

Jeremy B **Provance**, MS *Curriculum Vitae*

CONTACT INFORMATION

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Department of Biomedical & Health Informatics
University of Missouri-Kansas City School of Medicine
2411 Holmes Street
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EDUCATION

PhD Bioinformatics (May 2021, expected), UMKC School of Medicine
Quality of Care and Outcomes in Patients with Critical Limb Ischemia

MS Bioinformatics (2017), UMKC School of Medicine
Decisional Conflict in Peripheral Artery Disease: Association with Treatment Choice and Health Status

BA Biology (2014), William Jewell College
*Fermentation Vessel Geometry Effects on *Saccharomyces cerevisiae* Metabolites with Gas Chromatograph-Mass Spectroscopy Analysis*

PROFESSIONAL EXPERIENCE

Graduate Research Assistant (2017-Present), Saint Luke's Mid America Heart Institute (Kansas City, Missouri)

Software Support Analyst (2015-Present), UMKC School of Medicine

Microbiologist (2015), Boulevard Brewing Company (Kansas City, Missouri)

Brewer (2014), Tallgrass Brewing Company (Manhattan, Kansas)

PEER-REVIEWED PUBLICATIONS

1. Smolderen KG, Malik AO, Peri-Okonny P, Gosch K, Thomas BT, Mena C, Hiatt W, Aronow HD, Jones PG, **Provance JB**, Labrosciano C, Jelani Q, Spertus JA. 2020. Association of Perceived Stress with Health Status in Patients with Peripheral Artery Disease. *Journal of Psychosomatic Research*. Accepted.

2. Smolderen KG, Pacheco C, **Provance JB**, Stone N, Fuss C, Decker C, Bunte M, Jelani Q, Safley DM, Secemsky E, Sepucha K, Spatz ES, Mena-Hurtado C, Spertus JA. 2020. Treatment Decisions for Patients with Peripheral Artery Disease and Symptoms of Claudication: Development Process and Alpha Testing of the SHOW-ME-PAD © Decision-Aid. *Vascular Medicine*. Accepted.
3. Peri-Okonny P, Spertus JA, Malik AO, Jackson EA, Shishehbor MH, Mena-Hurtado C, **Provance JB**, Hejjaji V, Patel S, Gosch KL, Smolderen KG. 2020. Physical Activity after Treatment for Symptomatic Peripheral Artery Disease. *American Journal of Cardiology*.
4. Peri-Okonny P, Patel S, Heyligers JM, Spertus JA, Jackson EA, Malik AO, **Provance JB**, Mena C, Shishehbor MH, Hejjaji V, Gosch KL, Smolderen KG. 2020. Physical Activity in Patients with Symptomatic Peripheral Artery Disease: Insights from the PORTRAIT Registry. *European Journal of Vascular & Endovascular Surgery*.
5. Malik AO, Peri-Okonny P, Gosch K, Thomas M, Mena C, Hiatt WR, Jones PG, **Provance JB**, Labrosciano C, Jelani Q, Spertus JA, Smolderen KG. 2020. Association of Perceived Stress Levels with Long-Term Mortality in Patients with Peripheral Artery Disease. *JAMA Netw Open*. 3(6):e208741.
6. **Provance JB**, Spertus JA, Decker C, Jones PG, Smolderen KG. 2019. Assessing Patient Preferences for Shared Decision-Making in Peripheral Artery Disease: Insights from the PORTRAIT Registry. *Circulation: Cardiovascular Quality and Outcomes*. 12(8).
7. Ward-Smith P, Hawks JH, Quallich SA, **Provance JB**. 2018. Workplace incivility: Perceptions of urology nurses. *Urological Nursing*. 38(1), 20-26.
8. Hoffman MA, **Provance JB**. 2017. Visualization of Molecular Structures Using HoloLens-based Augmented Reality. *AMIA Jt Summits Trans Sci Proc*. 68-74.

PUBLISHED ABSTRACTS

1. **Provance JB**, Spertus JA, Jones PG, Bunte MC, Vogel TR, Hoffman MA, Mena-Hurtado C, Anderson BS, Smolderen KG. 2020. Factors Associated with 30-Day Amputation in Patients with Critical Limb Ischemia Undergoing Endovascular Intervention. *American College of Cardiology*. Submitted.
2. **Provance JB**, Spertus JA, Jones PG, Bunte MC, Vogel TR, Hoffman MA, Mena-Hurtado C, Smolderen KG. 2020. Site Variability in 30-Day Amputation Rates Among Patients with Critical Limb Ischemia Undergoing Endovascular Intervention. *American College of Cardiology*. Submitted.
3. **Provance JB**, Spertus JA, Decker C, Buchanan D, Jones P, Smolderen KG. 2019. Preferences and Patterns of Shared Decision-Making in Patients With Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.
4. Peri-Okonny P, Malik A, **Provance JB**, Hejjaji V, Gosch K, Spertus JA, Smolderen KG. 2019. Cross Country Comparison of Leisure Time Physical Activity Trajectories in Patients With Symptomatic Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.
5. Peri-Okonny P, Malik A, **Provance JB**, Hejjaji V, Gosch K, Spertus JA, Smolderen KG. 2019. Leisure Time Physical Activity After Invasive Treatment For Symptomatic Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.
6. Malik AO, Peri-Okonny P, **Provance JB**, Gosch K, Thomas M, Labrosciano C, Spertus JA, Smolderen KG. 2019. The Association of Perceived Stress With Health Status Outcomes in Patients With Peripheral Artery Disease. *JACC*. 73(9): S1.

7. **Provance JB**, Spertus JA, Decker C, Smolderen KG. 2018. Examining Patients' Knowledge With Regards to Peripheral Artery Disease Treatments and Outcomes: Insights From the PORTRAIT Registry. *Circulation*. 138: A15970.
 8. **Provance JB**, Spertus JA, Decker C, Smolderen KG. 2018. How Patients Value Different Treatment Goals and Outcomes in Peripheral Artery Disease Outcomes: Insights From the PORTRAIT Registry. *Circulation*. 138: A16038.
 9. **Provance JB**, Spertus JA, Safley D, Jones P, Sepucha K, Spatz E, Decker C, Smolderen KG. 2017. Decisional Conflict in Peripheral Artery Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry. *Circulation*. 136: A20550.
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PODIUM PRESENTATIONS

1. *Visualization of molecular structures using HoloLens-based augmented reality*, Midwest Bioinformatics Conference, 2017 [video, start at 28:35]
 2. *Visualization of molecular structures using HoloLens-based augmented reality*, American Medical Informatics Association Joint Summits for Translational Science, 2017
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MODERATED POSTER PRESENTATIONS

1. *Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry*, American College of Cardiology Scientific Sessions, 2019
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POSTER PRESENTATIONS

1. *Patterns of Provider-type Encounters for Patients with Peripheral Artery Disease, Insights from the Cerner Health Facts Database*, UMKC Virtual Health Sciences Student Research Summit, 2020
2. *Catatonic patients given atypical antipsychotics have a significantly longer length of stay Catatonic patients treated early with a benzodiazepine have a significantly shorter length*, UMKC 3rd Year Medical Student Poster Presentations, 2019
3. *The Protective Effects of Smoking on Catatonia*, UMKC 3rd Year Medical Student Poster Presentations, 2019
4. *The Effects of Insurance Status on the Route Type of the Catatonia Medication Prescribed*, UMKC 3rd Year Medical Student Poster Presentations, 2019
5. *Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry*, Saint Luke's Hospital Annual Research Day, 2019
6. *Studying Non-Traumatic, Lower-Limb Amputations in the Cerner Health Facts EMR Database*, UMKC Health Sciences Student Research Summit, 2019
7. *Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry*, UMKC Health Sciences Student Research Summit, 2019

8. *Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry*, UMKC Community of Scholars Research Symposium, 2019
 9. *Examining Patients' Knowledge with Regards to Peripheral Artery Disease Treatments and Outcomes: Insights from the PORTRAIT Registry*, American Heart Association Scientific Sessions, 2018
 10. *How Patients Value Different Treatment Goals and Outcomes in Peripheral Artery Disease Outcomes: Insights from the PORTRAIT Registry*, American Heart Association Scientific Sessions, Chicago, 2018
 11. *The Effect of Language Barrier on Prescribing of Pain Medication for Patients Diagnosed in the Emergency Department with Kidney Stones*, Truman Medical Center Emergency Medicine Resident Research Day, 2018
 12. *Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry*, Saint Luke's Hospital Annual Research Day, 2018
 13. *Comparison of a National and a Local Electronic Health Data Warehouse for Clinical Laboratory Quality Improvement Research*, Midwest Bioinformatics Conference, 2018
 14. *Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry*, American Heart Association Scientific Sessions, 2017
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PROGRAMMING

Expert: R, SAS, SQL, Markdown

Intermediate: MongoDB, Python, MySQL, PostgreSQL

Working Knowledge: PHP, HTML5, CSS, Oracle, Command Line

HONORS & AWARDS

2020

Scientific Writing Program Selection, Genetics Society of America and BioKansas

2019

3rd Place (Poster), UMKC Community of Scholars Research Symposium

Ida Bamberger Memorial Research Award, UMKC School of Medicine

Travel Award, UMKC School of Graduate Studies

2018

Travel Award, UMKC School of Graduate Studies

Sarah Morrison Student Research Award, UMKC Office of Research Administration

2017

Travel Award, UMKC School of Graduate Studies

GRANT PARTICIPATION

2020-2025 (submitted)

Role: *Database Analyst*

Project: Pragmatic Trial: Medication Adherence Given Individual Change (PT-MAGIC) Study

Principle Investigator: Cynthia Russell, PhD, RN

Funding Agency: National Institute of Nursing Research (R01)

Projected Total Costs: \$2,405,190

2016-2018

Role: *Electronic Data Warehouse Analyst* (0.2 FTE)

Project: Practice-Based Evidence Using Local and National Data for Quality Improvement

Principal Investigators: Mark Hoffman, PhD; Kamani Lankachandra, MD

Funding Agency: Center for Disease Control (RFA-OE16-1602)

Grant amount: \$956,553 (3 years)

TEACHING EXPERIENCE

Instructor, Department of Biomedical & Health Informatics, UMKC School of Medicine

MEDB 5512: Clinical Trials (2020, 2021)

Teaching Assistant, Department of Biomedical & Health Informatics, UMKC School of Medicine

MEDB 5512: Clinical Trials (2019)

INVITED PRESENTATIONS & GUEST LECTURES

2019

Preparing Next-generation Scientists for Biomedical Big Data: Artificial Intelligence Approaches, Multi-disciplinary Seminar, UMKC School of Medicine [slides]

2018

Generalized Linear Mixed Models-Logistic Regression, Biostatistics III, UMKC School of Medicine

Introduction to Digital Open Science, Multi-disciplinary Seminar, UMKC School of Medicine [slides]

Using Cerner i2b2 and Health Facts for Clinical Trials and General Research, Clinical Trials, UMKC School of Medicine

2017

Visualization of molecular structures using HoloLens-based augmented reality, Multi-disciplinary Seminar, UMKC School of Medicine

Using the De-identified Cerner i2b2 Database as a Research Resource, Medical Student Neuroscience Course, UMKC School of Medicine

RESEARCH MENTORSHIP

2020: Geetha Rajagopal, Medical Student, UMKC School of Medicine

2020: 3rd Year Medical Student Neuroscience Statistical Mentorship, UMKC School of Medicine

2019-2020: Fahad Qureshi, Medical Student, UMKC School of Medicine

2019: 3rd Year Medical Student Neuroscience Statistical Mentorship, UMKC School of Medicine

PROFESSIONAL SERVICE

American Heart Association *Quality of Care & Outcomes Research Scientific Sessions* (Data Science & Health Information Technology Abstract Reviewer, 2020-)

Saint Luke's Hospital Research Day (Poster Judge, 2019)

American Heart Association, *Circulation: Cardiovascular Quality and Outcomes* (Reviewer, 2017-)

American Medical Informatics Association, *Informatics Summits* (Abstract Reviewer, 2017-)

PROFESSIONAL MEMBERSHIP

American College of Cardiology (Student Member, 2019-)

American Heart Association (Student Member, 2017-)

American Medical Informatics Association (Student Member, 2017-)

PODCAST APPEARANCES

Role in implementing i2b2 software, how i2b2 facilitates research goals, and challenges within clinical trials, The Research Rundown Podcast Series, Episode 3, Cerner Corporation, 2018

SERVICE LEADERSHIP

UMKC Graduate Student Council, *President (2019), Vice President (2018), Secretary (2016, 2017)*

William Jewell College Presidential Mentorship Program, *Mentor* (2019-Present)

UMKC School of Graduate Studies Strategic Planning Committee, *Student Member* (2019)

UMKC School of Graduate Studies Assistantship and Tuition Task Force, *Student Member* (2019)

Golden Key International Honor Society, Inducted 2016, *Treasurer (2016)*

Omicron Delta Kappa Honor Society, Inducted 2016

UMKC Biomedical & Health Informatics Chair Search Committee, *Student Member* (2016-2017)

UMKC Biomedical & Health Informatics Curriculum Committee, *Student Member* (2016-2017)

Phi Gamma Delta-Zeta Phi, Board of Graduate Advisers (2014-Present)

William Jewell College Student Senate, *President (2013), Treasurer (2014, 2012)*

Phi Gamma Delta-Zeta Phi, *New Member Educator (2014), Treasurer (2013), Judicial Chair (2012)*

William Jewell College Cardinal Hosts (2011-2014)

Missouri Boys State Staff Counselor (2010)

Missouri Boys State (2009) *Boys Nation Finalist*

PERSONAL ACHIEVEMENTS

Kansas City Marathon *2010, 2011, 2016, 2019*

Hospital Hill Half Marathon *2017, 2018, 2019*

Kansas City Half Marathon *2012, 2013, 2018*

Kansas Half Marathon *2014*

Des Moines 5150 Triathlon *2012*

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