

CURRICULUM VITAE

MICHAEL A. SMITH, PHARM.D, BCPS

ADULT PALLIATIVE CARE PROGRAM

F7870 MOTT EXPANSION

1500 E. MEDICAL CENTER DR., SPC 5233, ANN ARBOR, MI 48109-5233

OFF: 734-764-5374 | EMAIL: MANDSMIT@MED.UMICH.EDU

APPOINTMENTS AND POSITIONS

ACADEMIC

- November 2015 — Present Clinical Assistant Professor
Department of Clinical Pharmacy
University of Michigan College of Pharmacy
- July 2013 — November 2015 Assistant Professor of Clinical Pharmacy
Department of Pharmacy Practice and Pharmacy Administration
Philadelphia College of Pharmacy
University of the Sciences in Philadelphia

NON-ACADEMIC

- November 2015 — Present Clinical Pharmacist, Pain and Palliative Care
Michigan Medicine, Ann Arbor, MI
- July 2013 — November 2015 Adult Internal Medicine Clinical Pharmacy Specialist
University of Pennsylvania Health System, Philadelphia, PA

EDUCATION AND TRAINING

- July 2012 — June 2013 PGY2 Internal Medicine Pharmacy Residency
UPMC Presbyterian Shadyside, Pittsburgh, PA
Program Director: Rima Mohammad, PharmD, BCPS
- July 2011 — June 2012 PGY1 Pharmacy Residency
UPMC Presbyterian Shadyside, Pittsburgh, PA
Program Director: Heather Johnson, PharmD, BCPS
- August 2007 — April 2011 Doctor of Pharmacy
University of Pittsburgh, School of Pharmacy, Pittsburgh, PA
- August 2003 — August 2007 Bachelor of Science in Chemistry with a Bioscience Option
University of Pittsburgh, Pittsburgh, PA

LICENSURE

- 2016 — Present Pharmacist, Michigan (5302044264)
2011 — Present Pharmacist, Pennsylvania (RP-445521)

CERTIFICATION

2014	Teaching and Learning Academy American College of Clinical Pharmacy
2012	Board Certified Pharmacotherapy Specialist Board of Pharmacy Specialties
2012	Mastery of Teaching University of Pittsburgh, School of Pharmacy

SCHOLARSHIP

Peer-Reviewed Publications

10. Alpert CM, **Smith MA**, Hummel SL, Hummel EK. Symptom burden in heart failure: assessment, impact on outcomes, and management. *Heart Fail Rev.* 2017; 22: 25-39.
9. **Smith MA**, Siemianowski LA, Benedict NJ. Virtual patient case sharing across two schools of pharmacy. *Am J Pharm Educ.* 2016; 80 (9): Article 153.
8. **Smith MA**, Regal RE, Mohammad RA. Daclatasvir: A NS5A replication complex inhibitor for Hepatitis C infection. *Ann Pharmacother.* 2016; 50 (1): 39-46.
7. **Smith MA**, Love BL, Mohammad RA. The changing landscape of adverse drug events associated with chronic hepatitis c virus therapy. *Expert Opin Drug Safety.* 2015; 14 (11): 1649-52.
6. **Smith MA**, Chan J, Mohammad RA. Ledipasvir-sofosbuvir: interferon/ribavirin-free regimen for chronic hepatitis c virus infection. *Ann Pharmacother.* 2015; 49 (3): 343-50.
5. **Smith MA**, Benedict NJ. Effectiveness of educational technology to improve patient care in pharmacy curricula. *Am J Pharm Educ.* 2015; 79 (1): Article 15.
4. **Smith MA**, Mohammad RA. Vedolizumab: $\alpha 4\beta 7$ integrin inhibitor for inflammatory bowel diseases. *Ann Pharmacother.* 2014; 48 (12): 1629-35.
3. **Smith MA**, Mohammad RA, Benedict NJ. Use of virtual patients in an advanced therapeutics pharmacy course to promote active, patient-centered learning. *Am J Pharm Educ.* 2014; 78 (6): Article 125.
2. **Smith MA**, Johnson HJ, Chopra K, Dunn M, Ulrich A, Mohammad RA. Incidence and management of rash in telaprevir-treated patients: lessons for simeprevir? *Ann Pharmacother.* 2014; 48 (9): 1166-71.
1. **Smith MA**, Hibino M, Falcione BA, Eichinger KM, Patel R, Empey KM. A review of the immunosuppressive aspects of analgesics and sedatives used in mechanically ventilated patients: an underappreciated risk factor for the development of ventilator-associated pneumonia in critically ill patients. *Ann Pharmacother.* 2014; 48 (1): 77-8

Invited, Peer-Reviewed Publications

1. **Smith MA**, Lim A. Profile of ombitasvir/paritaprevir/ritonavir/dasabuvir in the treatment of chronic hepatitis c virus (HCV) genotype 1 infection. *Drug Des Dev Ther.* 2015; 9: 6083-94.

Invited, Non Peer-Reviewed Publications

1. **Smith MA**, Mohammad RA. Ledipasvir-sofosbuvir for hepatitis C genotype 4 infection. *Lancet Infect Dis.* 2015; 15 (9): 993-5.

Book Chapters

1. Mohammad RA, **Smith MA**. Biologic Therapies for Gastrointestinal Diseases. In: Murphy JE, Lee MW, eds. *Pharmacotherapy Self-Assessment Program, 2014 Book 2. Chronic Illnesses.* Lenexa, KS: American College of Clinical Pharmacy, 2014: 261 - 289.

Presentations

19. **Smith MA**. Neuropathic Pain. Hot Topics Webinar. Michigan Pharmacists Transforming Care and Quality. April 2017.

18. **Smith MA**. Management of Chronic, Non-Terminal Pain. Invited Presentation. Michigan Council of Nurse Practitioners Annual Conference. Detroit, MI. March 2017.

17. **Smith MA**. Chronic Non-Terminal Pain: Opioid Based Treatment. Hot Topics Webinar. Michigan Pharmacists Transforming Care and Quality. December 2016.

16. **Smith MA**. Chronic Non-Terminal Pain: Non-Opioid Based Treatment. Hot Topics Webinar. Michigan Pharmacists Transforming Care and Quality. November 2016.

15. **Smith MA**. Virtual Patient Technology in Pharmacy Education. AACP Technology in Pharmacy Education and Learning Special Interest Group Webinar. November 2016.

14. **Smith MA**, Benedict N. Virtual patient case sharing across schools of pharmacy. Mini-Session. AACP Annual Meeting, Anaheim, CA. July 2016.

13. Moderator. Pharmacotherapy Advances and Nutrition in the Management of Patients with IBD and IBS. ACCP Annual Meeting, San Francisco, CA. October 2015.

12. **Smith MA**. Molecular and phenotypic characteristics of KPC-Kp strains are associated with clinical outcomes in transplant recipients with bacteremia. Slide Session. ICAAC 2013, Denver, CO. September 2013.

11. **Smith MA**. Are all KPC's created equally: a phenotypic characterization. Seminar Presentation. UPMC Presbyterian Shadyside, Pittsburgh, PA. June 2013.

10. **Smith MA**. Management and complications of ascites. Pharmacy Grand Rounds. UPMC Presbyterian Shadyside, Pittsburgh, PA. May, 2013.
9. **Smith MA**. Evaluating the incidence and treatment of telaprevir-induced rash. Platform Presentation. GI/Liver/Nutrition PRN of ACCP. Hollywood, FL. October 2012.
8. **Smith MA**. Antibiotic use for the prevention of COPD exacerbations. Seminar Presentation. UPMC Presbyterian Shadyside, Pittsburgh, PA. October 2012.
7. **Smith MA**, Patel R. Updates in incretin analogues for diabetes. Pharmacy Grand Rounds. UPMC Presbyterian Shadyside, Pittsburgh, PA. May 2012.
6. **Smith MA**. Immunosuppressive effects of fentanyl and dexmedetomidine in critically-ill patients who develop ventilator-associated pneumonia. Platform Presentation. Eastern States Conference 2012, Hershey, PA. May 2012.
5. **Smith MA**. From student to pharmacist: a prescription for success. Invited Presentation. University of Pittsburgh School of Pharmacy, Pittsburgh, PA. April 2012.
4. **Smith MA**. Immunosuppressive effects of fentanyl and dexmedetomidine in critically-ill patients who develop ventilator-associated pneumonia. Seminar Presentation. UPMC Presbyterian Shadyside, Pittsburgh, PA. April 2012.
3. **Smith MA**. Bad blood. Platform Presentation. UPMC Presbyterian Shadyside, Pittsburgh, PA. December 2011.
2. **Smith MA**. Ketamine use in the critically ill. Seminar Presentation. UPMC Presbyterian Shadyside, Pittsburgh, PA. November 2011.
1. **Smith MA**, Mascara G, Gardner E. Therapeutic class review: eltrombopag and romiplostim. AMCP/FMCP National P&T Competition, AMCP Annual Meeting and Showcase, San Diego, CA. April 2010.

Poster Presentations

†Indicates pharmacy learner under my direction

10. †Dadiomov D, Keefer P, **Smith MA**. Using the LACE score as a predictor of clinical outcomes in palliative care patients. ASHP Midyear Clinical Meeting, Las Vegas, NV. December 2016.
9. **Smith MA**, Silveira MJ, Marks AD, O'Neil TA, Rodgers PE. MeRIT Project: Evaluation of a methadone rotation protocol on patient outcomes. Project Proposal. ACCP Annual Meeting, Hollywood, FL. October 2016.
8. Siemianowski LA, **Smith MA**. Virtual patient case utilization in an elective pharmacy course. Bright Idea Award Nomination. University of the Sciences, Philadelphia, PA. May, 2015.
7. **Smith MA**, Mohammad RA, Benedict NJ. Use of virtual patients to promote active, patient-centered learning in an advanced pharmacy therapeutics course. AACP Annual Meeting, Grapevine, TX. July 2014.

6. **Smith MA**, Johnson HJ, Chopra K, Dunn M, Ulrich A, Mohammad RA. Evaluating the incidence and treatment of telaprevir-induced rash. ACCP Annual Meeting, Albuquerque, NM. October 2013.
5. **Smith MA**, Johnson HJ, Chopra K, Dunn M, Mohammad RA. Evaluating the incidence and treatment of telaprevir-induced rash. ASHP Midyear Clinical Meeting, Las Vegas, NV. December 2012.
4. Swintek LM, **Smith MA**, Johnson HJ, Dunn M, Mohammad RA. Evaluation of the clinical impact of the calcium channel blockers—direct-acting antivirals interaction in chronic hepatitis C patients. ASHP Midyear Clinical Meeting, Las Vegas, NV. December 2012.
3. **Smith MA**, Hibino M, Kloet MA, Seaton SM. Improving patients' admission drug reconciliation: the IPAD reconciliation study. ASHP Midyear Clinical Meeting, New Orleans, LA. December 2011
2. **Smith MA**. Captivating active P1 student leaders (CAPSL) project. APhA Annual Meeting & Exposition, San Antonio, TX. March 2009
1. **Smith MA**, Cost MR, Bajpayee GL, Yang H, Rohan LC. The development of UC-781 as a microbicide: tissue localization and film formulation. CTSI. Pittsburgh, PA, August 2008.

In Progress

Smith MA, Marshall VD, O'Neil T. Effect of discontinuation of anti-rejection medications on the outcomes of solid organ transplant patients.

Smith MA, Marks A, O'Neil T, Silveria M, Marshall VD, Rodgers P. Retrospective review of methadone use for the treatment of pain in adult palliative care patients.

Waite LH, **Smith MA**. Evaluation of problem-based learning as a strategy to enhance critical thinking and expand the pharmacotherapeutics curriculum.

Smith MA, Waite LH. Advanced assessment of student performance in pain management utilizing a virtual patient.

RESIDENCY INVOLVEMENT

University of Michigan Health System, Ann Arbor, MI

Elective Rotation — Adult Palliative Care, Inpatient Consult Service/Inpatient Primary Service

Elective Rotation — Adult Palliative Care, Ambulatory

PGY2 Ambulatory Care Resident — Jessica Fennelly, PharmD (2016)

PGY2 Ambulatory Care Resident — Nada Farhat, PharmD (2016)

University of Pennsylvania Health System, Philadelphia, PA

PGY1 Internal Medicine Rotation

Hospital of the University of Pennsylvania — Emily Kreider, PharmD (2015)

Penn Presbyterian Medical Center — Kasey Brown, PharmD (2014)

TEACHING EXPERIENCE

University of Michigan, College of Pharmacy, Ann Arbor, MI

DIDACTIC

Introduction to Drug Discovery and Drug Product Development

Lecturer — **Drug Addiction and Dependency**. March 2017.

Therapeutics Problem Solving

Lecturer — **Substance Abuse and Smoking Cessation**. January 2017.

PharmD Investigations Preceptor

Class of 2019 — Heather Gillespie, Darene Moqbel, Krysta Walter

Class of 2018 — Taylor Bergmann, Nathan Steffke

PharmD Seminar Preceptor

Class of 2017 — Michael Kwiatkowski, Emily Belarski

COORDINATOR

Chronic Disease Management. 2016.

EXPERIENTIAL

Advanced Pharmacy Practice Experience

Preceptor — Adult Palliative Care (Ambulatory), 8 students/year

University of the Sciences, Philadelphia College of Pharmacy, Philadelphia, PA

COORDINATOR

Problem-based Approach to Acute Care Medicine. 2015.

DIDACTIC

Introduction to Pharmacy and Healthcare

Lecturer — **Hospital Pharmacy**. April 2015.

Care for the Patient with Diabetes

Lecturer — **Inpatient Management of Diabetes**. December 2014, March 2015, November 2015.

Technology in Healthcare, Patient Navigation Certificate Program

Simulation and Virtual Learning in Clinical Education Module

Clinical Pharmacokinetics and Individualized Drug Dosing

Lecturer — **Renal Dysfunction**. September 2014, 2015.

Lecturer — **Hepatic Dysfunction**. September 2014, 2015.

Recitation Facilitator — Fall 2014, 2015.

Remediation Facilitator — Individualized Drug Dosing in Pediatrics. February 2014.

Remediation Facilitator — Assay Methodologies for Therapeutic Drug Monitoring. February 2014.

Remediation Facilitator — Effects of Altered Renal Physiology on Drug Pharmacokinetics. February 2014.

Remediation Facilitator — Individualized Drug Dosing in Renal Replacement Therapy. April 2014.

Human Disease and Application of Therapeutics III

Lecturer — **Liver Disease.** March 2015.

Lecturer — **Drug-Induced Disease.** April 2014, July 2014, February 2015.

Human Disease and Application of Therapeutics I

Lecturer — **Drug Dosing in Renal Disease.** January 2014.

Principles in Pharmacotherapeutics and Human Disease

Lecturer — **Drug Dosing in Renal Disease.** October 2014, 2015.

Lecturer — **GERD.** September 2015.

Lecturer — **SRMD, PUD, GIB.** September 2015.

Lecturer — **Drug-Drug Interactions.** October 2015.

Practice Lab and Case Studies III and IV

Instructor — Case and Lab. 2013-2015.

Practice Lab and Case Studies II

Case Developer — **Drug Dosing in Renal Disease.** Spring 2014.

APPE Preparatory Enrichment

Journal Club — Content developer and facilitator. May 2014, 2015.

EXPERIENTIAL

Advanced Pharmacy Practice Experience

Co-Preceptor — Internal Medicine, 16 students/year

University of Pittsburgh, School of Pharmacy, Pittsburgh, PA

DIDACTIC

Advanced Pharmaceutical Care II

Facilitator — Problem Based Learning Pedestrian vs. Car Case. January 2013.

Standardized Physician — Capstone Case. April 2012.

Facilitator — Problem Based Learning Chronic Kidney Disease Case. March 2012.

Facilitator — Problem Based Learning Assault Case. January 2012.

Advanced Pharmaceutical Care I

Facilitator — Problem Based Learning Asthma Case. February 2012.

Lecturer — **Asthma.** February 2012.

Drug Development II: Pharmacokinetics

Coordinator — **Clinical Application of Pharmacokinetics: Practicum.** November 2012.

Lecturer — **Clinical Application of Pharmacokinetics: Vancomycin.** November 2012.

Lecturer — **Clinical Application of Pharmacokinetics: Aminoglycosides.** November 2012.

Lecturer — **Clinical Application of Pharmacokinetics: Book to Bedside.** November 2012.

Profession of Pharmacy III

- Evaluator — Standardized Patient Interview Final. November 2012.
- Facilitator — Standardized Patient Interviewing. October 2012.
- Standardized Patient and Nurse — **Rash With a Twist**. November 2011.
- Lecturer — **Minor Burns and Sunburn**. October 2011.

Advanced Infectious Diseases

- Facilitator — Cryptococcal Meningitis. September 2012.
- Facilitator — Endocarditis. November 2011.

Pulmonology/Rheumatology

- Coordinator — **Asthma Virtual Patient Simulation**. September 2012.
- Facilitator — Respiratory Laboratory. September 2012.
- Lecturer — **Asthma Therapeutics**. September 2012.

Profession of Pharmacy II

- Facilitator — Blood Pressure Measurement. January 2012, 2013.
- Evaluator — Patient Counseling Interview Final. April 2012.
- Preceptor — Silver Scripts. March 2012.
- Facilitator — Family and Friends Case Presentations. January 2012.

Endocrinology

- Standardized Patient and Physician — Thyroid Disorders. October 2011.

Peter M. Winter Institute for Simulation Education and Research, Pittsburgh, PA

DIDACTIC

Pharmacotherapy of Cardiovascular Disease

- Simulation Evaluator — Summative Clinical Examinations. November 2011, 2012.
- Simulation Facilitator — Dysrhythmia, Myocardial Infarction, Stroke, and Heart Failure. November 2011.
- Simulation Facilitator — Acute Coronary Syndrome. October 2011.

University of Pittsburgh, School of Dental Medicine, Pittsburgh, PA

DIDACTIC

Dental Hygienist Pharmacology

- Lecturer — **Autonomic Pharmacology**. October 2011.

ACADEMIC SERVICE

University of Michigan, Ann Arbor, MI

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|------------------------|---|
| October 2016 — Present | Palliative Care Operations Work Group, Member (Michigan Medicine) |
| August 2016 — Present | PharmD Investigations Committee, Member (COP) |
| August 2016 — Present | Clinical Skills Committee, Member (COP) |

March 2016 — Present Palliative Care Education Committee, Member (Michigan Medicine)

January 2016 — Present Pain Management Committee, Member (Michigan Medicine)

University of the Sciences, Philadelphia College of Pharmacy, Philadelphia, PA

July 2014 — November 2015 Internal Grant Reviewer (University)

July 2014 — November 2015 Committee on Planning, Member (College)

July 2014 — November 2015 Education Committee, Member (Department)

May 2014 — November 2015 Institutional Review Board, Member (University)

January 2014 — October 2014 Research and Scholarly Activities Committee, Member (College)

PROFESSIONAL SERVICE

Reviewing Activities

August 2015 — Present Journal of Pharmacy Practice

August 2015 — Present American Journal of Pharmaceutical Education

July 2015 — Present The Journal of Pain

November 2014 — Present Annals of Pharmacotherapy

September 2014 — Present Currents in Pharmacy Teaching and Learning

Professional Organizations

2016 — Present Society of Palliative Care Pharmacists (Founding Member)
Development Committee Member (2016 - Present)

2015 — Present American Academy of Hospice and Palliative Medicine

2012 — Present American Association of Colleges of Pharmacy

2011 — Present	American College of Clinical Pharmacy GI/Liver/Nutrition Practice and Research Network -Chair (2015-16), Chair-Elect (2014-15), Secretary/Treasurer (2013-14) Adult Medicine Practice and Research Network Pain and Palliative Care Practice and Research Network Infectious Diseases Practice and Research Network Education and Training Practice and Research Network National Resident Advisory Committee of ACCP (2012-13)
2008 — Present	American Society of Health-System Pharmacists Science and Research Advisory Group (2012-13)

Consulting

January 2015 — Present	Clinical Consultant Wolters Kluwer, Clinical Drug Information
October 2014 — November 2015	Consultant, Gastroenterology/Hepatology p-value communications, LLC

HONORS AND AWARDS

Professional

2016 — 2018	Mentored Research Investigator Training (MeRIT) Program of ACCP RI
2013	ICAAC ID Fellows Grant
2012	Travel Award — GI, Liver, and Nutrition PRN of ACCP
2008	JHF Patient Safety Fellow
2008	CTSI Research Fellow

University of the Sciences, Philadelphia, PA

2015	Educational Bright Idea Award, Virtual Patient Implementation
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University of Pittsburgh, School of Pharmacy, Pittsburgh, PA

2013	Resident of Distinction, University of Pittsburgh School of Pharmacy
2010	Samuel T. and Herbert S. Shear Family Scholarship for future impact on the profession

2009	Frank Miller Coad Memorial Scholarship
2009	Carl and Virginia Stoehr Scholarship for involvement and leadership
2008	Ralph R. Kartub Scholarship for enthusiasm and commitment
2007	University of Pittsburgh School of Pharmacy Alumni Board Scholarship

Leadership

2009	Hesselbein Global Academy Student Leadership Summit
2008	Phi Lambda Sigma
2007 — 2011	Class President, University of Pittsburgh, School of Pharmacy

REFERENCES

Available Upon Request