

CURRICULUM VITAE

Meera J. Patel, PhD
UT Southwestern Medical Center
Peter O'Donnell Jr. School of Public Health
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EDUCATION

University of Delaware

Newark, Delaware

Doctor of Philosophy, Medical Sciences, May 2021

Rowan University – Graduate School of Biomedical Sciences

Stratford, New Jersey

Master of Sciences, Biomedical Sciences, August 2015

Rutgers University

New Brunswick, New Jersey

Bachelor of Arts, Cell Biology and Neuroscience, Psychology, May 2013

ACADEMIC APPOINTMENTS

2024 – Present Instructor (Research Track), University of Texas Southwestern Medical Center
Peter O'Donnell Jr. School of Public Health, Dallas, Texas

2016 – 2021 Graduate Teaching Assistant, Department of Medical and Molecular Sciences,
University of Delaware, Newark, Delaware

2013 – 2015 Graduate Teaching Assistant for Biochemistry, Rowan University School of
Osteopathic Medicine, Stratford, New Jersey

RESEARCH EXPERIENCE/TRAINING

2024 – Present Instructor (Research Track), University of Texas Southwestern Medical
Center, Peter O'Donnell Jr. School of Public Health, Dallas, Texas

2023 – 2024 Research Scientist, University of Texas Southwestern Medical Center, Peter
O'Donnell Jr. School of Public Health, Dallas, Texas

- Co-Investigator, GUARDD-US, NIH
- Sub-Investigator, PREVENTABLE, NIA
- Co-Investigator, Program to Alleviate National Disparities in Ethnic and
Minority Immunizations in the Community (PANDEMIC), CDC
- Co-Investigator, IMPaCT, Merck Sharp & Dohme LLC
- Co-Investigator, I-POP, Communities Foundation of Texas

- 2023 – Present Program Lead, Community Engagement Planning and Pilot Grants, Office of Community Health and Research Engagement, Clinical and Translational Science Award, UT Southwestern Medical Center, Dallas, TX
- 2022 – 2023 Research Scientist, Baylor Scott & White Health and Wellness Center, Baylor Scott and White Health, Dallas, Texas
- Project Manager, Genetic Testing to Understand and Address Renal Disease Disparities Across the United States (GUARDD-US), NIH
 - Project Manager, PRagmatic Evaluation of events And Benefits of Lipid-lowering in oLER adults (PREVENTABLE), National Institute of Aging
 - Sub-Investigator, Long-term comparative effectiveness of once-daily oral semaglutide versus any other oral glucose-lowering medication in a real-world adult population with type 2 diabetes on metformin monotherapy in US based health care systems – a pragmatic randomized trial, Novo Nordisk NN9924-4558/REALYSE
 - Co-Investigator, Integrated Population Health (I-POP) Study to Improve Health Outcomes in Uninsured Adults, Communities Foundation of Texas Caruth 360 Degrees of Health
 - Project Manager, Identifying a Cardiorenal Protective Diet in a Lower Income Population with Chronic Kidney Disease at Risk for Cardiovascular Disease, Baylor Healthcare System Foundation
 - Project Manager, A Pilot Study Comparing Dietary Approaches to Decrease Hypertension in a Lower Income, African American Population at Risk for Cardiovascular Disease, Baylor Healthcare Systems Foundation
 - Project Coordinator, Leveraging Technology in Underserved Populations with T2D for DSME, CDC
- 2021 – 2022 Research Postdoctoral Fellow, Baylor Scott & White Health and Wellness Center, Baylor Scott and White Health, Dallas, Texas (Kitzman, mentor)
- 2016 – 2021 Research Assistant, Department of Medical and Molecular Sciences, University of Delaware, Newark, Delaware
- 2015 – 2016 Research Associate, Rowan University – Graduate School of Biomedical Sciences, Stratford, New Jersey
- 2011 – 2013 Research Assistant, Rutgers University – Department of Cell Biology and Neuroscience, New Brunswick, New Jersey

RESEARCH AND EXTERNAL SUPPORT

- 2017 – 2018 University of Delaware, Provost’s Initiative for Excellence and Innovation in E-Learning, University of Delaware. **Meera J. Patel, Co-I**, Marie Wood, Co-I, Esther Biswas, Co-I. Total budget: \$9,000.
- 2018 – 2019 Bioethics and Research Integrity Training for Early Career Graduate Students. Curriculum Development Grant Award. Center of Science, Ethics and Public

- Policy, School of Arts and Sciences, University of Delaware. **Meera J. Patel, PI**. Total budget: \$3,000
- 2019; 2020 Development of a Robust Expression Platform for the Human Retina-Specific ABCA4 Transporter in Virus-Like Particles. Summer Doctoral Fellowship, Office of Graduate and Professional Education, University of Delaware. **Meera J. Patel, PI**. Total budget: \$4,500 for each summer
- 2020 – 2021 Structural Characterization of Virus-Like Particles Harboring the Human Retina-Specific ABCA4 Protein. Core Center Access Award, Delaware IDeA Network of Biomedical Research Excellence (INBRE). **Meera J. Patel, PI**. Total budget: \$4,000.
- 2020 – 2021 Functional Characterization of the Human Retina-Specific ABCA4 Transporter in Virus-Like Particles. Grants-in-Aid of Research, Sigma Xi – The Scientific Research Honor Society. **Meera J. Patel, PI**. Total budget: \$2,500.
- 2019 – 2025 Building and Deploying a Genomic-Medicine Risk Assessment Model for Diverse Primary Care Populations (GUARDD-US), Lori Ann Orlando, MD, PI, Heather Kitzman, Co-I/Site PI, **Meera Patel, Site Co-I**, National Institutes of Health, Total Costs, \$2,967,476.
- 2020 – 2023 Integrated Population Health (I-POP) Study to Improve Health Outcomes in Uninsured Adults. Heather Kitzman, PI, **Meera Patel, Co-I**, Communities Foundation of Texas Caruth 360 Degrees of Health, Total costs \$600,000.
- 2023 – 2025 Improving Minority Participation in Clinical Trials (IMPACT): A mixed methods qualitative study leveraging a community-based participatory research infrastructure. Heather Kitzman, PI, **Meera Patel, Co-I**. Merck. Total costs \$145,575.
- 2023 – 2025 Program to Alleviate National Disparities in Ethnic and Minority Immunizations in the Community. Linda Cottler, PI, Heather Kitzman, Co-I, **Meera Patel, Co-I**. CDC, University of Florida. Total costs \$ \$379,701 (site budget).

PUBLICATIONS

Patel, M.J. (2015) *Conformational Dynamics of DnaA Protein of Bacillus anthracis in the Initiation of DNA Replication: A Fluorescence Resonance Energy Transfer Study*. M.S. Thesis. Rowan University School of Medicine, Stratford, New Jersey.

Patel, M.J., Bhatia, L., Yilmaz, G., Biswas-Fiss, E.E., Biswas, S.B. (2017) *Multiple Conformational States of DnaA Protein Regulate its Interaction with DnaA Boxes in the Initiation of DNA Replication*. *Biochimica et Biophysica Acta (BBA) – General Subjects*, 1861(9), 2165-2174. doi:10.1016/j.bbagen.2017.06.013.

Patel, M. J., Yilmaz, G., Bhatia, L., Biswas-Fiss, E. E., Biswas, S. B. (2018) *Site-Specific Fluorescence Double-Labeling of Proteins and Analysis of Structural Changes in Solution by Fluorescence Resonance Energy Transfer (FRET)*. MethodsX. doi:10.1016/j.mex.2018.03.006.

Patel, M.J., Biswas, S., Biswas-Fiss, E. (2019) *Functional Significance of the Conserved C-Terminal VFVNFA Motif in the Retina-Specific ABC Transporter, ABCA4, and Its Role in Inherited Visual Disease*. Biochemical and Biophysical Research Communications (BBRC). doi:10.1016/j.bbrc.2019.08.121.

Patel, M.J., Biswas, S., Biswas-Fiss, E. (2020) *Integrated Approaches to Understanding Novel Genetic Variants Identified Through Molecular Diagnostic Testing*. [ASCLS Today](#).

Patel, M.J. (2021) *Characterization of the Functional Roles of ABCA4 in the Pathology of Inherited Visual Disease*. Doctoral Dissertation. University of Delaware, Newark, Delaware.

Kitzman, H., Dodgen, L., Vargas, C., Khan, M., Montgomery, A., **Patel, M.**, Ajoku, B., Allison, P., Strauss, A., Bowen, M. (2023). Community health worker navigation to improve allostatic load: The Integrated Population Health (IPOP) Study. Contemporary Clinical Trials Communications. doi:10.1016/j.conctc.2023.101235.

PUBLISHED ABSTRACTS & CONFERENCE PRESENTATIONS

Patel, M.J. and Green, W. (2009) *The Role of Levodopa in the Treatment of Parkinson's Disease* (oral). UMDNJ-SHRP and UMDNJ-SOM Medical Science Academy Research Day. University of Medicine and Dentistry School of Osteopathic Medicine, Stratford, New Jersey.

Patel, M.J. and Biswas, S.B. (2014) *A New Approach for the Expression of Multiprotein Complexes in Baculovirus* (oral). Fall Research Retreat for Cell and Molecular Biology. Rowan University School of Osteopathic Medicine, Stratford, New Jersey.

Mbanefo, A., **Patel, M. J.,** Biswas-Fiss, E. (2017) *Fluorescence Resonance Energy Transfer (FRET) as a Tool for Assessing Disease Associated Mutations in the Retina Specific ABC Transporter, ABCA4* (oral). Eighth Annual Undergraduate Research and Service Celebratory Symposium. University of Delaware, Newark, Delaware.

Patel, M.J., Biswas-Fiss, E.E., and Biswas, S.B. (2017) *Conformational Dynamics of DnaA Protein Drive the Switch Promoting Initiation of DNA Replication in Bacillus anthracis* (oral). Fifth Annual Microbial Systems Symposium. University of Delaware, Newark, Delaware.

Waghray, S., Brandt, S., **Patel, M.J.,** Das, S., Biswas-Fiss, E., Biswas, S. (2018) *Structural Analysis of DnaB Helicase of Escherichia Coli by Fluorescence Resonance Energy Transfer (FRET)* (oral). Ninth Annual Undergraduate Research and Service Celebratory Symposium. University of Delaware, Newark, Delaware.

Latta, J., **Patel, M.J.,** Parcels, M., Biswas-Fiss, E. (2019) *Immunocharacterization of Domain-Specific Antibodies Against the Retina-Specific ABCA Transporter, ABCA4* (oral). Tenth Annual

Undergraduate Research and Service Celebratory Symposium. University of Delaware, Newark, Delaware.

Barndt, S., **Patel, M.J.**, Biswas, S. (2019) *DnaB Alpha Structure Analysis: Study of Alpha Domain Using Fluorescence Resonance Energy Transfer (FRET)* (oral). Tenth Annual Undergraduate Research and Service Celebratory Symposium. University of Delaware, Newark, Delaware.

Patel, M.J., and Biswas-Fiss, E.E. (2019) *Novel Translational Approaches to Studying the Retina-Specific ABCA4 Transporter and Its Macular Dystrophy-Associated Genetic Variants: Genotype-Phenotype Correlations* (oral). Ninth Graduate Students' Forum for Research and Creative Works. University of Delaware, Newark, Delaware.

Patel, M.J., Biswas, S., Biswas-Fiss, E. (2019) *Genetic Variants in the C-Terminal Domain of the Retina-Specific ABCA4 Protein Lead to Inherited Visual Diseases* (oral). First College of Health Sciences Research Day. University of Delaware, Newark, Delaware.

Patel, M.J., Montgomery, A., Allison, P., & Kitzman, H. (2022). *A Dietary Intervention to Reduce Cardiovascular Disease Risk in African Americans with Chronic Kidney Disease and Hypertension*. Oral Poster Presentation. Society of Behavior Medicine 43rd Annual Meeting: The Urgency of Adaptation, Baltimore, Maryland.

Patel, M.J., Wang, X., Bottiglieri, T., Kitzman, H., (2023). *Physiological Metabolomic Effects of a Cardiorenal Protective Diet Intervention in African Americans with Chronic Kidney Disease and Hypertension*. Oral Presentation. 19th Annual Conference of the Metabolomics Society. Niagara Falls, Canada.

Patel, M.J., Wang, X., Bottiglieri, T., Kitzman, H., (2024). *Physiological and Metabolomic Effects of a Community-Based Cardiorenal Protective Diet Intervention in African Americans with Chronic Kidney Disease and Hypertension*. Poster Presentation. Association for Clinical and Translational Science Conference. Las Vegas, Nevada.

HONORS AND AWARDS

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| 2009 | Prize winner for Poster Presentation Competition. UMDNJ-SHRP and UMDNJ-SOM Medical Science Academy Research Day University of Medicine and Dentistry School of Osteopathic Medicine. |
| 2015 | Outstanding Academic Achievement in Master of Science Award, Rowan University School of Osteopathic Medicine. |
| 2017 | Best Poster Presentation, 5 th Annual Microbial Systems Symposium, University of Delaware. |
| 2019 | Outstanding Poster Presentation, Ninth Graduate Students' Forum for Research and Creative Works, University of Delaware. |

PROFESSIONAL AFFILIATIONS

Society of Behavioral Medicine (SBM)
American Society of Biochemistry and Molecular Biology (ASBMB)
Sigma Xi, The Scientific Research Honor Society
The Association for Research in Vision and Ophthalmology (ARVO)
Graduate Women in Sciences (GWIS): Delaware Chapter – Founder, President, and National Liaison
Association for Clinical and Translational Science

INVITED PRESENTATIONS

Conformational Dynamics of DnaA Protein of Bacillus Anthracis in the Initiation of DNA Replication. Invited Guest Lecturer for Current Topics in Biotechnology (2015) Thomas Jefferson University, Philadelphia, Pennsylvania.

TEACHING EXPERIENCE

2014 – 2015 Graduate Teaching Assistant in Department of Biochemistry, Rowan University – School of Osteopathic Medicine and Graduate School of Biomedical Sciences

2016 – 2021 Graduate Teaching Assistant, Department of Medical and Molecular Sciences, University of Delaware, Newark, Delaware:
Medical Microbiology and Infectious Diseases
Introduction to Genetics and Molecular Diagnostics
Molecular Preparatory Techniques
Diagnostic Bacteriology and Medical Mycology Laboratory
Medical Biochemistry
Cell and Tissue Culture Techniques
Genetic and Molecular Diagnostics for Clinical Laboratory
Flow Cytometry
Clinical Immunology and Medical Virology

OUTREACH AND SERVICE

2017 Mentor, Afoma Mbefo, Summer Undergraduate Research Student (INBRE). University of Delaware, Newark, Delaware.

2018 Mentor, Shefali Waghray, Summer Undergraduate Research Student (INBRE). University of Delaware, Newark, Delaware.

2018 – 2023 Graduate Women in Science (GWIS); Founder, President, and National Liaison for the Delaware Chapter.

2018 – 2020 Mentored National Honor Society students at Newark High School (Newark, Delaware). MEDT100: Introduction to Medical Laboratory Science.

2019 Mentor, Sarah Barndt, Summer Undergraduate Research Student (INBRE). University of Delaware, Newark, Delaware.

- 2019 Mentor, Janae Latta, Summer Undergraduate Research Student (INBRE).
University of Delaware, Newark, Delaware.
- 2021 – 2022 Mentor, Walker Campbell, AP Research Project, Baylor Scott & White Health
and Wellness Center.
- 2022 – 2023 Mentor, Pamela Gomez, MPH Intern, Baylor Scott & White Health and Wellness
Center.
- 2023 – 2024 Mentor, Chiamaka Emerenini, Public Health Summer Intern, UT Southwestern
Medical Center, O'Donnell Jr. School of Public Health.
- 2023 – 2024 Mentor, Anika Srinath, MD/MPH Graduate Research Assistant, UT Southwestern
Medical Center, O'Donnell Jr. School of Public Health.
- 2024 – Mentor, Sriketan Tamirisa, High School Intern/Volunteer, UT Southwestern
Medical Center, O'Donnell Jr. School of Public Health