin interaction: A case report. HCA Healthcare Journal of Medicine (2020) 1:COVID-19.
- 08/2020 **Manigaba K**, Gael M. COVID-19: The Culprit, the People and Lessons Learned. HCA Healthcare Journal of Medicine (2020) 1:4
- 12/2018 **Manigaba K**, Borgert SJ, Klinker KP, Cherabuddi K, Venugopalan V. SCAN: A novel approach for vancomycin time-out. Infect Control Hosp Epidemiol. 2018 Dec;39(12):1501-1503.
- 09/2018 Venugopalan V, **Manigaba K**, Borgert SJ, Cope J, Peloquin CA, Klinker KP. Training a Drug to Do New Tricks: Insights on Stability of Meropenem Administered as a Continuous Infusion. Microbiol Insights. 2018;11:1178636118804549.
- 04/2018 Kenneth L Wiley, Edward Treadwell, **Kayihura Manigaba**, Beverly Word, Jarren Oates, Beverly D Lyn-Cook. Modulation of Histone Deacetylases (HDACs) Expression in Patients with and without Systemic Lupus Erythematosus: Possible Drug Targets for Treatment. J Rheum Dis Treat 2018, 4:060
- 08/2017 Rybak JM, Dickens CM, Parker JE, Caudle KE, **Manigaba K**, Whaley SG, Nishimoto AT, Luna-Tapia A, Roy S, Zhang Q, Barker KS, Palmer GE, Sutter TR, Homayouni R, Wiederhold NP, Kelly SL, Rogers PD. Loss of C-5 sterol desaturase activity results in increased resistance to azole and echinocandin antifungals in a clinical isolate of *Candida parapsilosis*. Antimicrob Agents Chemother. 2017 Aug 24;61(9).
- 07/2015 Berkow EL, **Manigaba K**, Parker JE, Barker KS, Kelly SL, Rogers PD. Multidrug transporters and alterations in sterol biosynthesis contribute to azole antifungal resistance in *Candida parapsilosis*. Antimicrob Agents Chemother, 2015; 59(10):5942-50.
- 02/2013 Wiley KL, Treadwell E, **Manigaba K**, Word B, Lyn-Cook BD. Ethnic differences in DNA methyltransferases expression in patients with systemic lupus erythematosus. J of clin immunol, 2013; 33 (2): 342-8.

## **Book Chapter**

Antimicrobial Stewardship and Resistance in Low- and Middle-Income Countries. IDSAP 2023 Book 2 • Global Public Health Issues.

#### Newsletter

Manigaba, Kayihura; Hahirwa, Innocent; Bitunga, Leopold; Jean Bosco Munyemana; Inkindi, Anaclet; Venugopalam, Veena. Implementing Antimicrobial Stewardship in Sub-Saharan Africa: Challenges, Progress, and Solutions. Practice Report 2023. ACCP Global Health PRN

#### **Poster Presentations**

| 5/2023  | Manigaba K, Hahirwa I, Bitunga L, Munyemana JB, Inkindi A,<br>Venugopalan V. International Virtual Mentorship and Multidisciplinary<br>Collaboration: Advancing Antimicrobial Stewardship in Rwanda. MAD-ID.<br>Orlando, FL.  |
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| 5/2021  | Bairagdar, Nora; Hernando, Kathryn; <b>Manigaba, Kayihura</b> ; Cintron,<br>Cristobal; Kima, Marie; Thomas, Sanil; and Yancey, Robert, "Taking<br>Serious Threats Seriously: Successful Antimicrobial Stewardship<br>Interventions to Reduce Vancomycin-Resistant Enterococcus" (2021).<br>North Florida Division Research Day 2021. 2. |
| 12/2020 | Waite L, Hernando K, <b>Manigaba K</b> , Bairagdar N, et al. Impact of microbiology testing cascade on time to susceptibility result for multi-drug resistant organisms. ASHP 2020 Midyear Clinical Meeting and Exhibition Poster Session.  |
| 12/2020 | Tang A, Cheng J, Bairagdar N, Huelsman A, Hiruy A, <b>Manigaba K.</b><br>Evaluating the impact of procalcitonin turnaround time on<br>antimicrobial de-escalation. ASHP 2020 Midyear Clinical Meeting and<br>Exhibition Poster Session.   |
| 12/2020 | Hayley C, Hernando K, <b>Manigaba K,</b> Bairagdar N. Impact of mandatory<br>stop dates and indication documentation on duration of antibiotic<br>treatment in hospitalized adults with bacterial pneumonia. ASHP<br>2020 Midyear Clinical Meeting and Exhibition Poster Session.   |
| 12/2020 | Cheng J, Scalera S, Bairagdar N, Haver C, <b>Manigaba K.</b> Student pharmacists' role in improving IV to PO conversion rates for antibiotics. ASHP 2020 Midyear Clinical Meeting and Exhibition Poster Session.  |
| 12/2020 | Simpson S, Woodberry K, <b>Manigaba K.</b> Clinical Outcomes and Cost-<br>Analysis of Prothrombin Complex Concentrate (Human) at a Community<br>Hospital. ASHP 2020 Midyear Clinical Meeting and Exhibition Poster<br>Session.  |

|         | series analyzing for a potential drug-drug interaction. ASHP 2020<br>Midyear Clinical Meeting and Exhibition Poster Session.  |
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| 12/2019 | Yum D, Gagne D, Ellis H, <b>Manigaba K.</b> Impact of negative methicillin-<br>resistant Staphylococcus aureus (MRSA) nasal swab on total duration of<br>MRSA therapy for pneumonia patients. ASHP 2019 Midyear Clinical<br>Meeting and Exhibition Poster Session. Las Vegas, NV  |
| 12/2019 | Haddad H, Hernando K, <b>Manigaba K</b> , Antigua A. Impact of required<br>antibiotic stop dates and indications on length of treatment in hospitalized<br>patients with pneumonia. ASHP 2019 Midyear Clinical Meeting and<br>Exhibition Poster Session. Las Vegas, NV.   |
| 05/2018 | <b>Manigaba K</b> , Venugopalan V, Cope J, Borgert S, Peloquin C, Klinker K.<br>Utilization of Beta-Lactam Therapeutic Drug Monitoring to Support<br>Continuous Infusion Meropenem. Making a Difference in Infectious<br>Diseases (MAD-ID) Poster Session. Orlando, FL  |
| 05/2017 | <b>Manigaba K</b> , Ashton J, Venugopalan V, Cope J. A single center comparison of oxacillin 10 g versus 12 g continuous IV infusion in methicillin-susceptible <i>Staphylococcus aureus</i> endocarditis. Making a Difference in Infectious Diseases (MAD-ID) Poster Session. Orlando, FL  |
| 12/2016 | <b>Manigaba K</b> , Ashton J, Venugopalan V, Cope J. Methicillin-susceptible<br>Staphylococcus aureus endocarditis: a single center review of oxacillin<br>dosing strategies. Vizient Poster Session. Las Vegas, NV   |
| 12/2015 | <b>Manigaba K</b> , Behbahani Y, Marilyn L, Spiceland E. Evaluation of accuracy of home medication lists as part of a nonpharmacy-based medication reconciliation program. ASHP 2015 Midyear Clinical Meeting and Exhibition Poster Session. New Orleans, LA  |
| 10/2015 | Rybak JM, <b>Manigaba K</b> , Berkow EL, Parker JE, Kelly SL, Rogers PD,<br>Molecular Mechanisms of Azole Resistance (AR) in Clinical Isolates of<br><i>Candida tropicalis.</i> American College of Clinical Pharmacy (ACCP) Global<br>Conference on Clinical Pharmacy Poster Session. San Francisco, CA  |
| 09/2015 | Rybak JM, <b>Manigaba K</b> , Berkow EL, Parker JE, Kelly SL, Rogers PD,<br>Molecular Mechanisms of Fluconazole (FLC) Resistance (FR) in Clinical<br>Isolates of <i>Candida tropicalis (Ct)</i> Joint Interscience Conference on<br>Antimicrobial Agents and Chemotherapy and International Congress of<br>Chemotherapy (ICAAC/ICC) Poster Session. San Diego, CA |
| 10/2014 | <b>Manigaba K</b> , Berkov EL, Rogers PD. The role of Mdr1 in azole resistance in clinical isolates of <i>Candida parapsilosis.</i> ACCP Annual Meeting Poster Session. Austin, TX  |
| 03/2014 | Berkow EL, <b>Manigaba K</b> , Wanamaker E, Barker KS, Caudle KE, Rogers PD. Molecular Mechanisms of Multidrug Resistance in <i>Candida</i>   |

*parapsilosis.* American Society for Microbiology (ASM) Candida Meeting Poster Session. New Orleans, LA

#### Other Research Experience

| 07/2019 – 08/2021 | North Florida Regional Medical Center, Gainesville, FL<br>Pharmacy residency program research coordinator   |
|-------------------|---|
| 07/2016 – 06/2018 | <b>UF Health Shands Hospital, Gainesville, FL</b><br>Longitudinal Residency research projects.  |
| 07/2012 – 05/2016 | <b>University of Tennessee Health Science Center, Memphis, TN</b><br>Senior Advisor: P. David Rogers, Pharm.D., Ph.D., FCCP<br>Work aimed to explain the azole and echinocandin resistant phenotype<br>observed in <i>Candida</i> species.  |
| 11/2009 –11/2011  | Food and Drug Administration (FDA)<br>National Center for Toxicological Research (NCTR), Jefferson, AR<br>Senior Advisor: Beverly Lyn-Cook, Ph.D.<br>Projects included studying sex/gender differences in drug safety and<br>efficacy related to polymorphisms in ATP-Binding Cassette (ABC)<br>transporter ABCC1 and evaluation of the role of epigenetics in lupus<br>patients. |

### **International Collaboration**

2023 Initiated a collaborative partnership between the University of Rwanda and the University of Florida to enhance antimicrobial stewardship in Rwanda.

## Leadership & Extracurricular Activities

| 12/2021- Present  | Scholarship committee, UF College of Pharmacy  |
|-------------------|--|
| 12/2021- Present  | Anti-infective Subcommittee (AIS) Member, UF Health Shands Hospital                        |
| 12/2021– Present  | Diversity, Inclusion, and Health Equity (DIHE) Committee Member, UF<br>College of Pharmacy |
| 12/2021 – Present | Institutional Review Board (IRB) Committee Member, UF                                      |
| 08/2019 – 08/2021 | Pharmacy and Therapeutics (P&T) Secretary, NFRMC   |
| 08/2019 – 08/2021 | Policy and Procedure Committee Member, NFRMC   |
| 01/2019 – 07/2020 | Antimicrobial Stewardship Program Committee Chair, NFRMC                                   |
|                   |  |

| 01/2019 – 08/2021 | Graduate Medical Education Research Advisory Committee Member,<br>NFRMC       |
|-------------------|---|
| 01/2019 - 08/2021 | Pharmacy Residency Advisory Committee Member, NFRMC                           |
| 08/2018 - 11/2018 | P&T Member, Jackson North Medical Center                                      |
| 07/2017 – 06/2018 | Antimicrobial Pharmacokinetics Service Coordinator, UF Shands Hospital        |
| 07/2016 - 06/2017 | Education Committee Coordinator, UF Health Shands Hospital                    |
| 07/2016 – 06/2017 | Nursing and Pharmacy Operations Committee Member<br>UF Health Shands Hospital |

## Awards & Honors

| 2023 | Excellence in Teaching, University of Florida College of Pharmacy                         |
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| 2023 | Best storyteller award, University of Florida College of Pharmacy                         |
| 2022 | Excellence in Teaching, University of Florida College of Pharmacy                         |
| 2022 | Best storyteller award, University of Florida College of Pharmacy                         |
| 2016 | Excellence in Research and Scholarship Award, University of Tennessee College of Pharmacy |
| 2011 | Honor Medal, U.S Food and Drug Administration (FDA)                                       |

## **Professional Memberships**

| 2015 – Present | American Society of Health-System Pharmacists (ASHP) |
|----------------|--|
| 2015 – Present | Rho Chi Pharmacy Honor Society                       |
| 2014 – Present | American College of Clinical Pharmacy (ACCP)         |
| 2012 – Present | Phi Delta Chi Pharmacy Fraternity (PDC)              |