

Kathleen A. Stringer, PharmD, FCCP

CURRICULUM VITAE

PRIMARY POSITION: Professor of Clinical and Translational Pharmacy
Department of Clinical Pharmacy
College of Pharmacy
University of Michigan
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Ann Arbor, MI 48104
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Secondary Appointments:

October 2016- present Professor of Internal Medicine, Division of Pulmonary and Critical Care
Medicine, University of Michigan School of Medicine

January 2022- present Deputy Director, The Max Harry Weil Institute for Critical Care
Research & Innovation, University of Michigan School of Medicine

EDUCATION and TRAINING

July 1994-
June 1996 American Foundation for Pharmaceutical Education (AFPE)
Post-PharmD Fellow in Experimental Pulmonary Research
University of Colorado Health Sciences Center
Denver, CO 80262

July 1986-
August 1988 Post-graduate Fellowship in Cardiovascular Research
Clinical Pharmacokinetics Laboratory
Millard Fillmore Hospital
Buffalo, New York 14209

July 1985-
June 1986 Clinical Pharmacy Practice Resident
University of Illinois Hospital
Chicago, Illinois 60612

June 1985 Doctor of Pharmacy Degree
University of Michigan
College of Pharmacy

September 1984-
May 1985 Pharmacy Intern
University of Michigan Hospital
Ann Arbor, Michigan 48109

September 1979-
April 1981 Pre-Pharmacy Coursework
University of Michigan
College of Literature, Science, & Art

LICENSURE: Michigan License #5302026041 (active)

CERTIFICATES

and CERTIFICATIONS: Informatics and Statistics for Metabolomics
Canadian Bioinformatics Workshops, June 2011

Board Certified Pharmacotherapy Specialist, August 1992
Recertified, December 1999 and December 2006

Good Clinical Practice certified (basic course, CITI program)
February 2017, July 2021

FELLOWSHIPS: Elected Fellow, American College of Clinical Pharmacy (FCCP), May 1995

PROFESSIONAL EXPERIENCE and ACADEMIC APPOINTMENTS:

December 2023-present	Unit Ombud, College of Pharmacy, University of Michigan
April 2021-present	Member, Artificial Intelligence & Digital Health Innovation, University of Michigan
January 2018-present	Albert B. Prescott collegiate professorship, University of Michigan College of Pharmacy
November 2015-December 2021	Associate Director, Michigan Center for Integrative Research in Critical Care (MCIRCC) <i>now the Weil Institute</i> Department of Emergency Medicine, School of Medicine University of Michigan
July 2014-present	Director, the Nuclear Magnetic Resonance (NMR) Metabolomics Laboratory College of Pharmacy University of Michigan Ann Arbor, Michigan
July 2012-present	Professor of Clinical & Translational Pharmacy (with tenure) Department of Clinical Pharmacy College of Pharmacy University of Michigan Ann Arbor, Michigan
August 2011-present	Affiliate member, Center for Computational Medicine University of Michigan
July 2007-June 2012	Associate Professor of Clinical Pharmacy (with tenure) Department of Clinical, Social and Administrative Sciences College of Pharmacy University of Michigan Ann Arbor, Michigan
December 2007-present	Member, University of Michigan Comprehensive Cancer Center
July 2006-June 2007	Associate Professor of Clinical Pharmacy (with tenure) Department of Pharmaceutical Sciences School of Pharmacy University of Colorado Health Sciences Center Denver, Colorado

October 2003- June 2007	Associate Professor Graduate Program in Toxicology and Pharmaceutical Sciences Graduate School, University of Colorado Health Sciences Center
October 2003- June 2007	Associate Member Cancer Center University of Colorado Health Sciences Center
July 1997- June 2006	Associate Professor (with tenure) Department of Clinical Pharmacy School of Pharmacy University of Colorado Health Sciences Center
September 1988- June 1997	Assistant Professor School of Pharmacy University of Colorado Health Sciences Center
January 1984- September 1984	Research Assistant Department of Pharmacology University of Michigan Medical School Ann Arbor, Michigan 48109
May 1982- April 1984	Pharmacy Intern Sinai Hospital of Detroit Detroit, Michigan 48325

RESEARCH SUPPORT

R21 HL181071 (MPI: Stringer (contact), Sofer, Shapiro)	8/1/2025- 7/30/2027	3% effort
NIH/National Heart, Lung & Blood Institute <i>Genetically Linked Metabolites of Sepsis Severity & Mortality</i> This project will utilize biospecimens from the CLOVERS trial at NHLBI's BioLINCC to investigate genetically linked metabolites and sepsis outcomes.		
R35 GM136312 (PI: Stringer)	4/1/20- 1/31/30	38% effort
NIH/National Institute of General Medical Sciences <i>Translational Metabolomics in Critical Care (1/31/25-1/31/30)</i> \$2,193,360 (total costs) This Maximizing Investigators' Research Award (MIRA) proposes a translational metabolomics approach to study complex critical illnesses like sepsis. It also will utilize metabolomics to further understanding of the mechanisms that underpin adverse drug reactions.		
K08 AR083015 (PI: Bongers)	6/1/24- 5/31/29	mentor
NIH/National Institute of Arthritis and Musculoskeletal and Skin Diseases <i>The Role of the Gut Microbiome in Post-Sepsis Skeletal Muscle Atrophy</i> Dr. Bongers plans to interrogate the role of the gut microbiome in sepsis-induced skeletal muscle atrophy using <i>in vivo</i> and <i>in vitro</i> models.		
U01 UHL168308A (MPI: Dickson, Prescott, Hyzy)	5/1/23-4/30/29	2% effort
NIH/National Heart, Lung and Blood Institute <i>Great Lakes Clinical Center of the Acute Respiratory Distress Syndrome, Pneumonia and Sepsis (APS) Consortium</i> \$3,305,745 (total costs) The proposed Great Lakes Clinical Center (GLCC) of the ARDS, Pneumonia and Sepsis (APS) Consortium, consisting of the University of Michigan, Henry Ford Hospital, the University of Cincinnati, and the University of Chicago will screen, enroll, collect data and transport biospecimens on at least 1000 patients of this 5000-patient observational study over a 6-year period.		

- R01 CA277043 (PI: Hertz)** 1/1/23-12/31/27 2% effort
 NIH/National Cancer Institute
Development of an Integrated Risk Prediction Model of Taxane-induced Peripheral Neuropathy \$3,194,474 (total costs)
 This proposal seeks to test the hypothesis that physiologic and genetic biomarker candidates are predictive of taxane induced peripheral neuropathy (TIPN) and will enrich the proposed clinical TIPN prediction model.
- Massey Traumatic Brain Injury (TBI) Challenge (PI: Dickson, Tiba)**
 Weil Institute for Critical Care Research & Innovation 7/1/22-12/31/23 0% effort
Role of the Gut Microbiome in TBI Severity \$100,000 (total costs)
 This application proposes to assess TBI severity in swine following manipulation of the gut microbiome.
- R01 HL162659 (PI: O'Dwyer)** 8/15/22-7/31/26 2% effort
 NIH/National Heart Blood and Lung Institute
Gut Microbiota and Host Regulatory Cross-talk in Pulmonary Fibrosis
 This project aims to understand the relationship between the composition of the gut microbiota, signaling molecules in the blood such as short-chain fatty acids, and the development of pulmonary fibrosis.
- R56 HL155055 (PI: O'Dwyer)** 9/22/21-8/31/22 2% effort
 NIH/National Heart Blood and Lung Institute
Gut Microbiota and Host Regulatory Cross-talk in Pulmonary Fibrosis
 This project will generate additional preliminary data about the relationship between the composition of the gut microbiota, signaling molecules in the blood such as short-chain fatty acids, and the development of pulmonary fibrosis. These data will support a planned R01 re-submission.
- R21 AI154239 (PI: Ambroggio)** 4/1/21-3/31/23 consultant
 NIH/National Institute of Allergy & Infectious Disease
Metabolomic Prediction of Pneumonia Severity
 This application proposes to test the feasibility of a metabolomics approach to predicting pneumonia severity in children. The University of Michigan Metabolomics Laboratory will assay the urine samples for this project.
- 21-AAR00271 (PI: Hertz)** 7/1/21-3/31/23 5% effort
 American Cancer Society
Nutrient Insufficiency and Peripheral Neuropathy Risk \$750,000 (total costs)
 This study will utilize serum samples collected from a large cohort of breast cancer patients enrolled in a SWOG clinical trial of paclitaxel to assess metabolomics and vitamin D status.
- T32 HL007749 (PI: Dickson)** 7/1/21-6/30/26 mentor
 NIH/National Heart, Lung and Blood Institute
Multidisciplinary Training Program in Lung Disease
 This is a pulmonary training grant that uniquely offers trainees multi-disciplinary training opportunities in clinical and translational science.
- K23 HL51751 (PI: Labaki)** 7/1/19-6/30/24 mentor
 NIH/National Heart, Lung and Blood Institute
Leveraging Serum Metabolomics to Understand Clinical Phenotypes in COPD
 Dr. Labaki will leverage blood biospecimens collected from the SPIROMICS study to conduct and gain training in metabolomics and the clinical phenotyping of COPD.
- R01 GM127787 (PI: Rosania)** 1/20/19-11/30/23 10% effort (concurrent with R35)
 NIH/National Institute of General Medical Sciences
L-Carnitine as a Metabolic Biomarker of Drug Toxicity Risk \$2,047,712 (total costs)
 In this application, we hypothesize that intracellular accumulation of weakly basic small molecule drugs is associated with perturbations in mitochondrial function, predisposing individuals to idiosyncratic ADRs. One extracellular biomarker of mitochondrial function that could be used to pinpoint individuals at increased risk of drug-induced ADRs is L-carnitine.

Michigan Center for Clinical and Health-related Research Synergy Award 1% effort
Bridging the Translational Gap in Acute Respiratory Distress Syndrome (ARDS) with an Innovative Porcine Model 9/1/18-8/30/19 \$100,000

This award is aimed at developing a new and novel experimental model of ARDS that recapitulates the human condition. Furthermore, the project is designed as a team science project that will forge sustained collaborative relationships that are needed for the writing and submission of a large program project grant application.

K01 AI125413 (PI: Ambroggio) 3/1/17- 2/28/22 mentor
 NIH/National Institute of Allergy & Infectious Diseases
Metabolomics Evaluation of the Etiology of Pneumonia

The objective of this prospective cohort study is to determine distinct metabolite profile for major classes of pathogens that cause community-acquired pneumonia (CAP) in children (e.g., virus, typical and atypical bacteria). Urine and blood samples will be collected from children diagnosed with CAP in the Emergency Department or who are hospitalized at Cincinnati Children's Hospital Medical Center.

University of Mississippi Medical Center (PI: Puskarich) 7/1/17-6/30/18 0% effort
Advancing the metabolic phenotyping of sepsis patients through the integration of functional mitochondrial assessment, metabolomics, and mitochondrial proteomics

We will conduct the metabolomics assays and analysis on platelet and whole blood samples from the University of Mississippi as part of this collaborative project.

Massey Traumatic Brain Injury (TBI) Challenge (PI: Korley)
 Michigan Center for Integrated Research in Critical Care 7/1/17-6/30/18 0% effort
Identification of Pharmacodynamic Biomarkers for Optimizing TBI treatment studies \$120,000 (total costs)

This application proposes the use of an experimental model of TBI to identify small molecule and protein biomarker candidates of TBI severity.

American Thoracic Society Foundation (PI: Dickson) 12/30/16-12/29/18 1% effort
Bacterial Translocation in sepsis: a multifaceted molecular approach \$100,000 (total costs)

Existing serum samples collected from sepsis patients will be used to assay for specific bacterial metabolites and bacterial DNA in order to find a "bacterial footprint" in the blood of bacterial translocation.

R01 FD005393 (MPI: Stringer & Schumacher) 11/1/16-6/30/23 15% effort
 Food and Drug Administration \$2,000,000 (total costs)
IND119678 Phase II Safety & Efficacy of Inhaled Activase for Acute Plastic Bronchitis

This is a phase II clinical trial protocol to test the efficacy and safety of inhaled tissue plasminogen activator (tPA; Activase) in children with acute plastic bronchitis.

R01 GM111400 (PI: Stringer) 4/1/16-3/31/20 20% effort
 NIH/National Institute of General Medical Sciences \$1,204,516 (total costs)
L-Carnitine Pharmacometabolomics in Sepsis (CaPS)

This study will capitalize on the infrastructure of the phase II clinical trial of L-carnitine for sepsis in order to metabolically phenotype sepsis patients following metabolic provocation with carnitine.

University of Michigan Health System (UMHS)- Peking University Health Science Center (PUHSC) Joint Institute Research Award (PI: Standiford) 8/1/15-7/31/17 5% effort*

This is a collaborative project in which serum samples from both institutions will be assayed by NMR to generate metabolomics data. Samples from healthy controls and smokers with and without chronic obstructive pulmonary disease will be analyzed. *Funding covers per sample analytical costs that includes effort.

R01 GM103799-S1 (PI: Jones) 7/1/15-6/30/17 10% effort
 NIH/National Institute of General Medical Sciences \$113,943 (total costs)
Carnitine for the Treatment of Vasopressor Dependent Septic Shock

This is a phase II randomized clinical trial of carnitine efficacy and safety in septic shock. The supplement will fund the metabolomics assay of serum samples collected as part of the phase I trial in order to inform a targeted metabolomics approach for the phase III study.

- R01 GM069438-S1 (PI: Younger)** 6/1/13-12/31/15 10% effort
 Administrative Supplement
 NIH/National Institute of General Medicine Sciences \$152,415 (total costs)
Complement C5a in Human Sepsis- Metabolomics Supplement
 The goal of this project is to use novel assays of host bactericidal activity and C5a generation and to measure function in a subset of sepsis patients. The supplement request funds to support metabolomics assays to complete and elaborate these data.
- R01 MH082784-S3 (PI: Ellingrod)** 6/1/14-5/31/15 5% effort
 NIH/National Institute of Mental Health \$77,750 (total costs)
Antipsychotic and folate pharmacogenetics- Sex Differences Metabolomics Supplement
 The goal of this project is the genetically phenotype patients who respond and do not respond to folate supplementation and to characterize risk of metabolic syndrome. The supplement funds permits characterization of sex-differences in the metabolome.
- R01 MH082784-S2 (PI: Ellingrod)** 6/1/14-5/31/15 5% effort
 NIH/National Institute of Mental Health \$155,500 (total costs)
Antipsychotic and folate pharmacogenetics- Metabolomics Supplement
 The goal of this project is the genetically phenotype patients who respond and do not respond to folate supplementation and to characterize risk of metabolic syndrome. The supplement funds the metabolomics component of this work.
- Upjohn Award (PI: Stringer)** 1/01/14-12/31/14 \$50,000
 University of Michigan College of Pharmacy
Validation of potential differentiating metabolites of age-related DVT
 The goal of this project is twofold- first, to generate untargeted NMR metabolomics data to direct a targeted approach to metabolite biomarker discovery in DVT and second, to provide training in metabolomics to a post-doctorate.
- MCubed (Stringer, Standiford, Ellingrod)** 6/1/13-12/31/14 \$50,000
Macrophage-targeted Immunomodulatory Therapies for Lung Diseases
 This is a University of Michigan program that fosters collaboration among a diverse group (cube) of faculty to help drive innovative research. The funds support a post-doctorate.
- R01 HL095091 (PI: Wakefield)** 11/1/12-5/31/13 2.5% effort
 NIH/National Heart, Lung and Blood Institute \$6472 (sub-award)
Novel Therapeutic Targets for Venous Thromboembolism
 The goals of this application are to define the role of VWF in venous thrombosis, develop new aptamers to VWF and P-selectin, test these aptamers in models of venous thrombosis, and determined the clinical value of new biomarkers. The sub-award is aimed at generating metabolomics data to complement the clinical findings of the trial.
- T32 HL007749 (PI: Standiford/Dickson)** 7/1/13-6/30/25 mentor
 NIH/ National Heart, Lung and Blood Institute
Multidisciplinary Training Program in Lung Disease
 This is a pulmonary training grant that uniquely offers trainees multi-disciplinary training opportunities in clinical and translational science.
- R25 GM103798 (PI: Barnes)** 9/1/12-8/31/17 0% effort
 NIH/National Institute of General Medicine Sciences
 UAB Metabolomics Workshop: from Design to Decision
 This is a National Training Resource funded by NIGMS. The goal of this project is to provide an education and training venue in metabolomics to workshop participants.
- R01 GM078200 (PI: Rosania)** 7/1/12-6/30/16 5% effort
 NIH/National Institute of General Medicine Sciences \$1,847,000 (total costs)
Chemical Address Tags: A Cheminformatics & Image Data Management and Analysis Plan
 The goal of this project is to develop machine vision and image analysis tools to identify Chemical Address Tags by relating the chemical structure of small molecules to their subcellular localization as apparent in image data.

The Griese-Hutchinson Award (PI: Magdo)	5/1/12-4/31/13	0% effort
University of Michigan Congenital Heart Center		\$25,000 (total costs)
<i>Comparison of cell-mediated and humoral immunity in Fontan patients with protein-losing enteropathy and plastic bronchitis, healthy Fontan patients, and thymectomized two-ventricle patients</i>		
The primary goal of this project is to assess whether there are differences in immune function in patients with Fontan physiology that may contribute to the development of plastic bronchitis and protein losing enteropathy.		
CCMB Pilot Research Grant (PI: Karnovsky)	4/1/11-3/31/13	10% effort
University of Michigan		
Center for Computational Medicine and Bioinformatics (CCMB)		\$50,000 (total costs)
<i>Integrative Analysis of Metabolomic and Transcriptional Profiles of Sepsis and Sepsis-induced Acute Lung Injury (ALI)</i>		
The major goal of this project is to generate pilot data to support the concept that metabolomics can differentiate the phenotypes of sepsis and sepsis-induced ALI.		
The Daniel Foy Plastic Bronchitis Research Fund (PI: Stringer)		0% effort
This fund was established with an initial gift of \$25,000 to support plastic bronchitis research.		
The Rocco Hines Heart Award (co-PI: Stringer)	3/1/11-2/28/12	0% effort
University of Michigan Congenital Heart Center		\$50,000 (total costs)
<i>Development of a Fontan Complications Database</i>		
The goal of this project is to utilize social media such as Facebook to identify patients with plastic bronchitis and protein losing enteropathy, complications of Fontan physiology. The database will be derived using a survey that captures information about patients with and without these complications.		
R15 HD065594 (PI: Stringer)	7/15/10-6/30/13	10% effort
NIH/National Institute of Child Health and Human Development		\$463,337 (total costs)
<i>Pulmonary Formulation of Tissue Plasminogen Activator for Plastic Bronchitis</i>		
The goals of this project are to show that a pulmonary formulation of tPA (pf-tPA) is an effective treatment for fibrin plastic bronchitis casts and to generate data to support the safe translation of pf-tPA from the bench to the pediatric plastic bronchitis population.		
MICHR Pilot Research Project Grant (PI: Stringer)	9/1/07-8/31/08	10% effort
Michigan Institute for Clinical and Health Research (MICHR)		\$21,500 (total costs)
<i>Tissue Plasminogen Activator Polymorphisms in ALI/ARDS</i>		
R42 HL071439 (PI: Stringer)	7/1/05-6/30/08	25% effort
NIH/National Heart, Lung and Blood Institute		\$833,044 (total costs)
<i>Safety of Lung Delivered Tissue Plasminogen Activator</i>		
Cancer Center Pilot Project Grant (PI: Stringer)	2/1/04-1/31/06	5% effort
American Cancer Society and the University of Colorado Cancer Center		\$20,000 (direct costs)
<i>Prolongation of Neutrophil Lifespan by Cigarette Smoke: Implications in the Pathogenesis of Lung Cancer</i>		
R41 HL071439 (PI: Stringer)	9/15/03-9/14/04	30% effort
NIH/National Heart, Lung and Blood Institute		\$99,693 (total costs)
<i>Lung Delivery of Tissue Plasminogen Activator</i>		
Tobacco External Research Award (PI: Stringer)	7/1/01-6/30/04	25% effort
Philip Morris External Research Program		\$350,000.00 (total costs)
<i>Modulation of Neutrophil Function by Cigarette Smoke Extract</i>		
New Investigator Award (PI: Jung)	7/1/00-6/30/01	0% effort
American College of Clinical Pharmacy		\$10,000 (total costs)
<i>Characterization of the Mechanism of Anti-inflammatory Activity of Clarithromycin</i>		
Investigator-initiated Pilot Project (PI: Jung)	7/1/00-6/30/01	0% effort
Abbott Laboratories		\$35,000 (total costs)
<i>The Mechanism of Anti-inflammatory Activity of Clarithromycin: Inhibition of LPS-induced NF-KB Activation and TNF-α in Pulmonary Epithelial Cells and Macrophages</i>		

Grant-in-Aid Award (PI: Stringer) National American Heart Association <i>Modulation of Inflammation by Plasminogen Activators</i>	8/1/96-7/30/98	15% effort \$118,630 (direct costs)
Amgen-Biotechnology Award (PI: Stringer) American College of Clinical Pharmacy <i>Role of Plasminogen Activators in Inflammatory Lung Disease</i>	7/1/96-6/30/97	0% effort \$10,000.00 (direct costs)
Pilot Project Grant (PI: Stringer) University of Colorado Hospital Authority Grants Program <i>Evaluation of a heparin titration nomogram on patient outcomes at university hospital</i>	9/1/95-8/31/98	0% effort \$17,500 (direct costs)
G. A. Pfeiffer Clinical Pharmacy Post-PharmD Fellowship American Foundation for Pharmaceutical Education Joe M. McCord, PhD, advisor	7/1/94-6/30/96	50% effort \$55,000 (stipend)
Thrombolysis in Myocardial Infarction (TIMI) Study Harvard Medical School <i>TIMI-9: Thrombolysis and thrombin inhibition in acute myocardial infarction</i>	8/1/94-7/31/95	0% effort \$12,000 (direct costs)
Retepase Clinical Study (site PI: Stringer) Boehringer Mannheim Pharmaceuticals <i>A randomized, open-label, multicenter, angiographic study to compare the effects of 10+10 rPA with front-loaded alteplase in patients with acute myocardial infarction</i>	7/1/94-6/30/95	0% effort \$13,200 (direct costs)
Clinical Study (site PI: Stringer) Dupont-Merck Pharmaceuticals <i>Coumadin-Aspirin Reinfarction Study (CARS)</i>	7/1/94-6/30/96	0% effort \$20,000 (direct costs)
Regional Grant-in-Aid (PI: Stringer) American Heart Association of Colorado <i>Effect of SK, tPA and anistreplase on rat footpad edema</i>	7/1/93-6/30/94	0% effort \$16,000 (direct costs)
Pilot Project Grant (PI: Stringer) Bristol Meyers Squibb <i>Effect of streptokinase and streptokinase plus heparin on neutrophil chemotaxis</i>	7/1/93-12/31/93	0% effort \$1500 (direct costs)
TIMI Study (site PI: Stringer) Ciba-Geigy Pharmaceuticals <i>TIMI-6: A multi-center, open-label, ascending dose, safety and tolerability trial to compare the effects of CGP 39393 and heparin when given in conjunction with streptokinase to patients with acute myocardial infarction</i>	7/1/92-6/30/93	0% effort \$70,400 (direct costs)
Ancillary Project Grant (co-PI: Stringer) SmithKline-Beecham <i>Effect of three thrombolytic agents on neutrophil function and free radical generation</i>	7/1/90-6/30/91	0% effort \$12,500 (direct costs)
CU Clinical Research Center (PI: Stringer) NIH <i>Effect of three different doses of verapamil on the disposition of theophylline</i>	10/1/90-9/30/91	0% effort \$3500 (direct costs)
Clinical Study (site PI: Stringer) Beecham Laboratories <i>Multicenter investigation of alteplase vs. anistreplase in acute myocardial infarction</i>	7/1/89-6/30/90	0% effort \$25,000 (direct costs)
Young Investigator's Award (PI: Stringer) Association of Colleges of Pharmacy (ACCP) <i>Effect of three different doses of verapamil on the disposition of theophylline</i>	10/1/89-9/30/90	0% effort \$5000 (direct costs)
Clinical Study (site PI: Stringer) Boehringer Mannheim Pharmaceutical Corporation <i>A multicenter study of the efficacy and safety of intravenous torsemide as adjunctive therapy in patients with acute pulmonary edema</i>	10/1/88-9/30/89	0% effort \$20,000 (direct costs)

PUBLICATIONS

My full bibliography can be found here: <https://www.ncbi.nlm.nih.gov/myncbi/kathleen.stringer.1/bibliography/public/>

150. Kim JS, Loe A, Ma SF, Ranjan P, Lipinski JH, Mikhail SG, Gurczynski SJ, Zhou X, Huffnagle GB, Downward JE, Metcalf JD, Falkowski N, Stringer KA, Dickson RP, Huang Y, Moore BB, Martinez FJ, Murray S, Noth I, O'Dwyer DN. Gut microbiota associate with disease severity and survival in idiopathic pulmonary fibrosis. *Am J Respir Crit Care Med*. 2026 May 19:aamag249. doi: 10.1093/ajrcm/aamag249. Online ahead of print.
149. Drohan CM, Falkowski NR, Hough TA, Branton WR, Luth JE, Ranjan P, Thau MR, Tiba MH, **Stringer KA**, Dickson RP. In sepsis, circulating bacterial DNA correlates with disease severity and is filtered by the lungs. *Am J Respir Crit Care Med*. *In press*.
148. Chanderraj R, Bartek B, **Stringer KA**, Tiba MH, Sjoding MW, He Y, Nuppnau M, Bongers KS, Adame MD, Lou SS, Kerschberger E, Churpek MM, Calfee CS, Tripathi S, Foster DM, Kellum JA, Dickson RP, Sinha P. Pathogen characteristics are key determinants of distinct host response phenotypes of sepsis. *J Clin Invest*. 2026 Mar 16;136(6):e197346. doi: 10.1172/JCI197346. eCollection 2026 Mar 16. PMID: 41837287.
147. Adame MD, **Stringer KA**, Dickson RP The Gut Microbiome and Short-Chain Fatty Acid Metabolites in Sepsis. *Clin Chest Med*. 2026 Mar;47(1):119-128. doi: 10.1016/j.ccm.2025.11.006. Epub 2026 Jan 2.
146. Lim YJ, Asadi Tokmedash M, Allen M, Gruich C, Choi JH, Kim C, Falkowski N, Goldsmith B, **Stringer KA**, Dickson RP, Bong KW, Min J. MIDAS: rapid, multiplexed molecular profiling for integrated host-pathogen analysis. *Nat Commun*. 2025 Dec 19;17(1):349. doi: 10.1038/s41467-025-67391-3. PubMed PMID: 41419730; PubMed Central PMCID: PMC12796348.
145. Alipanah-Lechner N, Neyton L, Sinha P, Leroux C, Bardillon K, Carrillo SA, Chak S, Chao O, Hariharan T, Hendrickson C, Kangelaris K, Langelier CR, Lee D, Lin C, Liu K, Magee L, Ringor A, Sarma A, Schmiege E, Spottiswoode N, Sullivan K, Weingart MF, Willmore A, Zhuo H, Rogers AJ, **Stringer KA**, Matthay MA, Calfee CS. Longitudinal multi-omic signatures of ARDS and sepsis inflammatory phenotypes identify pathways associated with mortality. *J Clin Invest* 2025 Dec 2;136(3): e196290. doi: 10.1172/JCI196290. PubMed PMID: 41329523. PubMed Central PMCID: PMC12867137.
144. Bongers, KS, Floom TL, Yeomans L, Maynard L, Adame MD, Falkowski NR, McDonald RA, Petouhoff A, Baker JM, McLellan M, Aragones, LL, Kaniaru J, Singer BH, Dickson RP, and **Stringer KA**. Gut microbiome mediated nutrients alter opportunistic bacterial growth in peritonitis. *Am J Physiol Gastrointest Liver Physiol*. 2025 Nov 5. doi: 10.1152/ajpgi.00132.2025. Online ahead of print.
143. Ouyang W, Chen Y, Tan T, Song Y, Dong T, Yu X, Lee KE, Zhou X, Tetz Z, Go S, Zeng X, Shao L, Quan C, Zhao T, Tian Y, Kurabayashi K, Jin H, Ma J, Qin J, Williams B, Li Q, Zhu GD, Alam HB, **Stringer KA**, Li Y, Ma J. A citrullinated histone H3 monoclonal antibody for immune modulation in sepsis. *Nat Commun*. 2025 Aug 12;16(1):7435. doi: 10.1038/s41467-025-62788-6. PubMed PMID: 40796783; PubMed Central PMCID: PMC12343807.
142. **Stringer KA**, Goldberg D, Chen S, Thrush P, Graham EM, Lubert A, Myers J, McLellan L, Flott TF, Nasr S, and Schumacher KR. A Multi-center, Open-label Study to Assess the Safety of Nebulized Tissue Plasminogen Activator for the Acute Treatment of Pediatric Plastic Bronchitis: the PLATyPuS Trial. *Pharmacotherapy* 2025;45:677-687. PMID: 40910281; PubMed Central PMCID: PMC12530010
141. Wong KK, Wu BG, Chung M, Li Q, Darawshy F, Tsay J-C J, Holub M, Barnett CR, Kwok B, Kugler MC, Chung C, Natalini JG, Singh S, Li Y, Schluger, Ficaro L, Carpenito J, Collazo D, Perez L, Kyere-mateng Y, Chang M, Czachor A, Singh R, McCormick C, Campbell CD, Keane R, Askenzai M, Hansbro PM, Weiden MD, Huang YJ, **Stringer KA**, Clemente JC, Jones D, Ghedin E, Segal LN, Sulaiman I. Microbial Contribution to Metabolic Niche Formation Varies Across the Respiratory Tract. *Cell Host Microbe* 2025; Jul 9;33(7):1073-1088.e6; doi: 10.1016/j.chom.2025.06.002. Epub 2025 Jun 26. PMID: 40578342; PubMed Central PMCID: *in process*.

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compared with streptokinase in acute myocardial infarction. *Circulation* 1991;83:126-40.

6. Gin AS, **Stringer KA**, Welage LS, Wilton JH, Matthews GE. The effect of verapamil on the pharmacokinetic disposition of theophylline. *J Clin Pharmacol* 1989;29:728-32.
5. Tisdale JE, **Stringer KA**, Antalek M, Matthews GE. Streptokinase-induced anaphylaxis. *Drug Intel Clin Pharm* 1990;23:984-7.
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1. **Stringer KA**, Berardi RR. Does digoxin decrease gastric blood flow? *Drug Intel Clin Pharm* 1986;20:363-4.

BOOK CHAPTERS:

Kelly RS, **Stringer KA**, Wendt CH. (2020) Biomarkers in Obstructive Airway Diseases. In: Gomez J., Himes B., Kaminski N. (eds) Precision in Pulmonary, Critical Care, and Sleep Medicine. Respiratory Medicine. Humana, Cham. https://doi.org/10.1007/978-3-030-31507-8_10

Stringer KA, Lopez L. Acute Myocardial Infarction. In: Pharmacotherapy, 5th edition. Dipiro J, Talbert R, Yee G, Wells BG, Posey M, eds. Appleton and Lange, Stamford, CT, 2002. p. 251-272.

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Stringer KA, Lopez L. Acute myocardial infarction. In: Pharmacotherapy Self-Assessment Program, Second Edition (PSAP II). Carter BL, Angaran DM, Lake KD, Raebel MA, eds. American College of Clinical Pharmacy, Kansas City, MO, 1997. p. 123-143 (peer reviewed).

Stringer KA, Lopez L. Acute myocardial infarction. In: Pharmacotherapy, 3rd edition. Dipiro J, Talbert R, Yee G, Wells BG, Posey M, eds. Appleton and Lange, Stamford, CT, 1997. p. 295-322.

NEWSLETTERS/LETTERS/MONOGRAPHS/EDITORIALS:

Stringer KA. Fibrinolytic therapy for acute lung injury: The case for inhaled tissue plasminogen activator. *Respiratory Drug Delivery*. May, 2009.

Stringer KA, Lopez L, Talbert RL. A call for pharmacists to improve the care of patients with myocardial infarction. *Pharmacotherapy* 2001;21:1317-19.

Stringer KA, Trujillo TC. Reteplase in the Management of Acute Myocardial Infarction. *Bio-science Communications*. April, 2000.

Stringer KA, ed (invited). Antithrombotics in the Management of Acute Coronary Syndromes. *Pharmacy and Therapeutics* (supplement). February, 1999.

Cohen M, Goodman SG, Grines CL, Samuels LE, **Stringer KA**. Management of unstable angina or non-Q-wave myocardial infarction: Guidelines for treatment with enoxaparin. May, 1999.

Holdsworth MT, Cetnarowski AB, **Stringer KA**. Prostaglandin E1 and streptokinase in acute myocardial infarction. *Am J Cardiol* 1987;60:1215-6.

Stringer KA, Watson WA. Caffeine withdrawal symptoms. *Am J Emerg Med* 1987;5:469.

ONLINE LECTURE NOTES/PRESENTATIONS and PODCASTS:

Conversation with Drs. Christopher Debiase, Renee Paxton, and Christopher Giuliano about their recent publication regarding Enoxaparin vs. UFH for VTE Prophylaxis in Renally Impaired ICU

patients (*Pharmacotherapy*. 2021 May;41(5):424-429). <https://anchor.fm/accp-jrnls/episodes/Enoxaparin-vs--UFH-for-VTE-Prophylaxis-in-Renally-Impaired---Ep-56-e1125g8>

Conversation with Dr. Ryan Rivosecchi about his team's research that challenged the typical fentanyl-based sedation with hydromorphone-based sedation for ECMO patients (*Pharmacotherapy*. 2020 May; 40(5):389-397). [Hydromorphone- vs. Fentanyl-based sedation in ECMO by ACCP JOURNALS • A podcast on Anchor](#)

Conversation with Dr. Rob McLaren about the special issue of *Pharmacotherapy* that was dedicated to Prevention Strategies in the Critically Ill. <https://anchor.fm/accp-jrnls/episodes/Prevention-Strategies-in-the-Critically-Ill---Episode-7-e3h309>

Conversation with Dr. Yaman Kaakeh about her publication "An Overview of Hyperinsulinemic-Euglycemic Therapy in Calcium Channel Blocker and Beta-Blocker Overdose" (*Pharmacotherapy*. 2018 Nov;38(11):1130-114). Available on the @ACCP podcast: on Google Play <https://play.google.com/music/listen#/ps/I7u2chxitze2vyqfsu2ksxqvcym> and iTunes <https://itunes.apple.com/us/podcast/accp-podcast/id1175416904?mt=2>

Stringer, KA. *Principles of Research and Problem Solving* [material type, PowerPoint or PDF]. Retrieved from [OpenMichigan Website](#)

PATENTS/INVENTIONS/DISCOVERIES

Tissue Plasminogen Activator as an Anti-inflammatory Agent. KA Stringer, Principal Investigator. Patent US #6,497,877 issued December 24, 2002.

Markers for Sepsis Treatment. KA Stringer and AE Jones, Principal Investigators. Provisional patent filed by the University of Michigan, May 1, 2014. Full patent filing, April 28th, 2015. PCT/US2015/027956

Compositions and Methods for Delivering Pharmaceutical Agents. R Keswani, GS Yoon, KA Stringer, GR Rosania, C Tian, X Wang. Provisional patent filed by the University of Michigan, January 29th, 2016. U.S. Patent Application No. 15/011,047

Calibration Standards for Microscopy Measurements Provisional Patent Application - UM Ref.: 2019-130 - Our Ref.: 30275/54072

Acetylcarnitine (C2) as a Predictive Biomarker for a Mortality Benefit from Supplemental L-carnitine in Patients with Septic Shock U.S. Application No. 16/449,936

INVITED PRESENTATIONS

(last 10 years)

International

2024

Metabolic Mechanisms of Sepsis-induced Organ Dysfunction (Basic Science session keynote presentation). Annual international meeting of the American Thoracic Society 2024, San Diego, CA, USA

2020

Metabolomics and sepsis/septic shock: translational aspects. European Society of Clinical Microbiology and Infectious Diseases (ESCMID). Paris, France. *Cancelled due to the COVID pandemic.*

2017

Quantitative ¹H-Nuclear Magnetic Resonance Metabolomics Differentiates Patients with and without Emphysema as Detected by the Percent of Low Attenuation Areas on Chest Computed Tomography (CT). Meeting of the Joint Institute- University of Michigan and Peking University Health Sciences Center. Peking University Medical School, Beijing, China

2016

Pharmacometabolomics: Metabolic Phenotyping of Drug Response. Department of Critical Care Medicine, University of Calgary, Calgary, Alberta, Canada

National

2022

Sepsis is a Metabolic Disease: Evidence from Metabolomics and Pharmacometabolomics. American College of Clinical Pharmacy (ACCP) Therapeutic Frontiers Lecture; 43rd ACCP Meeting, San Francisco, CA

2018

Application of Metabolomics to Drug Target and Biomarker Discovery in Critical Illnesses. Integration of Glycoscience into Bioinformatics and Personalized Medicine, National Heart Lung and Blood Institute, National Institutes of Health, Bethesda, MD

L-Carnitine Supplementation as a Metabolic Probe of Sepsis Phenotypes. Metabolism of Infectious Diseases Symposium, Colorado State University, Fort Collins, CO

2016

Lung metabolomics: State of the field. NHLBI-sponsored workshop on lung proteomics and metabolomics. National Jewish Health, Denver, CO

Local/State

2026

Metabolic Signatures of Sepsis-Induced Organ Dysfunction and Mortality. Pulmonary and Critical Care Research Conference, Case Western-University Hospital, Cleveland, OH

2024

Sepsis is a Metabolic Disease: Evidence from Metabolomics and Pharmacometabolomics. University of Minnesota, Department of Emergency Medicine, Minneapolis, MN

Sepsis is a Metabolic Disease: Evidence from Metabolomics and Pharmacometabolomics. University of Illinois at Chicago, College of Pharmacy, Chicago, IL

2018

Metabolic phenotyping of sepsis and sepsis drug response. University of Florida College of Pharmacy, Gainesville, FL

2017

Vignettes from the field: Nuclear Magnetic Resonance (NMR) Metabolomics. 5th Annual Michigan Regional Comprehensive Metabolomics Resource Core. University of Michigan, Ann Arbor, MI

Metabolic phenotyping of sepsis. MCIRCC Sepsis Collaborative. University of Michigan, Ann Arbor, MI

2016

Pharmacometabolomics: Metabolic phenotyping of drug response. Department of Bioinformatics and Computational Medicine, University of Michigan, Ann Arbor, MI

Vignettes from the field: Nuclear Magnetic Resonance (NMR) Metabolomics. 4th Annual Michigan Regional Comprehensive Metabolomics Resource Core. University of Michigan, Ann Arbor, MI

TEACHING, MENTORING & TRAINING

UNIVERSITY OF MICHIGAN (2007- present):

College of Pharmacy

2019- present	Grant Proposal III (CPTS 803) Graduate student course in preparation for preliminary examination
2019- present	Metabolomics & Proteomics (CPTS 824)- taught biannually Lectures and assignments in metabolomics for graduate students
2009- present	Principles of Research and Problem Solving (Pharmacy 614, formerly Pharmacy 476) Course lecturer, coordinator and small group leader (2009-2017) Course lecturer & coordinator (2018-)
2008- present	PharmD Investigations (Pharmacy 565 & 569)
2009- 2016	Opportunities in Pharmacy (Pharmacy 550) Credentialing in Pharmacy lecture
2008- 2018	PharmD seminar (Pharmacy 680)
2020- 2022	I mentor and advise 1-2 PharmD students each who give a 40 min formal seminar

PharmD Investigation Students:

2008- 2010	Angela Loo, Mollie Kemp, Shari Rosen, Mark Pangrazzi ¹ , Michael Lu
2009- 2011	Shelly Ling, Andrew Clark
2010- 2012	Erin Gulbransen, Elizabeth Kelly, Steven Hseuh (through 2010)
2011- 2013	Odilia Chan
2011- 2014	Lauren Heath
2011- 2015	Kristina Brooks
2012- 2015	Melissa Tai, Yihan Sun
2012- 2016	Swan Lin (2015 recipient of the AFPE Gateways Scholar Award & McGlone Award)
2013- 2016	Tony Koehn
2015- 2017	Julie Trexel
2016- 2018	Navya Varshney
2016- 2019	Sichen Wang
2017- 2021	Jeffrey Ciric-Quillama
2019- 2022	Jacob Pifer, Benjamin Fine, Danielle Kulman
2020- 2023	Jingyu (Lynne) Hu
2025-	Jihun Park

Multidisciplinary Clinical Researchers in Training (MCRiT) Program (summer):

2008	Christine Kim
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¹recipient of the 2010 University of Michigan's College of Pharmacy PharmD Student Research Award

2011	Odilia Chan ² , Lauren Heath
2012	Kristina Brooks, Melissa Tai
2013	Tony Koehn
2018	Jeffrey Ciric-Quillama

Undergraduate Research Opportunity Program (UROP)

2009- 2011	Andrew Schrottenboer (Medical School)
2015- 2018	Casey Schoof (Physician Assistant program)
2016- 2019	Benjamin Andrew (Dental School)
2016- 2018	Rachel Cevigney (Medical School)

Bachelor of Science in Pharmaceutical Sciences (BSPS)

2018- 2019	Min Yue (graduate school, Purdue University)
2021- 2023	Bo Dong

Post-doctorates

2016- 2018	Yihan Sun, PharmD
2015- 2018	Kristen Ward (Weise), PharmD (metabolomics)
2013- 2016	Gi Yoon Sang, PhD; Rahul Keswani, PhD (via MCubed program)
2013- 2015	Larisa Yeomans, PhD
2012- 2014	Kyoung Ah Min, PhD
2025-	Kyle Riedmann, PhD

Graduate School

Graduate students (Doctor of Philosophy), primary or co-advisor:

2015- 2019	Vernon Lalone
2019- 2023	Marc McCann, PharmD
2019- 2023	Theodore Jennaro, PharmD
2019- 2023	Mery Vet George Da La Rosa
2019- 2023	Jennifer Diaz-Espinosa
2019- 2023	Andrew Willmer
2019- 2024	Jennifer Baker (Immunology-Microbiology)
2021-	Mark Adame (MD/PhD; Immunology-Microbiology)
2025-	Lauren Heinzinger (Immunology-Microbiology)
2026-	Sophie Pickelner (MCDB)

Doctor of Philosophy Preliminary Exam/Data Committee Membership:

2010- 2011	Jing-yu Yu	Medicinal Chemistry
2010- 2012	Kyoung Ah Min	Pharmaceutical Sciences
2015- 2019	Mikhail Murashov	Pharmaceutical Sciences

²finalist for best poster at the Spring MICHR Research Symposium

2015- 2019	Vernon Lalone	Pharmaceutical Sciences
2016- 2020	Sang Kim	Pharmaceutical Sciences
2018- 2023	Gayatri Iyer	Computational Medicine & Bioinformatics
2019- 2025	Logan Smith	Clinical Pharmacy & Translational Science
2020- 2023	Ciao-Sin Chen	Clinical Pharmacy & Translational Science
2021	Henry Gong	Immunology
2022- 2024	Ana Lopez Medina	Clinical Pharmacy & Translational Science
2023- 2025	Levi Hooper	Clinical Pharmacy & Translational Science
2026-	Sophie Pickelner	Molecular, Cellular, & Developmental Biology

Master of Science Data Committee Membership:

2016	Sarah Donnelly	University of Calgary Department of Medical Sciences
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Medical School

Unit for Laboratory Animal Medicine Training Program

2013- 2015	Portia Allen, DVM	Metabolomics
2023- 2024	Stephanie Yang, DVM	Metabolomics

Early Career Mentoring

2018- 2025	Wassim Labaki, MD	K23 awardee committee member
2020- 2023	Kale Bongers, MD	K08 awardee committee member
2021- 2022	Avnee Kumar, MD	Mentorship committee member
2023-	Callie Drohan, MD	T32 co-mentor
2024-	Vinitha Jacob, MD	K08 awardee committee member
2024-	Narges Alipanah-Lechner, MD	K23 awardee committee member

Additional Mentoring Activities

2012- 2014	Andrea Obi, MD Resident, Vascular Surgery University of Michigan	Metabolomics
2013- present	Lilliam Ambroggio, PhD ³ Assistant Professor University of Cincinnati (2013-2018) University of Colorado (2018- present)	Metabolomics
2016- 2017	William Masch, MD Assistant Professor of Radiology University of Michigan	Launch Committee chair
2016- 2020	Kristen Ward, PharmD ⁴ Post-doctoral Fellow/ Assistant Professor of Clinical Pharmacy University of Michigan	Metabolomics

³I served as Lilliam's metabolomics mentor on her K01 award⁴I served as Kristen's metabolomics mentor on her KL2 award

2017- 2019	Marco Bottino, DDS, PhD Associate Professor of Dentistry University of Michigan	Launch Committee chair
2017- 2022	Michael Maile, MD ⁵ Assistant Professor of Anesthesiology University of Michigan	Metabolomics

UNIVERSITY OF COLORADO (1988- 2007)

School of Pharmacy (PharmD curriculum)

Spring Semester (entry-level)

2006	PharmD Student (P3) Seminar (PHRD 5250)
2003-2004	Instructional Methods III (PHRD 4250) Course Co-coordinator Lectures
2002-2004	Comprehensive Patient Care (PHRD 5750) Acute Myocardial Infarction
2001-2007	Research Elective (PHRD 5865) Co-coordinator

Fall Semester (entry-level)

2005-2007	Integrated Organ Systems V (PHRD 4720) Cardiology Module, Pathophysiology
2004-2007	Instructional Methods III (PHRD 4250)- Lectures
2002-2004	Integrated Organ Systems V (PHRD 4720) Cardiology Module, Therapeutics
2001-2007	Research Elective (PHRD 5865), Co-coordinator
2000-2005	PharmD Student (P3) Seminar (PHRD 5250)
2000-2003	Cardiology Professional Skills (PHRD 4100)
2000-2001	Integrated Organ Systems IV (PHRD 4710) & V (PHRD 4720; 2001, V only) Coordinator; Cardiology Module, Therapeutics

Fall Semester (track-in)

1997-1998	Advanced Therapeutics/Kinetics (PRDO 5220) and Professional Skills (PRDO 5250) Fall Semester Coordinator
1997-2000	Advanced Therapeutics/Kinetics (PRDO 5220) Cardiology Module, Therapeutics
1997-2000	Professional Skills (PRDO 5250), Cardiology

Fall Quarter (add-on)

1993-1997	Introduction to Clinical Research Methodology I (PRDO 5240) Course Coordinator and lectures
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⁵I served as Michael's metabolomics mentor on his KL2 award

Winter Quarter (add-on)

1995-1997 Advanced Therapeutics and Pharmacokinetics (PRDO 5620)
 Cardiology Module Coordinator
 Acute Myocardial Infarction & Anticoagulation lectures
 Arrhythmias and Anti-arrhythmic drugs lectures
 Congestive Heart Failure and Digoxin lectures

1993-1994 Advanced Therapeutics (PRDO 5420)
 Cardiology Module Coordinator Acute Myocardial Infarction lectures
 Arrhythmias and Anti-arrhythmic drugs lectures
 Congestive Heart Failure lectures

1993-1994 Advanced Clinical Pharmacokinetics (PRDO 5660)
 Anti-arrhythmic drugs lectures

Spring Quarter (add-on)

1995-1996 Introduction to Clinical Research Methodology II (PRDO 5830) Course Co-ordinator and 10 h of lecture

Doctor of Pharmacy Investigations (Research Advisor)

1993-1995 Patrice Light: Evaluation of the Pharmacokinetic Disposition of Hirudin in Patients with Acute Myocardial Infarction
 Janet Pate: Effect of Streptokinase and Tissue Plasminogen Activator on Neutrophil Protein Kinase C
 Doug Russo: Effect of Heparin on Endothelin-1 Levels in Patients with Congestive Heart Failure

Experiential Teaching

1994-1999 PharmD Cardiology Research Rotation 1 student/6 weeks, 12 weeks

School of Pharmacy (B.S. Pharmacy Curriculum, 1988-2000)

Fall Semester

1996-1998 Pharmacotherapeutics I (PHPR 4600)
 Acute Myocardial Infarction lectures
 Arrhythmias and Anti-arrhythmic drugs lectures
 Congestive Heart Failure lectures (1992- 1998)
 Coronary Artery Disease lectures (1995- 1998)

1989-1999 Clinical Pharmacokinetics (CNLP 4490/PHPR 4790)
 Lidocaine and Procainamide lecture

1988-1990 Pharmacotherapeutics (CNLP 4210)
 Acute Myocardial Infarction lectures
 Arrhythmias and Anti-arrhythmic drugs lectures

Spring Semester

2000 Pharmacotherapeutics II (PHPR 4610), Course Coordinator

1991-1996 Pharmacotherapeutics I (PHPR 4600); Course Coordinator (1991-1992) Acute Myocardial Infarction lectures (6 h) Arrhythmias and Anti-arrhythmic drugs lectures; Congestive Heart Failure lectures (1992-1996); Coronary Artery Disease lecture (1995-1996)

Undergraduate Honors Students (Research)

1990-1991	Michael Clarke
1991-1993	Mary Vander Ploeg
1992-1993	Janet Pate

Experiential Teaching

1989-1993	BS Cardiology ICU Clinical Rotation 1 student/month, February-April
1989-1993	BS Cardiovascular Research Rotation 1 student/month, May

Graduate School and Post-Graduate Education and Training

University of Colorado Graduate Students (thesis advisor):

2004-2007	John S. Dunn, Masters (no thesis), Pharmaceutical Sciences
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Doctor of Philosophy Dissertation (Committee Member):

1994-1996	James Matsuura	Pharmaceutical Sciences
1997-2001	Lisa Siconolfi	Biochemistry
2003-2005	Lorinda Girouard	Toxicology
2004-2007	John S. Dunn	Pharmaceutical Sciences

Graduate Experiences for Multicultural Students (GEMS) Program (Summer):

2005	Joseph Pitluck
2006	Natasha Flores

Research Fellows (rotations):

1989-1990	Jacqueline Marinac, PharmD
1995-1996	Joseph Saseen, PharmD

Medical Resident:

1990	Jane Mallet, MD
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Medical House Staff Lectures:

1994	Anti-thrombotic Therapy
1995	Cardiology Fellows Lectures: Role of Anticoagulation in Acute Myocardial Infarction

Clinical Pharmacy Residents:

1990	Rhonda Andersen, BS, RPh
1991	Jeff Heiland, BS, RPh
1992-1993	Ben Dickenson, BS, RPh
1997-2000	Deb Sherman, PharmD
1999-2000	Kristal Morris, PharmD
2001-2002	Megan Brewer, PharmD
2002-2003	Nicole Schlobohm, PharmD

AWARDS AND HONORS

2025	Marc Peters-Golden Annual Research Education Award, University of Michigan Pulmonary & Critical Care Medicine
2022	American College of Clinical Pharmacy Therapeutics Frontier Award
2018	Albert B. Prescott Professorship
2014	Michigan Institute for Clinical and Health Research Distinguished Clinical and Translational Research Mentor
2010	Multimedia Teaching Grant from the Center for Research on Learning and Teaching (CRLT) for "Creation of posters for Pharmacy 476 - Principles of Research and Problem Solving" \$1211
2009	University of Michigan Teaching with Technology Institute (TTI) Award from the Center for Research on Learning and Teaching (CRLT) for "Development of an On-line Research Proposal Wizard"
2000	Certificate of Appreciation, Board of Pharmaceutical Specialties, for six years of service to the Specialty Council on Pharmacotherapy
1997	Teacher of the Year Award, Fourth Year Undergraduate Pharmacy Class
1996	Special Appreciation Award presented from the graduating PharmD class
1996	Phi Lambda Sigma
1997	Elected Fellow (FCCP), American College of Clinical Pharmacy
1994	American Foundation for Pharmaceutical Education, Gustavus A. Pfeiffer Clinical Pharmacy Post PharmD Fellowship in Biomedical Sciences
1994	Rho Chi National Pharmacy Honor Society
1989	American Association of Colleges of Pharmacy Young Investigator's Award "Effect of Three Different Doses of Verapamil on the Disposition of Theophylline"
1987	Roche Hospital Pharmacy Research Award "Effect of Theophylline on the Pharmacokinetic Disposition of Theophylline in Cigarette Smokers"

SERVICE TO THE UNIVERSITY OF MICHIGAN COLLEGE OF PHARMACY

2023- present	Unit Ombudsman, College of Pharmacy
2022	Chair, Department of Clinical Pharmacy, Promotion Review Committee
2021- 2022	Chair, Dean Search Advisory Committee
2019- 2021	Graduate Education Committee
2015- present	Member, Safety Committee
2015- 2016	Member, Tenure-track faculty search committee, ambulatory care
2014- 2015	Chair, Department of Clinical Pharmacy Chair position search committee
2014- 2018	Member, Dean's Executive Committee
2013- 2014	Member, Dean Search Committee
2013	Chair, Tenure-track Faculty Search Committee, University of Michigan College of

	Pharmacy
2012	Chair, Tenure-track faculty search committee, Department of Clinical, Social and Administrative Sciences
2012- present	Member, Research Resources Committee
2011	Member, Information Technology Search Committee
2009- 2010	Member, Department of Clinical, Social and Administrative Sciences, Promotion Review Committee
2009- 2013	Member, PharmD Investigations Committee
2009- 2013	Member, Curriculum Committee
2009- 2013	Member, Evidenced-based Medicine sub-committee (Curriculum)

SERVICE TO THE UNIVERSITY OF MICHIGAN

2021- 2022	Chair, Dean Search Advisory Committee, Office of the Provost
2016- 2018	Member, Nuclear Magnetic Resonance (NMR) Governing Committee
2015- present	Member, Control Substances Research Review Committee
2013- 2014	Member, Dean Search Advisory Committee, Office of the Provost
2012	Member, Ad-hoc Grievance Hearing Board, Office of the Provost
2013- 2018	Michigan Institute for Clinical & Health Research (MICHR) Pilot Grant Review Committee
2013- 2015	Michigan Regional Comprehensive Metabolomics Resource Center (MRC) ² pilot grant reviewer

SERVICE TO THE UNIVERSITY OF COLORADO SCHOOL OF PHARMACY

2006- 2007	Member, Department of Clinical Pharmacy Appointment, Promotion and Tenure Committee
2005-2006	Chair, Department of Clinical Pharmacy Appointment, Promotion and Tenure Committee
2004-2005	Member, Department of Clinical Pharmacy Appointment, Promotion and Tenure Committee
2003-2004	Chair, Department of Clinical Pharmacy Appointment, Promotion and Tenure Committee
2005-2007	Faculty senate officer (elected)
2001-2003	Faculty senate officer (elected)
1997-2002	Member, Department of Pharmacy Practice Advisory Committee
1997-2002	Member, Appointment, Promotion and Tenure Committee
1997-1998	Member, Assistant Dean Search Committee
1997-1998	Chair, Admissions Committee
1995-1996	Chair, Tenure-track Faculty Search Committee
1994-1998	Chair, PharmD Research Committee

1994-1997	Member, Admissions, Scholastic Advancement and Appeals Committee
1994-1995	Co-chair, Tenure-track Faculty Search Committee
1994	Member, Department Chair Search Committee
1993	Member, Search Committee for Director of Undergraduate Admissions
1991-1994	Chair, Admissions, Scholastic Advancement and Appeals Committee
1989-1991	Member, PharmD Curriculum Committee
1989-1990	Member, Research Seminar Committee
1988-1989	Member, Curriculum Committee

SERVICE TO THE UNIVERSITY OF COLORADO

School of Medicine

1992-1996 School of Medicine/University Hospital Acute Coronary Care Task Force

School of Nursing

2002 Member, Dean's Review Committee Appointment, Promotion and Tenure

University Hospital

1998-2003 Acute Coronary Syndromes Sub-committee

1997-1999 Patient care clinical service- Intensive Care Cardiology Service, 2 months/yr

1995-1998 Rapid Response Task Force on Drug Utilization

1994 Development of thrombolytic therapy administration kits for the emergency room

1991-1992 Member, Digoxin Task Force

1988-1996 Intensive Care Cardiology Service, 4 months/y

Health Sciences Center

2005-2007 Faculty Assembly, School of Pharmacy Faculty Senate representative

2001-2003 Faculty Assembly, School of Pharmacy Faculty Senate representative

1990-1994 Human Subject Committee (IRB)

1989-1991 Faculty Council

University System

2003-2006 Member, Faculty Senate Privilege & Tenure Committee (Health Sciences Center rep)

PROFESSIONAL SERVICE

PROFESSIONAL SOCIETY MEMBERSHIPS:

American College of Clinical Pharmacy (ACCP)

American Physiological Society (APS)

American Thoracic Society (ATS)

- *Assembly on Critical Care (primary)*
- *Assembly on Allergy, Immunology and Inflammation (secondary)*
- *Section on Genetics & Genomics (member, executive committee)*
- *Group, Women in Critical Care (member, research committee)*

PROFESSIONAL SOCIETY APPOINTMENTS/SERVICE:*American College of Clinical Pharmacy (ACCP)*

2022- 2025	Member (elected), Board of Trustees, ACCP Foundation
2018-	Scientific editor, <i>Pharmacotherapy</i>
2015-2017	Mentor, ACCP Mentored Research Investigator Training (MeRIT) Program
2004-2007	Regent (elected), Board of Regents
2004-2005	Member, Frontiers Campaign
2004-2005	FCCP Sub-committee
2004	Member, Research Institute Reorganization Committee
2002	Member, ACCP Strategic Planning Group
2001-2002	Chair, Task Force on Fellowship Training, Research Institute
2000-2003	ACCP representative to the Center for Medicare and Medicaid Services' (CMS) National Acute Myocardial Infarction Project
1999-2002	Research Institute Trustee (elected)
1998	ACCP representative to the AACP/ACPE Invitational Conference on Certificate Programs, Arlington, VA
1997-2002	Member, Research Institute Grant and Fellowship Review Panel
1997-1999	Member, 1999 Annual Program Planning Committee
1996-1997	Member, Awards Committee
1994-2002	Grant reviewer, Cardiovascular research grants
1994-1996	Author, Pharmacotherapy Self-Assessment Program (PSAP), Acute Myocardial Infarction
1993-1999	ACCP appointed representative to the Specialty Council for Pharmacotherapy, Board of Pharmaceutical Specialties
1993-1995	Reviewer, AHCP, Guidelines for the Management of Unstable Angina
1992-	Abstract Reviewer
1991-1993	Member, Research Affairs Committee

American Physiological Society (APS)

2021- present	Member, Editorial Board, <i>American Journal of Physiology, Lung, Cellular and Molecular Physiology (AJP-Lung)</i>
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American Thoracic Society (ATS)

2015- 2018	Member, Respiratory Cell and Molecular Biology (RCMB) committee on Proteomics and Metabolomics
2023-	Member, Executive Committee, Section on Genomics and Genetics
2024-	Co-lead, Women in Critical Care, Research

Board of Pharmaceutical Specialties (BPS)

1997-1999	Chair, Specialty Council on Pharmacotherapy
1994-1997	Chair, Cardiology Item Writing Panel
1993-1997	Vice Chair, Specialty Council on Pharmacotherapy

REVIEWER/EDITORIAL BOARDS:

2021-	Member, Editorial Board, <i>American Journal of Physiology, Lung, Cellular and Molecular Physiology (AJP-Lung)</i>
2018-	Scientific Editor, <i>Pharmacotherapy</i>
2016- 2017	Member, Editorial Board, <i>Pharmacotherapy</i>
2009	Grant reviewer, NIH Challenge Grants
2009	Grant reviewer, Italian Cystic Fibrosis Research Foundation

2002- 2005	Grant reviewer, Philip Morris External Research Program
1999-2001	Member, Editorial Board, <i>American Journal of Health System Pharmacists</i>
1993	Reviewer, Cardiovascular Chapters, Dipiro, et al. <i>Pharmacotherapy</i> , 2nd Edition
1990-1992	Member, Editorial Board and Staff Writer, American Heart Association, Colorado Chapter, Newsletter
1988-1997	Member, Cardiology Editorial Board, <i>Annals of Pharmacotherapy</i>

Journal referee (alphabetical):

American Journal of Physiology (Lung Cellular and Molecular Physiology)
 American Journal of Respiratory and Critical Care Medicine
 Analytical Chemistry
 Critical Care
 Critical Care Medicine
 Journal of Proteome Research
 Pharmacotherapy

SPECIAL ASSIGNMENTS

2022	Grant application reviewer, ZonMw (The Netherlands Organization for Health Research and Development)
2020, 2025, 2026	Member, Special Emphasis Panel Maximizing Investigator Research Awards (R35), National Institutes of Health, Bethesda, MD
2018	Member, Special Emphasis Panel (ZRG1 BCMB-P (50) P); Metabolomics Cores for Undiagnosed Diseases Network (UDN); Common Fund; National Institutes of Health, Bethesda, MD
2016, 2019, 2024	Ad hoc member, Surgery, Anesthesiology, and Trauma (SAT) study section; Center for Scientific Review, National Institutes of Health, Bethesda, MD
2014- 2018	Member, Data Safety Monitoring Board: Anti-psychotic and folate pharmacogenetics clinical trial (Ellingrod, PI)
2011	Member, Special Emphasis Panel (Ped Pharm ZHD1 DSR-A(50)); National Institutes of Health, Bethesda, MD Invited participant, Genomics Workshop, National Heart Lung and Blood Institute, National Institutes of Health, Bethesda, MD
2005	Chair, External Review Committee for Graduate Programs, University of Utah School of Pharmacy, Salt Lake City, UT
1999-2000	6-month sabbatical leave (August 1, 1999-February 1, 2000)
1996	Co-chair, Workshop on the NIH Inclusion Guidelines: Challenges for the Future, National Institutes of Health, Bethesda, MD
1994	Co-chair, National Meeting of IRB Chairs, NIH Guidelines on the Inclusion of Women and Minorities as Subjects in Clinical Research: Issues of IRBS, National Institutes of Health, Bethesda, MD

CONSULTANTSHIPS

2021-present	FHI Clinical
2020- 2022	Member, Therapeutic Monitoring Group; An open label Phase II Clinical Trial of Nebulised tissue plasminogen activator (rt-PA) in patients with COVID-19 ARDS to decrease the duration of ventilatory support and mortality: A pilot study (the PACA trial); University College London, England UK
2000-2008	Member, Angiomax Pharmacy Advisory Board, The Medicines Company
2001-2004	Member, Melagatran Pharmacy Advisory Board, Astra Zeneca
1997-2001	Member, Integrelin Pharmacy Advisory Board, Cor Therapeutics
1997-2001	Member, National Acute Coronary Syndromes Advisory Panel, Merck, Inc.
1997-1999	Member, Lepirudin Advisory Board, Hoescht Marion Roussel
1995-1998	Member, Pharmacy Advisory Board for Reteplase, Boehringer Mannheim Pharmaceuticals
1995-2000	Member, Inter-disciplinary Anti-thrombotic Advisory Board, Rhone-Poulenc-Rorer
1992-1993	Member, Pharmacy Advisory Board, Manoplax, Boots Pharmaceuticals
1990-1992	Member, SmithKline/Beecham Faculty Speakers Bureau, Cardiology
1988-1996	Assistant Editor, Drugdex Information System, Micromedex