

Michael T. Kenes, PHARM.D., BCPS, BCCCP

PERSONAL

PRESENT TITLES

Clinical Assistant Professor February 2020 – Present
Department of Clinical Pharmacy, College of Pharmacy
University of Michigan, Ann Arbor, MI

Medical Intensive Care Unit Clinical Pharmacy Specialist February 2020 – Present
Michigan Medicine
Ann Arbor, MI

ADDRESS

OFFICE ADDRESS:

University of Michigan College of Pharmacy
428 Church Street
Ann Arbor, MI 48109
mkenes@med.umich.edu

CITIZENSHIP

United States

EDUCATION

UNDERGRADUATE STUDIES

University of Illinois Chicago August 2007 – May 2009
Chicago, IL

GRADUATE STUDIES

Doctor of Pharmacy August 2009 – May 2013
University of Illinois Chicago
Chicago, IL

POST GRADUATE PHARMACY EDUCATION

PGY-1 PHARMACY PRACTICE RESIDENCY June 2013 – June 2014
ASHP Accredited
Cleveland Clinic
Cleveland, OH
Residency Director: Katie Greenlee, Pharm.D., BCPS (AQ-Cardiology)

PGY-2 CRITICAL CARE PHARMACY RESIDENCY

ASHP Accredited July 2014 – July 2015
Vanderbilt University Medical Center
Nashville, TN
Residency Director: Susan Hamblin, Pharm.D., FCCM, BCPS, BCCCP

APPOINTMENTS

PRESENT

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| Clinical Assistant Professor Department of Clinical Pharmacy, College of Pharmacy University of Michigan, Ann Arbor, MI | February 2020 – Present |
| Medical Intensive Care Unit Clinical Pharmacy Specialist Michigan Medicine Ann Arbor, MI | February 2020 – Present |

PAST

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| Medical Intensive Care Unit Clinical Pharmacy Specialist Wake Forest Baptist Health Winston Salem, NC | August 2015 – December 2019 |
| ICU Recovery Clinic Pharmacist Wake Forest Baptist Health Winston Salem, NC | August 2015 – December 2019 |
| Institutional Review Board (IRB) Voting Member Wake Forest Baptist Health Winston Salem, NC | January 2016 – December 2019 |
| PGY2 Critical Care Pharmacy Residency Program Coordinator Wake Forest Baptist Health Winston Salem, NC Residents Graduated: 2016-2017 Josh Arnold, 2017-2018 Liz Kowalik, 2018-2019 Kate Summers | July 2016 – December 2019 |
| Adjunct Clinical Assistant Professor College of Pharmacy, Belmont University Nashville, TN | August 2014 – June 2015 |

COMMITTEE ACTIVITIES

University

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|---|------------------------|
| University of Michigan College of Pharmacy Curriculum and Assessment, Therapeutics Subcommittee | January 2021 – Present |
| University of Michigan College of Pharmacy Faculty Development Committee | July 2020 – Present |

HOSPITAL

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|---|---------------------------|
| Michigan Medicine Post-Arrest Management Committee | January 2021 – Present |
| Michigan Medicine Sepsis Transitions of Care Committee | November 2020 – Present |
| Michigan Medicine Critical Care Steering Committee | February 2020 – Present |
| Michigan Medicine Critical Care Medicine Unit Interdisciplinary Quality Improvement Committee | February 2020 – Present |
| Michigan Medicine Interdisciplinary Delirium Committee | February 2020 – Present |
| Michigan Medicine Regional Infectious Containment Unit Interdisciplinary Committee | February 2020 – June 2020 |

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|---|------------------------------|
| Wake Forest Baptist Health Institutional Sepsis Prevention and Treatment Committee | January 2018 – December 2019 |
| Wake Forest Baptist Health Multidisciplinary Medical ICU Research Committee | January 2016 – December 2019 |
| Wake Forest Baptist Health Anticoagulation Management Pharmacy and Therapeutics Committee | August 2015 – December 2019 |
| Wake Forest Baptist Health Anticoagulant Reversal Sub-Committee | August 2015 – December 2019 |
| Vanderbilt University Medical Center Institutional Critical Care Committee | July 2014 – June 2015 |
| Vanderbilt University Medical Center Surgical Critical Care Quality Improvement Committee | July 2014 – June 2015 |

DEPARTMENT

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| Wake Forest Baptist Health Pharmacy Patient Care Needs Assessment Steering Committee | July 2018 – December 2019 |
| Wake Forest Baptist Health Institutional Sepsis Prevention and Treatment Committee | January 2018 – December 2019 |
| Wake Forest Baptist Health Pharmacy-to-Dose Medication Committee | July 2016 – December 2019 |
| Wake Forest Baptist Health Pharmacy Research Committee | August 2015 – December 2019 |
| - Chair | July 2018 – December 2019 |
| Wake Forest Baptist Health PGY-2 Critical Care Residency Advisory Committee | August 2015 – December 2019 |
| Wake Forest Baptist Health Code Response Education Workshop Committee | August 2015 – December 2019 |

SPECIALTY AND SUBSPECIALTY CERTIFICATIONS

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| Board Certified Pharmacotherapy Specialist | January 2015 – Present |
| Board Certified Critical Care Pharmacy Specialist | January 2017 – Present |

ELECTIVE CERTIFICATIONS

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| Fundamentals of Critical Care Support | July 2015 |
| Advanced Cardiac Life Support | February 2014 – Present |

LICENSURE

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| Ohio Licensed Pharmacist, License Number RPH.03232773-2 | July 2013 – Present |
| Michigan Licensed Pharmacist, License Number 5302412351 | January 2020 – Present |

PROFESSIONAL SOCIETY MEMBERSHIPS

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|---|---|
| American College of Clinical Pharmacy Critical Care Practice Related Network | July 2013 – Present |
| Society of Critical Care Medicine Clinical Pharmacy and Pharmacology Section Research Section | April 2014 – Present April 2014 – Present 2016 –Present |
| American Society of Health-System Pharmacists | August 2013 – December 2016 |
| <i>Phi Lambda Sigma</i> Pharmacy Leadership Society – <i>Alpha Iota</i> Chapter | May 2011 - Present |
| <i>Phi Delta Chi</i> Professional Pharmacy Fraternity – <i>Alpha Sigma</i> Chapter | October 2009 - Present |

PROFESSIONAL SOCIETY ACTIVITIES

COMMITTEES

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| American College of Clinical Pharmacy, Critical Care Practice Related Network Member Scholarship Review Committee Recognition Committee | August 2020 – Present November 2019 – Present |
| Society of Critical Care Medicine, THRIVE Initiative | February 2018 – February 2020 |
| Society of Critical Care Medicine, Research Section Simulation Education Sub-Committee | January 2018 – Present |
| American College of Clinical Pharmacy Standard Setting Committee Member, Critical Care Self-Assessment Program (CCSAP) | January 2018 – Present |
| Society of Critical Care Medicine, Clinical Pharmacist and Pharmacology Section Membership Committee Communications Committee | January 2015 – Present January 2015 – Present |

OFFICES

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| American College of Clinical Pharmacy, Critical Care Practice Related Network Vice-Chair/Chair-Elect; Member Scholarship Review Committee | October 2021 – Present |
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Didactic Teaching

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| University of Michigan College of Pharmacy Course Coordinator, P702 Therapeutics, P3 year | January 2021 – Present |
| Lecturer, P702 Therapeutics, P3 year Quantification of Renal Function Renal Replacement Therapy Chronic Kidney Disease Acute Kidney Injury and Drug-Induced Nephropathies Fluid Therapies Acid-Base Sodium and Potassium Disorders Calcium, Magnesium, and Phosphorus Disorders | January 2020 – Present |

PROFESSIONAL SERVICE AND COMMUNITY WORK

CLINICAL PERFORMANCE IMPROVEMENT PROJECTS

Medication Use Evaluations

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| New Requirement of Insulin Use Post-Discharge in Critically Ill COVID-19 Survivors (student advisor) | 2021 |
| Compliance with Medication Treatment Recommendations for Decompensated Cirrhotic Patients (student advisor) | 2021 |
| Cisatracurium Dosing Requirements in COVID-19 Compared to non-COVID-19 Patients (resident advisor) | 2020 |
| Vasopressin Utilization in the Medical ICU (resident advisor) | 2018 |
| Obtainment of Respiratory Cultures in Patients Treated for Pneumonia (resident advisor) | 2018 |
| Diagnosis and Treatment of Heparin-Induced Thrombocytopenia (student advisor) | 2017 |
| Dexamethasone Use in Bacterial Meningitis (student advisor) | 2017 |
| Effect of Scheduled Acetaminophen on Intravenous Opioid Use in Trauma Patients | 2014 |

Protocol and Orderset Development

Michigan Medicine

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| Care of the Critically Ill COVID-19 Patient Treatment Protocol | 2020 |
| Albumin Treatment Protocol | 2020 |

Wake Forest Baptist Health

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| Pharmacy Department Residency Research Protocol | 2018 |
| Peripheral Vasopressor Administration Protocol | 2018 |
| ICU Pain, Agitation and Delirium Orderset | 2017 |
| ICU Deep Sedation and Paralysis Orderset | 2017 |
| Calcium Channel Blocker Overdose Orderset | 2017 |
| Diabetic Ketoacidosis Treatment Orderset | 2017 |
| Heparin-Induced Thrombocytopenia Orderset and Guideline | 2017 |
| Citrate Anticoagulation for Renal Replacement Therapies Guideline and Protocol | 2016 |
| Anticoagulant Reversal Orderset and Guideline | 2016 |

Vanderbilt University Medical Center

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| Burn ICU High Dose Vitamin C for Resuscitation Protocol | 2015 |
| Surgical ICU Insulin Transition Protocol | 2015 |

Drug Monograph Preparation and Review

Wake Forest Baptist Health

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| Revefenacin | 2019 |
| Clevidipine | 2017 |
| Andexanet Alpha | 2017 |
| Angiotensin II | 2016 |

Vanderbilt University Medical Center

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| Peramivir | 2015 |
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Cleveland Clinic

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| Melatonin | 2014 |
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Professional Service

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| COVID-19 Colleague Connect (24/7 clinical care support line for COVID-19 care in state of Michigan) Pharmacist Team Member. Funded by Blue Cross Blue Shield – Michigan | 2020 – Present |
| Board of Pharmacy Specialties Standard Setting Committee, Board Certified Critical Care Pharmacist Exam | 2019 |
| Item writer, Board Certified Critical Care Pharmacist Exam | 2019 |
| National Association of Boards of Pharmacy Item writer, North American Pharmacist Licensure Examination (NAPLEX) | 2015 – Present |

EDITORIAL AND REVIEW ACTIVITIES

PERIODICALS

American Journal of Health-System Pharmacy

Anesthesia & Analgesia

Critical Care Medicine

Hospital Pharmacy

Journal of Critical Care

Journal of Hospital Medicine

Journal of Pharmacy Practice

Pharmacotherapy

PROFESSIONAL ORGANIZATION MEETINGS

Society of Critical Care Medicine, Annual Congress Abstract Reviewer 2015 – Present

OTHER REVIEW ACTIVITIES

“Shock Syndromes 1: Introductory, Vasodilatory, and Sepsis” Chapter 2020, 2021
Critical Care Pharmacy Preparatory Review and Recertification Course
American College of Clinical Pharmacy

PROFESSIONAL INVITATIONS

INVITED LECTURES

(LOCAL HOSPITAL AUDIENCE LECTURES NOT INCLUDED)

National/International

The METRICS Framework in Critical Care Simulation as a Guide to Career Advancement
51st Critical Care Conference, SCCM February 2022
Virtual Meeting

Role of the Pharmacist in ICU Follow-up Clinics
9th Annual Johns Hopkins Critical Care Rehabilitation Conference November 2020
Baltimore, MD

Post-Market Adverse Event Reporting at the Food and Drug Administration
Office of the Commissioner and FDA Center Directors March 2013
Silver Spring, MD

The Correlation between Ketamine and Posttraumatic Stress Disorder in Burned Service Members
American Burn Association: Pharmacy Interest Group January 2013

Invited Academic

“Sedation in the ICU” April 2021
Continuing Nursing Education presentation to Critical Care Nursing Section
Michigan Medicine, University of Michigan, Ann Arbor, MI

“Medication Clinical Pearls: Preparing for Intern Year”
Wake Forest University College of Medicine, Winston Salem, NC
Estimated 145 students

April 2017, April 2018, April 2019

“Anemia of Critical Illness and Blood Conservation”
Belmont University College of Pharmacy, Critical Care Elective
Nashville, TN
Estimated 30 students

November 2014

“Septic Shock”
Belmont University College of Pharmacy, Critical Care Elective
Nashville, TN
Estimated 30 students

October 2014

“Shock States and Hemodynamic Support”
Belmont University College of Pharmacy, Critical Care Elective
Nashville, TN
Estimated 30 students

September 2014

“Agitation and Delirium”
Belmont University College of Pharmacy, Critical Care Elective
Nashville, TN
Estimated 30 students

September 2014

HONORS

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| <i>Phi Delta Chi</i> Faculty Teaching Appreciation Award, P3 Class of 2022 | 2021 |
| Preceptor of the Year. Pharmacy Department, Wake Forest Baptist Health | 2018 |
| Presidential Citation, Society of Critical Care Medicine | 2016 |
| Chancellor’s Student Service and Leadership Award, University of Illinois Chicago | 2009 – 2013 |
| Excellence in Public Health Pharmacy Practice Award, United States Public Health Service | 2012 |
| Citation Award, United States Public Health Service | 2011 |
| Eagle Scout Award, Boy Scouts of America | 2007 |

CHAPTERS

1. **Kenes MT**, Farina N. Fungal Infections in the Intensive Care Unit. In Flannery AH, Hall Zimmerman L, eds. Critical Care Self-Assessment Program, 2022 Book II. Infectious Diseases in the ICU. Lenexa, KS: American College of Clinical Pharmacy, 2022. *In Draft*.
2. Bliss S, **Kenes MT**. Nutrition Support Services. In Boucher BA, Haas CE, eds. Critical Care Self-Assessment Program, 2018 Book III. Fluids and Nutrition/GI and Liver Disorders. Lenexa, KS: American College of Clinical Pharmacy, 2018: 48-72.

PEER REVIEWED

1. Mohammad RA, Nguyen CT, Costello, *et al.* (#10) Medication Changes and Diagnosis of New Chronic Illnesses in COVID-19 Intensive Care Unit Survivors. *Ann Pharmacother.* 2022. (in press).
2. Parker AM, Brigham E, Connolly B, *et al.* (#6) Addressing the Post-Acute Sequelae of SARS-CoV-2 Infections: A Multidisciplinary Model of Care. *Lancet Respir Med.* 2021. (in press).
3. Ingebrigtsen M, Farina N, Miller J, Renius K, McSparron JI, **Kenes MT.** Cisatracurium Dosing Requirements in COVID-19 Compared to Non-COVID-19 Patients. *J Pharm Pract.* 2021. (in press).
4. Harwayne-Gidansky I, Zurca A, Maa T, *et al.* (#9) Defining Priority Areas for Critical Care Simulation: A Modified Delphi Consensus Project. *Cureus.* 2021;13(6):e15844.
5. Pun BT, Badenes R, Heras La Calle G, *et al.* Prevalence and Risk Factors for Delirium in Critically Ill Patients with COVID-19 (COVID-D): A Multicenter Cohort Study. *Lancet Respir Med.* 2020;9(3):239-250.
6. **Kenes MT,** McSparron JI, Marshall VD, *et al.* Propofol-Associated Hypertriglyceridemia in Coronavirus Disease 2019 Versus Noncoronavirus Disease 2019 Acute Respiratory Distress Syndrome. *Crit Care Explor.* 2020;2(12):e0303.
7. Cagino LM, Kercheval JB, **Kenes MT,** *et al.* Association of Tracheostomy with Changes in Sedation During COVID-19: A Quality Improvement Evaluation at the University of Michigan. *Ann Am Thorac Soc.* 2020;18(5):907-9.
8. Goad NT, Bakhru RN, Pirkle JL, **Kenes MT.** Association of Hyperchloremia with Unfavorable Clinical Outcomes in Adults with Diabetic Ketoacidosis. *J Intensive Care Med* 2020;35(11):1307-13.
9. Roberts RJ, Miano TA, Hammond DA, *et al.* (#29). Evaluation of Vasopressor Exposure and Mortality in Patients With Septic Shock. *Crit Care Med.* 2020;48(10):1445-53.
10. Chen JT, Roberts R, Fazzari MJ *et al.* (#27). Variation in Fluid and Vasopressor Use in Shock With and Without Physiologic Assessment: A Multicenter Observational Study. *Crit Care Med.* 2020;48(10):1436-44.
11. Mohammad RM, Betthausen KD, Boostaver KR, *et al.* (#8) Clinical Pharmacist Services within Intensive Care Unit Recovery Clinics: An Opinion of the Critical Care Practice and Research Network of the American College of Clinical Pharmacy. *J Am Coll Clin Pharm.* 2020 [article in press].
12. Stringer KA, Puskarich MA, **Kenes MT,** Dickson RP. COVID-19: The Uninvited Guest in the Intensive Care Unit - Implications for Pharmacotherapy. *Pharmacotherapy.* 2020 May;40(5):382-386.
13. Coe AB, Boostaver RE, Fritschle AC, *et al.* (#4) Pharmacists' Perceptions on their Roles, Activities, Facilitators, and Barriers to Practicing in a Post-Intensive Care Recovery Clinic. *Hospital Pharmacy* 2020 Apr;55(2):119-125.
14. Bakhru RN, Davidson JF, Bookstaver RE, *et al.* (#4) Implementation of an ICU Recovery Clinic at a Tertiary Care Academic Center. *Crit Care Expl* 2019;1(8):e0034.
15. Haines KJ, McPeake J, Hibbert E, *et al.* (#19) Key Mechanisms by which Post-ICU Activities can Improve In-ICU Care: Results of the International THRIVE Collaboratives. *ICM* 2019;47(9):1194-1200.
16. Haines KJ, Sevin CM, Hibbert E, *et al.* (#18) Enablers and Barriers to Implementing ICU Follow-up Clinics and Peer Support Groups Following Critical Illness: The Thrive Collaboratives. *Crit Care Med* 2019;45(7):939-47.
17. Lat I, Daley MJ, Shewale A, *et al.* A Multicenter, Prospective, Observational Study to Determine Predictive Factors for Multidrug Resistant Pneumonia in Critically Ill Adults: The DEFINE Study. *Pharmacotherapy* 2018;39(3):253-60.
18. Bakhru RN, Davidson JF, Bookstaver RE, *et al.* (#4) Physical Function Impairment in Survivors of Critical Illness in an ICU Recovery Clinic. *J Crit Care* 2018;45:163-9.
19. **Kenes MT,** Stollings JL, Wang L, Ely EW, Girard TD, Pandharipande PP. Persistence of Delirium after Cessation of Sedative and Analgesics and Impact on Clinical Outcomes in Critically Ill Patients. *Pharmacotherapy* 2017;37(11):1357-65.
20. **Kenes MT,** Leonard MC, Bauer SR, Wyman MJ. Comparison of Liposomal Bupivacaine and Elastomeric Continuous Infusion Bupivacaine Pump for the Treatment of Post-Operative Pain. *Am J Health Syst Pharm* 2015;72:S127-32.

NON-PEER REVIEWED

21. Summers KL, Mihm AE, **Kenes MT.** Direct Oral Factor Xa Inhibitors in Patients with Morbid Obesity. *Lancet Haematology* 2019;6(9):e446.

CASE REPORTS REVIEWED

22. **Kenés MT**, Hamblin S, Tumuluri S, Guillaumondegui O. Syndrome of Inappropriate Antidiuretic Hormone in a Patient Receiving High-Dose Haloperidol and Quetiapine therapy. *J Neuropsychiatry Clin Neurosci*. 2016;28(2):e-29-e30.

ABSTRACTS

1. **Kenés MT**, Belford PM. *Anticoagulation Practices with Catheter-Directed Thrombolysis for Treatment of Pulmonary Embolism*. Society of Critical Care Medicine's 49th Critical Care Congress. Orlando, FL. February 2020
2. Mahmood S, Brooks A, Files DC, **Kenés MT**, Bookstaver R, Bakhrú R. *Evaluation of Pain in Post-ICU Clinic Patients*. Society of Critical Care Medicine's 49th Critical Care Congress. Orlando, FL. February 2020
3. Mahmood S, Feng X, McCullough G, Bode A, Files DC, **Kenés MT**, Bookstaver R, Bakhrú R. *Evaluation of Speech and Swallow Function in Post-ICU Clinic Patients*. Society of Critical Care Medicine's 49th Critical Care Congress. Orlando, FL. February 2020
4. McMoon, M, Files DC, LaRose M, Boostaver R, **Kenés MT**, Bakhrú R. *Perception of Quality of Life and Recovery Resource Availability in ICU Survivors*. Society of Critical Care Medicine's 49th Critical Care Congress. Orlando, FL. February 2020.
5. **Kenés MT**, Maxam M, Thomas K. *Respiratory Viral Infection Testing in Critically Ill Patients Diagnosed with Pneumonia*. Society of Critical Care Medicine's 48th Critical Care Congress. San Diego, CA. February 2019.
6. Goad NT, Pirkle J, Bakhrú R, **Kenés MT**. *Association of Hyperchloremia and Unfavorable Clinical Outcomes in Adults with Diabetic Ketoacidosis*. Society of Critical Care Medicine's 48th Critical Care Congress. San Diego, CA. February 2019.
 - Star Research Award
7. **Kenés MT**, Davidson J, Boostaver R, Watson M, Creech O, Files DC, Bakhrú R. *Characterization of Non-Attendance in an Intensive Care Unit Recovery Clinic*. Society of Critical Care Medicine's 46th Critical Care Congress. Honolulu, HI. January 2017.
8. **Kenés MT**, Stollings JL, Wang L, Ely EW, Girard TD, Pandharipande PP. *Persistence of Delirium after Cessation of Sedative and Analgesics and Impact on Clinical Outcomes in Critically Ill Patients*. Society of Critical Care Medicine's 45th Critical Care Congress. Orlando, FL. February 2016.
9. **Kenés MT**, Patel P, Jones W, Nelson G, Stollings J, Aronoff DA. *Treatment Outcomes of Clostridium difficile Infection in Neutropenic Adults*. IDWeek 2015. San Diego, CA. May 2015.
10. **Kenés MT**, Kahn S, Hamblin S, et al. *Effect of Scheduled Acetaminophen on Intravenous Opioid Use in Trauma Patients*. Society of Critical Care Medicine's 44th Critical Care Congress. January 2015.
11. **Kenés MT**, Leonard MC, Bauer SR, Wyman MJ. *Comparison of Liposomal Bupivacaine and Elastomeric Continuous Infusion Bupivacaine Pump for the Treatment of Post-Operative Pain*. American College of Clinical Pharmacy 2014 Annual Meeting. Encore Presentation. Austin, TX. October 2014.
12. **Kenés MT**, Leonard MC, Bauer SR, Wyman MJ. *Comparison of Liposomal Bupivacaine and Elastomeric Continuous Infusion Bupivacaine Pump for the Treatment of Post-Operative Pain*. American Society of Anesthesiology 2014 Annual Meeting. New Orleans, LA. October 2014.

RESEARCH GRANTS

PEER REVIEWED

1. Role: Other Significant Contributor; PIs: Robert Dickson, Michael Sjoding, Kathleen Stringer. NIH/NHLBI R01. (\$5,060,751). *The Role of the Microbiome in the Acute Respiratory Distress Syndrome: A Translational, Molecular Approach*. Submitted Fall 2021.

NON-PEER REVIEWED

1. Role: Co-Investigator (10% effort); PI: Jill Ohar. Investigator-Initiated, Unrestricted Research Grant. Boehringer Ingelheim. *Utilization of Peak Inspiratory Flow Rate in Chronic Obstructive Pulmonary Disease*. Funded 2019.
2. Role: Study Coordinator (no effort); PI: Jill Ohar. Investigator-Initiated Grant. Sunovion Pharmaceuticals Inc (\$604,026). *Preliminary Study for Comparison of Triple Nebulizer Therapy versus Dry Powdered Inhalers for Care Transitions in Chronic Obstructive Pulmonary Disease*. Funded 2017
3. Role: PI; Research Mentor: Joanna Stollings. Vanderbilt Institute for Clinical and Translational Research Grant for statistical support (\$5,000). *The Persistence of ICU Delirium after Cessation of Sedatives and Analgesics*. Vanderbilt University Medical Center. Funded 2015

Updated 1.18.2022