

CURRICULUM VITAE

NAME: Mohammad Alfrad Nobel Bhuiyan, Ph.D.

Homepage: <https://www.lsuhs.edu/departments/school-of-medicine/internal-medicine/research/bhuiyan-lab>

NCBI Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/mohammad%20alfrad%20nobel.bhuiyan.1/bibliography/public/>

Google Scholar: <https://scholar.google.com/citations?user=VGMYt7MAAAAJ&hl=en>

ResearchGate: <https://www.researchgate.net/profile/Mohammad-Bhuiyan-20>

Affiliation:

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EDUCATION

2015-2019	Ph.D., Biostatistics (Big Data Track) Division of Biostatistics and Bioinformatics Department of Environmental and Public Health Sciences University of Cincinnati, USA
2012-2015	M.Sc., Mathematical Statistics Division of Mathematical Statistics Department of Mathematical Science University of Cincinnati, USA
2009-2011	M.Sc., Applied Statistics Institute of Statistical Research and Training University of Dhaka, Bangladesh
2005-2009	B.Sc., Applied Statistics Institute of Statistical Research and Training University of Dhaka, Bangladesh

ACADEMIC POSITIONS AND EMPLOYMENT

10/2023-Present	Co-Director of Medical Student Research Louisiana State University Health Sciences Center-Shreveport Shreveport, LA
10/2023-Present	Director of Biostatistics and Computational Biology Louisiana State University Health Sciences Center-Shreveport

Shreveport, LA

08/2021-Present	Assistant Professor (Tenure Track) Department of Internal Medicine Louisiana State University Health Sciences Center-Shreveport Shreveport, LA
08/2019-07/2021	Biostatistician Medpace Inc, Cincinnati, OH
8/2019-12/2019	Instructor Department of Biostatistics and Bioinformatics University of Cincinnati, Cincinnati, OH
8/2019-12/2019	Statistician SMJ Data and Analytics, Fairfax, VA
08/2015-08/2019	Research Assistant Division of Biostatistics and Epidemiology Cincinnati Children Hospital Medical Center, Cincinnati, OH
01/2016-01/2017	Biostatistician Division of Pediatric and Thoracic Surgery Cincinnati Children Hospital Medical Center, Cincinnati, OH
05/2014-08/2015	Instructor Department of Mathematical Science University of Cincinnati, Cincinnati, OH
08/2012-08/2015	Tutor Department of Mathematical Science University of Cincinnati, Cincinnati, OH
08/2012-08/2014	Graduate Teaching Assistant Department of Mathematical Science University of Cincinnati, Cincinnati, OH
06/2011-08/2012	Consultant The World Bank Dhaka, Bangladesh
01/2012-08/2012	Research Assistant Department of Biostatistics and Epidemiology Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh

PATENT SUBMITTED:

1. US Application No. 63/533,197
2. US Application No. 63/599,876

BOOK CHAPTER:

1. Artificial Intelligence: Machine Learning, Convolutional Neural Networks and Large Language Models

HONORS

- 2024 Sep NIDA Diversity Scholar Program 2024
- 2024 Aug Summer student Ife Shango, got best student award for Undergraduate Research Apprenticeship Program, and I got the best mentor award
- 2024 Mar 2024 NIDA Diversity Scholars Network Program by NIDA
- 2024 Feb AHA Travel Grant for Data Bootcamp
- 2024 Feb Jolie Boullion my MS-Cardio Student received the best poster award from CCDS
- 2023 July Summer student Za'Christanae Eason, got best student award for Undergraduate Research Apprenticeship Program, and I got the best mentor award
- 2023 July Received best mentor Award for UGREP mentoring program
- 2023 Feb Received "Excellence in Translational Research" Award 2023
- 2023 Feb Two students secured 1st (Tyler Pierotti) and 2nd place (Zaki Al Yafeai) in the CCDS Feist Cardiovascular Research Symposium in the Clinical Research Category
- 2019 Travel Award, Division of Biostatistics and Epidemiology, Cincinnati Children's Hospital and Medical Center, USA
- 2019 Travel Award, Bayesian Causal Inference Workshop, Mathematical Bioscience Institute, USA
- 2015 - 2019 University Graduate Scholarship, Department of Biostatistics and Bioinformatics, University of Cincinnati, USA
- 2012 - 2015 University Graduate Scholarship, Department of Mathematical Science, University of Cincinnati, USA
- 2012 - 2015 Graduate Teaching Assistant, Department of Mathematical Science, University of Cincinnati, USA
- 2015 Summer Scholarship, University of Washington, USA
- 2013 Travel Award, Sweden-Bangladesh Trust Fund, Bangladesh
- 2012 Taft Enhancement Fellowship, University of Cincinnati, USA
- 2005 Merit Scholarship, Bangladesh Scholarship Council, and The Nippon Foundation, Japan

STATISTICAL EDITOR AND SERVICES:

- 2024 Early career reviewer for NIH (Pathophysiological Basis of Mental Disorders and Addictions) Study Section
- 2023-present Director of Biostatistics and Computational Biology
- 2023-present Co-Director of Medical Student Research
- 2022-2024 Research IT Committee member, LSU Health Shreveport
- 2022-2024 Data Use and Governance Committee Member, LSU Health Shreveport
- 2022-present Institutional Review Board (IRB) member
- 2022-Present Course Director (IDSP 227: Advance Biostatistics), October 2023
- 2023-present Statistical Editor, Arteriosclerosis, Thrombosis and Vascular Biology
- 2022-present Statistical Editor, Journal of American Heart Association
- 2023-present Statistical Editor, Frontiers in Epidemiology
- 2024-Present Statistical Reviewer, Frontiers in Cardiovascular Medicine
- 2024-Present Statistical Reviewer, Applied Geography

2023-Present Statistical Reviewer, Journal of Neural Transmission
 2023-Present Statistical Reviewer, Circulation
 2023-Present Statistical Reviewer, PeerJ Computer Science
 2023-Present Statistical Reviewer, MethodX
 2023-Present Statistical Reviewer, Redox Biology
 2023-Present Statistical Reviewer, Frontiers in Microbiology
 2023-Present Statistical Reviewer, Health Information Science and Systems
 2023-Present Statistical Reviewer, The Ochsner Journal
 2023-Present Statistical Reviewer, Scientific Reports
 2023-Present Statistical Reviewer, Substance Use and Misuse
 2023-Present Statistical Reviewer, Frontiers in Public Health
 2023-Present Statistical Reviewer, Stroke
 2022-Present Statistical Reviewer, Plos One
 2021-Present Statistical Reviewer, Journal of Substance Abuse Treatment
 2021-Present Statistical Reviewer, Journal of Child & Adolescent Substance Abuse
 2021-Present Statistical Reviewer, Bulletin of the Malaysian Mathematical Sciences Society
 2021-Present Statistical Reviewer, Catheterization and Cardiovascular Interventions
 2021-Present Statistical Reviewer, Contemporary Clinical Trial
 2021-Present Statistical Reviewer, BMC Medical Research Methodology
 2021-Present Statistical Reviewer, Journal of American Heart Association

BEST POSTER AWARD:

<u>Name</u>	<u>Date</u>	<u>Category</u>	<u>Title</u>
Ife Shango	07/25/2024	Undergraduate Research Apprenticeship Program	Using Machine Learning Model to Assess Biomarkers Associated with Stroke in Diabetic Patients
Jolie Boullion	02/06/2024	CCDS symposium, Clinical poster category	Integrating Potential Biomarkers: A Model For Early Detection of NAFLD
Za'Christanae Eason	07/27/2023	Undergraduate Research Apprenticeship Program	Deep Learning For The Classification of Alzheimer's Disease Patients from 3D MRI
Diensn Xing	11/03/2023	Biomedical Research and Industry Day	Social-geographic Disparities in Suicidal Ideation among Methamphetamine Users in the USA.
Farhan Mohiuddin	04/13/2023	Annual internal medicine research day	Classification of Cardiovascular Disease and Disease Subtypes Among Methamphetamine and Cocaine Users
Tyler Pierotti	01/13/2023	Annual CCDS symposium poster session	Trends of Methamphetamine-Associated Cardiomyopathy in the USA: Stratified by Sex, Race and Age
Zaki Al-Yafeai	01/13/2023	Annual CCDS symposium poster session	Substance Use and Peripheral Artery Disease in the United States: Geographic and Social Disparities

OTHER POSTER SUBMISSIONS:

Mohammad Bhuiyan	06/15/2024	National IDeA Symposium of Biomedical Research Excellence	ViViEchoformer: Deep Video Regressor Predicting Ejection Fraction
Parth Penukonda	07/27/2023	Undergraduate Research Apprenticeship Program	Advancements in Histopathological Image Analysis: A Review
Jolie Boullion	08/02/2023	MS-Cardio	Liver Disease Leading to Heart Disease: Is There a Biomarker?
Maamannan Venkataraj	05/05/2023	8th regional poster presentation	Trend and Prevalence of Cardiomyopathy-Related Hospital Admissions Among Methamphetamine Users: Geographical and Social Disparity

PROFESSIONAL MEMBERSHIPS:

2022-present	American Heart Association
2018-present	American Statistical Association
2018-present	Eastern North American Region International Biometric Society
2022-present	Center for Cardiovascular Diseases and Sciences
2022-present	Center for Brain Health
2022-present	Louisiana Addiction Research Center

TEACHING:

2024	Neuroscience (Fundamentals of Health and Disease), October, 2024
2024	Neuroscience III (Inter 110), April, 2024
2023-Pres	Course Director (IDSP 227: Advance Biostatistics), October 2023
2023-Pres	Course lecture (IDSP 226: Biostatistics), August 2023
2023	Non-parametric statistical analysis (Clinical Informatics Lecture), 2 nd February 2023
2023	Introduction to Statistics (Clinical Informatics Lecture), 26 th January 2023
2023	Research workshop- Examining a journal article, 25 th January 2023
2022	Introduction to R, 8 th December 2022
2022	Introduction to R, 15 th December 2022
2022	One-Way Analysis of Variance II, 20 th Oct, 2022
2022	One-Way Analysis of Variance I, 18 th Oct, 2022
2022	Two-Group Parametric Analysis, 11 th Oct, 2022
2021	Within-Subjects Factorial Designs Repeated Measures ANOVA, 4 th Nov, 2021

MENTORING EXPERIENCE:

Year	Name	Rank/Position/Program	Department
2024-present	Destyn Dicharry	Medical student research program	LSU Health Shreveport
2024-present	Scardino Brook	Medical student research program	LSU Health Shreveport
2024-present	Akshat Agrwal	Master's in public health	LSU Health Shreveport
2024-present	Hanaiah Morris	Psychiatry	LSU Health Shreveport

2024-present	Amber Hunt	OB/GYN	LSU Health Shreveport
2024-present	Jenna Andre	Ophthalmology	LSU Health Shreveport
2024-present	Maheen Fawad	Psychiatry	LSU Health Shreveport
2023-Present	Amanda Husein	Internal Medicine	LSU Health Shreveport
2023-2024	Christopher Girardo	Clinical Informatics Fellow	LSU Health New Orleans
2022-present	Shafaqat Ali	Assistant Professor	Internal Medicine, LSU Health Shreveport
2022-present	Sait Alp	Assistant Professor	Department of Artificial Intelligence Engineering, Trabzon University School of Medicine, LSU Health Shreveport
2022-present	Fatih Galir, PhD	Biostatistician	School of Medicine, LSU Health Shreveport
2024-present	Dinsen Xing	MD/PhD Student	School of Medicine, LSU Health Shreveport
2023-present	Md Ismail Hossain, Msc	Biostatistician	School of Medicine, LSU Health Shreveport
2022-present	Teymaz Akhan, PhD	Post Doc	School of Medicine, LSU Health Shreveport
2022-2023	Abu Musa Saleh Faisal, Msc	Biostatistician	School of Medicine, LSU Health Shreveport
2024-present	Faisal Ahmed, PhD	Post Doc	University of Texas, Dallas
June 3- August 6 th , 2024	Ife Shango	Undergraduate Research Apprenticeship Program (UGRAP)	Neuroscience with a double concentration in Biology and Chemistry, Xavier University of Louisiana
June 6 th – August 6 th , 2023	Parth Penukonda	Undergraduate Research Apprenticeship Program (UGRAP)	4th year student in Biology, McGill University in Montreal, Canada
June 6 th – August 6 th , 2023	Za'Christanae Eason	Undergraduate Research Apprenticeship Program (UGRAP)	Bachelor's of Science in Biology and Bachelor's of Science in Chemistry, Grambling State University, Louisiana
June 12 th – July 14 th , 2023	Jolie Bouillion	Medical Students Cardiovascular Research and Discovery Opportunities (MS-CARDIO)	1 st year Medical student, LSU health at Shreveport
August,2022- April,2023	Gabrielle LeNoir	American Heart Association Scholars Program at Historically Black College and Universities (HBCUs)	Southern University and A&M College
2023	Bryce Bonin	Department of Neurosurgery	LSU Health Shreveport
2023	Jimmy Brown	Emergency Medicine	LSU Health Shreveport
2023	Zaki Al Yefeai	Internal Medicine	LSU Health Shreveport
2023	Deon Ford	Internal Medicine	LSU Health Shreveport
2023	Maamanan Venkataraj	Internal Medicine	LSU Health Shreveport

2023	Frank Zhang	Internal Medicine	LSU Health Shreveport
2023	Kaitlin Mcdade	Internal Medicine	LSU Health Shreveport
2023	Taylor Powell	Internal Medicine	LSU Health Shreveport
2023	Farhan Mohiuddin	Internal Medicine	LSU Health Shreveport
2023	Mackenzie Noonan	Resident, Otolaryngology	LSU Health Shreveport
2023	Aidyn Dupuy	Internal Medicine	LSU Health Shreveport
2023	Teresa Horan	Internal Medicine	LSU Health Shreveport
2023	Elizabeth Armstrong	Internal Medicine	LSU Health Shreveport
2023	Rachel Coleman	Internal Medicine	LSU Health Shreveport
2023	Brennen Murphy	Internal Medicine	LSU Health Shreveport
2023	Farrah Flattmann	Internal Medicine	LSU Health Shreveport
2023	Sunil Wadhwa	Internal Medicine	LSU Health Shreveport
2023	Alyssa Lobelo	Internal Medicine	LSU Health Shreveport
2023	Kristin Bembenick	Internal Medicine	LSU Health Shreveport
2023	Alexa Zaheri	Internal Medicine	LSU Health Shreveport
2023	Nazar Hafiz	Internal Medicine	LSU Health Shreveport
2023	Syed Musa Raza	Internal Medicine	LSU Health Shreveport
2023	Maryam Mubashir	Internal Medicine	LSU Health Shreveport
2023	Daniyal Raza	Internal Medicine	LSU Health Shreveport
2023	David Okuampa	Internal Medicine	LSU Health Shreveport
2023	Karan Sachdeva	Internal Medicine	LSU Health Shreveport
2023	Muhammad Haris Khan	Internal Medicine	LSU Health Shreveport
2022	Udhayvir Grewal	Internal Medicine	LSU Health Shreveport
2022	Sahith Reddy	Internal Medicine	LSU Health Shreveport
2022	Thotamgari Pooja Shah	Internal Medicine	LSU Health Shreveport
2022	Nour A Daoud	Internal Medicine	LSU Health Shreveport
2022	MM Ross	Department of Psychiatry and Behavioral Medicine	LSU Health Shreveport
2022	Michael John Patton	Medical Scientist Training Program	University of Alabama at Birmingham
2022	William M Baldwin	Department of Pharmacology, Toxicology & Neuroscience	LSU Health Shreveport

2022	Ayeesha Kattubadi	Internal Medicine	LSU Health Shreveport
2022	Sukhmani Boparai	Internal Medicine	LSU Health Shreveport

INVITED LECTURES:

- 2024 Flexible modeling for Alzheimer's disease (AD) progression, Joint Statistical Meeting, Portland, August, 2024
- 2024 ViViEchoformer: Deep Video Regressor Predicting Ejection Fraction NISBRE, Washinton, June, 2024
- 2023 Vision Transformers and Bi-LSTM for Alzheimer's Disease Diagnosis from 3D MRI, JSM, August, Toronto, 2023
- 2023 Mapping socio-economic contribution to methamphetamine use and risk of cardiovascular disease July 19, 2023, LSU Health Shreveport, COBRE presentation
- 2022 How to craft the "Approach" section of a clinical research grant application, Faculty Grant Writing Series, LSU Health Shreveport (28th November, 2022)
- 2022 Designing research, understanding your data, and performing statistical analysis, SIAM Applied Math Seminar at Georgia Gwinnett College (29th Sep 2022).
- 2022 Understanding design of experiment and perform statistical analysis, LSUHSC-Shreveport, Medicine Didactic Conference (29th Sep 2022).
- 2022 "Designing a Research, Research Ethics and Statistical Analysis", LSUHSC-Shreveport, Medicine Grand Rounds (13th Sep 2022).
- 2022 "Recent Trends in Methamphetamine Associated with Emergency Visits, Hospitalizations, and Deaths in Louisiana", LSUHSC-Shreveport, Department of Psychiatry (8th Sep 2022).
- 2022 "Statistical Consideration for Research" Society of Industrial and Applied Mathematics Chapter (SIAM), Georgia Gwinnett College, School of Science and Technology, 29th September 2022.
- 2022 "Recent Trends in Cocaine Use Associated with Emergency Visits, Hospitalizations, and Deaths in Louisiana", LSUHSC-Shreveport, Methamphetamine Interest Group (10th March 2022).
- 2022 "Statistical modeling in Research", Research Education Event, March 18, 2022.
- 2021 "Win Ratio: A method to analyze composite endpoints", Medpace Inc., March 2021.
- 2019 "Bayesian shape invariant growth curve model for longitudinal data", Department of Biostatistics and Data Science, Kansas University Medical Center, Kansas. August 2019.
- 2019 "Differential impact of acute pm_{2.5} exposure on risk of stroke-by-stroke subtype, sex and race: A case-crossover study". Department of Neurology, Saint Louis University. July 2019.

RESEARCH SUPPORT:

ACTIVE:

2024–2029	Title: Redox, Environmental, and Metabolomics: investigating Disease Yield (REMEDY)	Funder: NIGMS
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Description: The goal of this project is to see the association between volatile organic compounds and redox balance.

Role: Principal-Investigator

Total Support: \$600,000

2024–2029 Title: Louisiana Addiction Research Center Opioid Settlement Programs Funder: Caddo Parish

Description: The goal of this project is to conduct preclinical and clinical research on non-addictive alternatives to opioids for pain management, as well as engage in regional planning to identify and address gaps in the care model for addiction.

Role: Co-Investigator **Total Support: \$2,500,000**

R01AI179608 (2024–2029) Title: Mechanism of macrophages colonization in gonorrhea Funder: NIAID

Description: We propose to complete a detailed analysis of macrophages infection by Ng, which will highlight the kinetics of invasion and recruitment of key mediators. Finally, our proposed human samples studies will generate valuable data regarding macrophages and other immune cells colonization by Ng and will correlate severity of infection with bacterial burden and immune response.

Role: Co-Investigator **Total Support: \$1,825,000**

1R01HL172846-01(2024–2029) Title: IL-1R1 in Endothelial-to-Mesenchymal Transition Funder: NHLBI

Description: To investigate the signaling role of endothelial IRAK1 in endothelial-to-mesenchymal transition in progressive atherosclerosis.

Role: Co-Investigator **Total Support: \$2,168,445**

R01HL172970 (2024–2029) Title: Novel mitophagy regulatory mechanism in heart failure Funder: NHLBI

Description: Determine the role of Sigmar1 in regulating mitophagy and protecting heart failure

Role: Co-Investigator **Total Support: \$ 3,301,740**

2023–2025 Title: Development of a patient-specific outcome prediction model for brain arteriovenous malformation (AVM) treatments modalities Funder: LSU Health Shreveport

Description: Development of a patient-specific outcome prediction model for brain arteriovenous malformation (AVM) treatments modalities.

Role: Co-Investigator **Total Support: \$ 25,000**

PENDING:

R01 Title: COBRE Center for Redox Biology and Cardiovascular Disease - Supplement Funder: NIH

Description: Create training for students for analyzing Metabolomics data

Role: Principal-Investigator **Total Support: \$250,000**

R01	Title: Understand the effect of drug use among adolescents' brain development: A Bayesian framework	Funder: NIDA
Description: Understand the effect of drug use among adolescents' brain development		
Role: Principal-Investigator		Total Support: \$2,590,375
Career Development Grant	Title: Mapping social economic contribution to methamphetamine use and risk of cardiovascular disease	Funder: American heart Association
Description: Mapping social economic contribution to methamphetamine use and risk of cardiovascular disease		
Role: Principal-Investigator		Total Support: \$231,000
R21	Title: Developing disease progression model based on MRI data	Funder: NIDA
Description: Developing disease progression model based on MRI data		
Role: Principal-Investigator		Total Support: \$409,740
R21	Title: Estimation and classification of adolescent neurodevelopment impacted by substance use	Funder: NIDA
Description: Estimation and classification of adolescent neurodevelopment impacted by substance use		
Role: Principal-Investigator		Total Support: \$409,740
R34	Title: Community Based Crisis Response Needs Assessment	Funder: NIMH
Description: Utilize AI to Community Based Crisis Response N		
Role: Principal-Investigator		Total Support: \$655,404
R01	Title: The Intersection of sex and childhood adversity on adolescent's brain development	Funder: NIDA
Description: The Intersection of sex and childhood adversity on adolescent's brain development		
Role: Principal-Investigator		Total Support: \$1,965,744
PCORI	Title: Generalizable AI for clinical language understanding using nationwide datasets	Funder: PCORI
Description: Generalizable AI for clinical language understanding		

Role: CO-Investigator **Total Support: \$750,000**

R01 Title: EphA2 signaling in nonalcoholic steatohepatitis Funder: NIH

Description: Determine reduced ephrinA1/EphA2 signaling during NASH stimulates

Role: Co-Investigator **Total Support: \$3,370,545**

R01 Title: Barriers and Facilitators to Clinical Trial Enrollment Equity Funder: NIH

Description: The proposed work will inform our efforts to improve diversity, equity and inclusion in research participation.

Role: Co-Investigator **Total Support: \$652,761**

R01 Title: Molecular and Physiological Mechanisms of Stress on the Female Heart Funder: NIH

Description: Establish guidelines to predict and prevent the potential impact of stress disorders on the cardiovascular health of women.

Role: Co-Investigator **Total Support: \$3,675,781**

R01 Title: Sigmar1 in mitochondrial metabolism in AD Funder: NIH

Description: Understand the effect of Sigmar1 in mitochondrial metabolism in AD

Role: Co-Investigator **Total Support: \$3,071,411**

R01 **Title:** Sigmar1 in skeletal muscle health and disease Funder: NIH

Description: Determine the role of Sigmar1 in muscular dystrophy.

Role: Co-Investigator **Total Support: \$3,370,545**

R01 Title: Sigmar1 in lipid metabolism Funder: NIH

Description: Identify a novel function of a molecular chaperone protein and discover the molecular mechanism of cardio protection with the ultimate goal of determining whether drugs targeting Sigmar1 are clinically useful for diabetic cardiomyopathy.

Role: Co-Investigator **Total Support: \$3,519,403**

R01 Title: Sigmar1 in hepatocyte lipid metabolism and non-alcoholic steatohepatitis Funder: NIH

Description: To understand the effect of Sigmar1 in hepatocyte lipid metabolism and non-alcoholic steatohepatitis

Role: Co-Investigator **Total Support: \$3,628,480**

R01	Title: Autophagy regulatory mechanisms in cardiac health and disease	Funder: NIH
Description: To understand the effect of autophagy regulatory mechanisms in cardiac health and disease		
Role: Co-Investigator		Total Support: \$2,664,265
R01	Title: Regulatory mechanisms of muscle metabolic adaptations	Funder: NIH
Description: To understand the effect of regulatory mechanisms of muscle metabolic adaptations		
Role: Co-Investigator		Total Support: \$554,105
R01	Title: A novel selective PPAR gamma agonist to treat methamphetamine use disorder	Funder: NIH
Description: To understand selective PPAR gamma agonist to treat methamphetamine use disorder		
Role: Co-Investigator		Total Support: \$4,868,483
R01	Title: Psilocybin Effects on Reward Circuit Responses to Cue Reactivity and Changes in Subjective Craving in Methamphetamine Use Disorder	Funder: NIH
Description: To understand Psilocybin Effects on Reward Circuit Responses to Cue Reactivity and Changes in Subjective Craving in Methamphetamine Use Disorder		
Role: Co-Investigator		Total Support: \$ 1,450,606
R01	Title: Neural mechanisms underlying psychedelic-mediated resilience against methamphetamine addiction	Funder: NIH
Description: To understand Neural mechanisms underlying psychedelic-mediated resilience against methamphetamine addiction		
Role: Co-Investigator		Total Support: \$3,333,258
R01	Title: Novel and functionally selective 5-HT2C agonist for methamphetamine use disorder	Funder: NIH
Description: To understand Novel and functionally selective 5-HT2C agonist for methamphetamine use disorder		
Role: Co-Investigator		Total Support: \$15,876,221

R01	Title: Preclinical and clinical development studies of DRhQ for methamphetamine addiction	Funder: NIH
Description: To understand Preclinical and clinical development studies of DRhQ for methamphetamine addiction		
Role: Co-Investigator		Total Support: \$3,686,400
R01	Title: Advancing a short-acting psychedelic to reduce methamphetamine in vulnerable populations	Funder: NIH
Description: To understand and advancing a short-acting psychedelic to reduce methamphetamine in vulnerable populations		
Role: Co-Investigator		Total Support: \$3,183,293
R01	Title: Hexafluoro, A Novel SIRT 3 Activator for Methamphetamine Addiction	Funder: NIH
Description: To understand Hexafluoro, A Novel SIRT 3 Activator for Methamphetamine Addiction		
Role: Co-Investigator		Total Support: \$5,218,480
R01	Title: CSE regulation of vascular remodeling	Funder: NIH
Description: To understand CSE regulation of vascular remodeling		
Role: Co-Investigator		Total Support: \$2,891,730
R01	Title: COBRE Center for Redox Biology and Cardiovascular Disease - MULTI COMPONENT GRANT	Funder: NIH
Description: The overall objectives of the COBRE Center for Redox Biology and Cardiovascular Disease are to establish a nationally recognized advanced research and training program in redox biology regulation of cardiovascular disease and to facilitate the development of junior faculty research programs to achieve major independent research funding.		
Role: Co-Investigator		Total Support: \$720,920
R01	Title: Dysregulated Putrescine Metabolism in Hepatic Fibrosis During Metabolic Dysfunction-Associated Steatohepatitis	Funder: NIH
Description: To understand Dysregulated Putrescine Metabolism in Hepatic Fibrosis During Metabolic Dysfunction-Associated Steatohepatitis		
Role: Co-Investigator		Total Support: \$3,254,577

R01 Title: Impaired Polyamine Homeostasis in Nonalcoholic Steatohepatitis Funder: NIH
Description: To understand Impaired Polyamine Homeostasis in Nonalcoholic Steatohepatitis
Role: Co-Investigator **Total Support: \$2,743,967**

DOD Title: Optimizing the parameters for stimulation of dementia in rats Funder: DOD
Description: To understand Optimizing the parameters for stimulation of dementia in rats
Role: Co-Investigator **Total Support: \$292,000**

R01 Title: A Liver-Brain Crosstalk Regulates Stroke Outcomes via Oxalate Metabolism Funder: NIH
Description: To understand Liver-Brain Crosstalk Regulates Stroke Outcomes via Oxalate Metabolism
Role: Co-Investigator **Total Support: \$3,630,473**

R01 Title: Novel Mechanisms for Deep Vein Thrombus Formation and Resolution in Metabolic dysfunction-Associated Steatohepatitis Funder: NIH
Description: To understand Mechanisms for Deep Vein Thrombus Formation and Resolution in Metabolic dysfunction-Associated Steatohepatitis
Role: Co-Investigator **Total Support: \$3,584,140**

DOD Title: Targeting INSM1 in neuroendocrine prostate cancer Funder: DOD
Description: To understand INSM1 in neuroendocrine prostate cancer
Role: Co-Investigator **Total Support: \$536,506**

R01 Title: Understanding Underrepresentation in Alzheimer's Disease Clinical Research Recruitment Funder: NIH
Description: Understanding Underrepresentation in Alzheimer's Disease Clinical Research Recruitment
Role: Co-Investigator **Total Support: \$2,157,323**

ABSTRACTS:

1. Raza SM, Raza D, Pass B, Armstrong E, Dies R, Andrus V, **Bhuiyan MAN**, Deville A, Okuampa D, Kawji L, Tran M, Neice M. Gerd in gastroparesis patients after gastric per oral endoscopic pyloromyotomy-a long term follow-up. *Gastrointestinal Endoscopy*. 2024 Jun 1;99(6):AB974-5.
2. Haris Khan M, Munshi R, Wangjam T, **Bhuiyan MAN**, Self M, Alam M, Malek AE. 216. A Comparison of Multidrug-Resistant Gram-negative Bacteremia in Cancer and Non-Cancer Patients. In *Open Forum Infectious Diseases* 2023 Dec (Vol. 10, No. Supplement_2, pp. ofad500-289). US: Oxford University Press
3. Ali S, Duhan S, Keisham, **Bhuiyan MAN**. Critical Limb Ischemia Hospitalizations in Substance Users in the United States: 2008-2020. *J Am Coll Cardiol*. 2023 Oct, 82 (17_Supplement) B206–B207. <https://doi.org/10.1016/j.jacc.2023.09.522>
4. Ali S, Duhan S, Al-Yafaei, Z. et al. Demographic, Regional, Gender-Based, and Racial Trends in Peripheral Artery Disease Hospitalization in the United States (2008–2020). *J Am Coll Cardiol*. 2023 Oct, 82 (17_Supplement) B121–B122. <https://doi.org/10.1016/j.jacc.2023.09.313>
5. Ali S, Duhan S, Farooq F, Keisham B, Al-Yafaei Z, Bhuiyan MS, Taha A, Hamza M, Sattar Y, Alraies C, Bhuiyan M. Demographic, Ethnic, and Geographic Trends of Amputations in Critical Limb Ischemia: 2008-2020. *Journal of the American College of Cardiology*. 2023 Oct 24;82(17):B123.
6. Sachdeva K, Hafiz N, Bahirwani, J, Khan O, Vyas A, Raza SM, **Bhuiyan MAN**; Canezaro H, McCurdy G, Weis F, Andrus V, Armstrong E, Neice M, Mubashir M, Rashid S, Cai Q, MACG1. S1856 Comparing GERD Health-Related Quality of Life and Reflux Symptom Index Scores (RSI) in Patients With and Without Gastroparesis. *The American Journal of Gastroenterology* 118(10S):p S1380-S1381, October 2023. | DOI: 10.14309/01.ajg.0000957064.76056.74
7. Okuampa D, **Bhuiyan MAN**, Pandit S, Derise A S398 Single Center Patient Understanding of Clear Liquid Diet Before Colonoscopy. *The American Journal of Gastroenterology* 118(10S):p S290-S291, October 2023. | DOI: 10.14309/01.ajg.0000951232.86533.5b
8. Syed M, Daniyal R, Elizabeth BA, Andrus V, McCurdy G, Neice M, Mubashir M, Rashid S, Hafiz N, **Bhuiyan MAN**, Cai Q, short-term outcomes of gerd in gastroparesis patients after gastric per oral endoscopic pyloromyotomy- final results, *Gastrointestinal Endoscopy*, 2023
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12. Yafaei ZA, Ali S , Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**, Substance Use and Peripheral Artery Disease in the United States: Geographic and Social Disparities, *Feist Cardiovascular Research Symposium*, February 6, 2023.

13. Mohiuddin F, Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**, Classification of Cardiovascular Disease and Disease Subtypes Among Methamphetamine and Cocaine Users, Feist Cardiovascular Research Symposium, February 6, 2023.
14. Venkataraj M, Pierotti T , Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Orr WA, Kevil CG, **Bhuiyan MAN**, Methamphetamine-Associated Cardiomyopathy in the USA, Feist Cardiovascular Research Symposium, February 6, 2023.
15. NA Daoud, **Bhuiyan, MAN**, S Koppada, M Alam, A Single-Center Experience of Solid versus Hematologic Malignancies in People Living with HIV, Open Forum Infectious Diseases, 2022.
16. Shah P, Searcy K, Dhaliwal LS, Rehmani M, Patel D, Raza D, **Bhuiyan MAN** & Cai Q (2022). Sa1427: The Long-term effect of COVID-19 on elevated liver function tests and outcomes. *Gastroenterology*, 162(7), S-382. doi:[10.1016/S0016-5085\(22\)60912-0](https://doi.org/10.1016/S0016-5085(22)60912-0)
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18. Paulette P, Wilmer S, Ayeesha K, Neev P, **Bhuiyan MAN**, John V, Evaluation of Predicting Performance of POSITIVE, PREDICT and VIRSTA Score for Infective Endocarditis in Patients with Staphylococcus aureus Bacteremia, IDWeek, October, 2022.
19. Grewal US, **Bhuiyan MAN**, APTE NM, Dherange, PA, Dominic P (2022). PO-716-07 Is CHA2DS2VASc Score Useful For Predicting The Risk Of Stroke In Patients With Atrial Fibrillation And Cancer?: A Single Center Observational Analysis. *Heart Rhythm*, 19(5), S499. <https://doi.org/10.1016/j.hrthm.2022.03.1175>
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CONFERENCE (ORAL/POSTER) PRESENTATIONS:

1. **Bhuiyan MAN**, ViViEchoformer: Deep Video Regressor Predicting Ejection Fraction, National IDeA Symposium of Biomedical Research Excellence, June 2, 2024
2. Shango I, Hossain M I, **Bhuiyan MAN**. Using Machine Learning Model to Assess Biomarkers Associated with Stroke in Diabetic Patients, Undergraduate Research Apprenticeship Program, 2024 (***Secured 3rd Place**)
3. Diensn Xing, **Bhuiyan MAN**, Social-geographic disparities in suicidal ideations among methamphetamine users in the USA, Biomedical Research and Industry Day, 2023 (***Secured 3rd Place**)
4. Penukonda P, Akan T, **Bhuiyan MAN**, Advancements in Histopathological Image Analysis: A Review, Undergraduate Research Apprenticeship Program, 2023
5. Boullion J, **Bhuiyan MAN**, Liver Disease Leading to Heart Disease: Is There a Biomarker?, Medical Students Cardiovascular Research and Discovery Opportunities poster, 2023 (***Secured 1st Place**)
6. Eason Z, Akan T, **Bhuiyan MAN**, Deep Learning For The Classification of Alzheimer's Disease Patients from 3D MRI, **Undergraduate** Research Apprenticeship Program, 2023 (***Secured 1st Place**)
7. G. Lenoir, MS Bhuiyan, ASM Faisal, NE Goeders, SR Bailey, SA Conrad, JA Vanchiere, AW Orr, CG Kevil, **Bhuiyan MAN**, Methamphetamine and Cocaine associated cardiomyopathy

trend in the USA. American Heart Association Historically Black Colleges and Universities Scholar Program Research Symposium, April, 2023.

8. **Bhuiyan, MAN**, Flexible Model to Estimate Patient-Specific Timing and Degree of Rapid Decline in Alzheimer's Disease (AD) , ENAR, March, 2023.
9. Yafeai ZA, Ali S , Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**, Substance Use and Peripheral Artery Disease in the United States: Geographic and Social Disparities, Feist Cardiovascular Research Symposium, February 6, 2023. (*Secured 2nd Place)
10. Mohiuddin F, Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**, Classification of Cardiovascular Disease and Disease Subtypes Among Methamphetamine and Cocaine Users, Feist Cardiovascular Research Symposium, February 6, 2023. (*Secured 1st Place)
11. Venkataraj M, Pierotti T , Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Orr WA, Kevil CG, **Bhuiyan MAN**, Trends of Methamphetamine-Associated Cardiomyopathy in the USA: Stratified by Sex, Race and Age, 8th regional cardiology conference 2023.
12. Venkataraj M, Pierotti T , Bhuiyan S, Faisal ASM, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Orr WA, Kevil CG, **Bhuiyan MAN**, Trend and Prevalence of Cardiomyopathy-Related Hospital Admissions Among Methamphetamine Users: Geographical and Social Disparity, Feist Cardiovascular Research Symposium, February 6, 2023. (*Secured 1st Place)
13. **Bhuiyan, MAN**, Bayesian Shape Invariant model for longitudinal data, Mathematical Biosciences Institute (MBI), Bayesian Causal Inference Workshop, June, 2019.
14. **Bhuiyan, MAN**, Source-specific contributions of particulate matter to asthma-related emergency department utilization, JSM, Colorado, 2019.
15. **Bhuiyan, MAN**, A Bayesian Shape Invariant Growth Curve Model for Longitudinal Data, ENAR, Philadelphia, 26 March-2019.
16. **Bhuiyan, MAN**, Bayesian Superimposition by Translation and Rotation (SITAR) model for longitudinal growth curve data, JSM, Vancouver, Canada, 2 Aug-2018.
17. **Bhuiyan, MAN**, Singular values vs Odds ratio a comparative Study, IISA, Oregon, 21 Aug-2016.
18. **Bhuiyan, MAN**, Singular values vs Odds ratio in Genetic Association Testing in Asthma, JSM, 2016.

PEER-REVIEWED PUBLICATIONS (UNDER REVIEW, 2023):

1. Kelly R, Monika T, **Bhuiyan MAN**, Diagnostic Yield and Therapeutic Implications of Vascular Imaging in Acute Ischemic Stroke: Prospective and Consecutive Study, Under review, New England Journal of Medicine
2. Gelir F, Chatla S, Bhuiyan MS, Disbrow EA, Conrad SA, Vanchiere JA, Kevil CG, Gecili E, **Bhuiyan MAN**. Characterizing Heterogeneity in Alzheimer's Disease Progression: A Semiparametric Model, Under review, Scientific Reports
3. Gelir F, Akan T, Alp S, Gecili E, Bhuiyan MS, Disbrow EA, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**, Machine Learning Approaches for Predicting Progression to Alzheimer's Disease in Mild Cognitive Impairment Patients, Under review, Scientific Reports
4. Akan T, Alp S, Bhuiyan M S, Helmy T, Orr AW, Bhuiyan S, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**. ViViEchoformer: Deep Video Regressor Predicting Ejection Fraction, Under review, Journal of Imaging Informatics in Medicine
5. Boullion J, Husein A, Agrawal A, Xing D, Hossain M I, Bhuiyan M S, Rom O, Conrad SA, Vanchiere JA, Orr AW, Kevil CG, **Bhuiyan MAN**, Machine Learning-Based Biomarker Identification for Early Diagnosis of Metabolic Dysfunction-Associated Steatotic Liver Disease, Under review, Cureus

6. Husein A, Bouillon J, Hossain M I, Xing D, Khan M T F, Bhuiyan M S, Kolluru G K, Bhuiyan M M R, Goeders N E, Conrad S A, Vanchiere J A, Orr A W, Kevil C G, **Bhuiyan MAN**, Trends and Patterns in Pulmonary Arterial Hypertension-Associated Hospital Admissions among Methamphetamine Users: A Decade-Long Study, Under review, *Frontiers in Cardiology*
7. Agrawal A, Scardino B, Hossain M I, Xing D G, Bhuiyan M S, Conrad S A, Goeders N E, Bhuiyan M M R, Vanchiere J A, Orr A W, Kevil C G, **Bhuiyan MAN**. The Evolving Epidemiology of Heart Failure with Reduced or Preserved Ejection Fraction: Implications of Demographic Shifts and Stimulant Use. Under review, *Journal of American College of Cardiology*
8. Elizabeth A, Victoria A, **Bhuiyan MAN**, Ashley D, Ross D, Lena K, Maryam M, Michelle N, David O, Brittany P, Shazia R, Daniyal R, Raza S, Sidra A, Qiang C , Short term symptomatic outcomes of GERD in patients with gastroparesis after Gastric Per Oral Endoscopic Pyloromyotomy.(Accepted, August 14, 2024)
9. Alp S, Bhuiyan S, Disbrow E, Conrad A, Vanchiere J, Kevil CJ, **Bhuiyan MAN**, Leveraging Video Vision Transformer for Alzheimer's Disease Diagnosis from 3D Brain MRI, Under review, *Behavioral Brain Research*
10. Dantes EM, **Bhuiyan MAN**, Bourg M, Smith CD, Bhuiyan S, Smith DG. Prevalence and Sociodemographic Covariates of Human Papillomavirus in the United States: Findings from the 2008 to 2020 National Inpatient Sample Database. medRxiv. 2024:2024-03.
11. Akan T, Agahian S, Dehkharghani R, **Bhuiyan MAN**, Battle royale optimizer with ring neighborhood topology, *Journal: Advances in Computational Intelligence*.
12. Traylor M, Vest M, Wood B, Brogan M, Thomas A, McNeil S, **Bhuiyan MAN**, Hendricks P, Kelly J, Gribben A, Keys K, Edinoff A, Patterson J, Murnane K. Assessing The Readiness of Psychiatrists in Louisiana to Incorporate Psilocybin into Clinical Practice – Lessons Learned from a State Underrepresented in Clinical Psychedelic Research, Under review, *Psychedelic Medicine*
13. Khlidj Y, Kumar M, Alsaeed T, Farooq F, Keisham B, Ponna P, Duhan S, Brar V, Manan M, Khan M R, **Bhuiyan MAN**, Vij A, Attanasio S, Qamar A, Helmy T Impact of Kidney Disease in Patients Undergoing Catheter Directed Interventions for Intermediate to High-Risk Pulmonary Embolism, Under review, *Journal of Critical Care*
14. Murnane K, Wood B, Daphney C, Canal C, Samedy-Bates, Kathryn Momary, **Bhuiyan MAN**, Takaomi Saido Differences in Serotonin 2A Receptor Expression and Function Across Sex, Age, and Genotype, Under review, *The Journal of Neuroscience*
15. Baldwin WM, Dayton RD, Yurochko AD, **Bhuiyan MAN**, Bivins AW, Vanchiere JA, Davis T; Scott RS, Arnold CL, Kevil CG, Queen K, Snead B, Goeders NE, Daniel W, KS Murnane, A Comparison of Viral Prevalence Versus Population Coverage as Drivers of Public Health Information Derived from Wastewater Sampling, Under review, *Science of total Environment*.
16. Murnane K, Wood B, Daphney C, Canal C, Samedy-Bates, Kathryn Momary, **Bhuiyan MAN**, Takaomi Saido Assessing The Readiness of Psychiatrists in Louisiana to Incorporate Psilocybin into Clinical Practice – Lessons Learned from a State Underrepresented in Clinical Psychedelic Research, Under review, *Psychedelic Medicine*
17. Management of Hepatic Sarcoidosis, a Retrospective Analysis of Patients at a University Hospital, Under review, *Discover Medicine*
18. Cognitive flexibility deficits in individuals with a history of methamphetamine misuse, Under review, *Experimental and Clinical Psychopharmacology*
19. Low-cost models but high-value training: 3D printed temporal bones pilot study
20. Prevalence and Trends of Human Papillomavirus in the United States
21. A Comparison of Viral Prevalence Versus Population Coverage as Drivers of Public Health Information Derived from Wastewater Sampling

PEER-REVIEWED PUBLICATIONS:

1. Raza SM, Raza D, Neice M, Kile B, Andrus V, Armstrong E, Okuampa D, **Bhuiyan MAN**, Deville A, Dies R, Kawji L, Mubashir M. Short-term symptomatic outcomes of GERD in patients with gastroparesis after gastric per oral endoscopic pyloromyotomy. *Diseases of the Esophagus*. 2024 Aug 18;doae066. **2024**
2. Aishwarya R, Abdullah CS, Remex NS, **Bhuiyan MAN**, Lu XH, Dhanesha N, Stokes KY, Orr AW, Kevil CG, Bhuiyan MS. Diastolic dysfunction in Alzheimer's disease model mice is associated with A β -amyloid aggregate formation and mitochondrial dysfunction. *Scientific Reports*. 2024 Jul 19;14(1):16715. **2024**
3. Xing DG, Mohiuddin F, Bhuiyan MS, Hossain MI, Al-Yafeai Z, Mosa Faisal AS, Goeders NE, Conrad SA, Vanchiere JA, Patterson JC, Kevil CG **Bhuiyan MAN**. Prevalence and patterns of methamphetamine use and mental health disparity in the United States. *Nature Mental Health*. 2024 Jun 26:1-9. **2024**
4. Alp S, Akan T, **Bhuiyan MAN**. Transferring knowledge: CNNs in Martian surface image classification. *Artificial Intelligence: Machine Learning, Convolutional Neural Networks and Large Language Models*. 2024 Aug 5;1:71. **2024**
5. Alp S, Akan T, Bhuiyan MS, Disbrow EA, Conrad SA, Vanchiere JA, Kevil CG, **Bhuiyan MAN**. Joint transformer architecture in brain 3D MRI classification: its application in Alzheimer's disease classification. *Scientific Reports*. 2024 Apr 18;14(1):8996.
6. Akan T, Oskouei AG, Alp S, **Bhuiyan MAN**. Brain magnetic resonance image (MRI) segmentation using multimodal optimization. *Multimedia Tools and Applications*. 2024 Jul 2:1-50. **2024**
7. Khan MZ, Alvarez R, **Bhuiyan MAN**, Faisal AS, O'Neill P, Siddiqui M, Kaki P, Franklin S, Waqas M, Shah H, Kanawati EI. Clinical Outcomes of Transcatheter Aortic Valve Replacement (TAVR) vs Surgical Aortic Valve Replacement (SAVR) in Patients With Sarcoidosis. *Cureus*. 2024 Jun 16;16(6). **2024**
8. Ali S, Al-Yafeai Z, Hossain MI, Bhuiyan MS, Duhan S, Aishwarya R, Goeders NE, Bhuiyan MM, Conrad SA, Vanchiere JA, Orr AW, **Bhuiyan MAN**. Trends in peripheral artery disease and critical limb ischemia hospitalizations among cocaine and methamphetamine users in the United States: a nationwide study. *Frontiers in Cardiovascular Medicine*. 2024 Jul 3;11:1412867. **2024**
9. Khan MZ, Alvarez R, Bhuiyan MA, Faisal AS, O'Neill P, Siddiqui M, Kaki P, Franklin S, **Bhuiyan MAN**, Waqas M, Shah H, Kanawati EI. Clinical Outcomes of Transcatheter Aortic Valve Replacement (TAVR) vs Surgical Aortic Valve Replacement (SAVR) in Patients With Sarcoidosis. *Cureus*. 2024 Jun 16;16(6). **2024**
10. Remex NS, Abdullah CS, Aishwarya R, Kolluru GK, Traylor J, **Bhuiyan MAN**, Kevil CG, Orr AW, Rom O, Pattillo CB, Bhuiyan MS. Deletion of Sigmar1 leads to increased arterial stiffness and altered mitochondrial respiration resulting in vascular dysfunction. *Frontiers in Physiology*. 2024 Apr 29;15:1386296. **2024**
11. Pandey N, Kaur H, Chorawala MR, Anand SK, Chandaluri L, Butler ME, Aishwarya R, Gaddam SJ, Shen X, Alfaidi M, **Bhuiyan MAN**, Wang J. Interactions between integrin $\alpha 9\beta 1$ and VCAM-1 promote neutrophil hyperactivation and mediate poststroke DVT. *Blood Advances*. 2024 May 14;8(9):2104-17. **2024**
12. Akan S, Varlı S, **Bhuiyan MAN**. An enhanced Swin Transformer for soccer player reidentification. *Scientific Reports*. 2024 Jan 11;14(1):1139. **2024**
13. Akan T, Alp S, **Bhuiyan MAN**. Vision Transformers and Bi-LSTM for Alzheimer's Disease Diagnosis from 3D MRI. In *2023 Congress in Computer Science, Computer Engineering, & Applied Computing (CSCE) 2023 Jul 24 (pp. 530-535)*. IEEE. **2024**
14. Bonin BJ, Beckman S, Diaz R, Terrell D, Mahmud S, **Bhuiyan MAN**, Kumbhare D, Savardekar A, Guthikonda B. The Utility of Stereotactic Radiosurgery in Primary Treatment of Small to

- Medium Sporadic Vestibular Schwannomas: A Systematic Review and Meta-Analysis. *Journal of Neurological Surgery Part B: Skull Base*. 2024 Feb;85(S 01):S146. **2024**
15. Al-Yafeai Z, Ali S, Brown J, Venkataraj M, Bhuiyan MS, Faisal AS, Densmore K, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, **Bhuiyan MAN**. Cardiomyopathy-associated hospital admissions among methamphetamine users: geographical and social disparities. *JACC: Advances*. 2024 Mar 13;100840. **2024**
 16. Akan T, Sait Alp, **Bhuiyan MAN**, ECGformer: Leveraging transformer for ECG heartbeat arrhythmia classification, *IEEE Computer Science, Computer Engineering, & Applied Computing (CSCE)*, **2024**
 17. Charoenpong P, Dhillon N, Murnane K, Goeders N, Hall N, Keller C, **Bhuiyan MAN**, Walter R. Methamphetamine-associated pulmonary arterial hypertension: data from the national biological sample and data repository for pulmonary arterial hypertension (PAH Biobank). *BMJ Open Respiratory Research*. 2023 Dec 1;10(1):e001917. **2024**
 18. Alam S, Pardue S, Shen X, Glawe JD, Yagi T, **Bhuiyan MAN**, Patel RP, Dominic PS, Virk CS, Bhuiyan MS, Orr AW. Hypoxia increases persulfide and polysulfide formation by AMP kinase dependent cystathionine gamma lyase phosphorylation. *Redox Biology*. 2023 Dec 1;68:102949. **2024**
 19. Xing DG, Horan T, Bhuiyan MS, Faisal AS, Densmore K, Murnane KS, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Patterson JC, **Bhuiyan MAN***, Social-geographic disparities in suicidal ideations among methamphetamine users in the USA. *Psychiatry research*. 2023 Nov 1;329:115524. **2024**
 20. Mubashir M, Andrus V, Okuampa D, Neice M, Armstrong E, Canezaro H, Dies R, Deville A, Kawji L, Rashid S, **Bhuiyan MAN*** Raza SM. Short-term Outcome of Peroral Endoscopic Myotomy Performed by the Same Endoscopist on Achalasia and Nonachalasia Esophageal Motility Disorders. *Surgical Laparoscopy Endoscopy & Percutaneous Techniques*. 2023 Oct 6:10-97. **2024**
 21. Alp S, Dehkharghani R, Akan T, **Bhuiyan MAN**. MOBRO: multi-objective battle royale optimizer. *The Journal of Supercomputing*. 2024 Mar;80(5):5979-6016. **2024**
 22. Akan T, Oliva D, Feizi-Derakhshi AR, Feizi-Derakhshi AR, Pérez-Cisneros M, **Bhuiyan MAN**. Battle royale optimizer for multilevel image thresholding. *The Journal of Supercomputing*. 2024 Mar;80(4):5298-340. **2024**
 23. Khan MTF, Mazumder S, Rahman MH, Afroz MA, Kiser H, **Bhuiyan MAN** "The Transition of Sociodemographic and Substance Abuse Characteristics, Pairwise Co-occurrences and Factors Associated with Polysubstance Use Among US Adolescents and Young Adults" *Addiction and Health*, Accepted, August, 2023. **2023**
 24. Boparai S, Lakra R, Dhaliwal L, Hansra RS, **Bhuiyan MAN**, Conrad SA, Krishnan P, Conrad S. Therapeutic Plasma Exchange in Severe Rhabdomyolysis: A Case-Control Study. *Cureus*. 2023 May 30;15(5). **2023**
 25. Thotamgari SR, Sheth AR, Patel HP, Sandhyavenu H, Patel B, Grewal US, **Bhuiyan MAN**, Dani SS, Dominic P. Safety of catheter ablation for atrial fibrillation in patients with cancer: a nationwide cohort study. *Postgraduate Medicine*. 2023 May 26. **2023**
 26. Hall N, James B, **Bhuiyan MAN**, Crane E, Falgout C, Murnane KS (2023). Topical cannabidiol is well tolerated in individuals with a history of elite physical performance and chronic lower extremity pain. *Journal of Cannabis Research*, 5(1), 1-10, **2023**
 27. Bhuiyan MS, Faisal AS, Venkataraj M, Goeders NE, Bailey SR, Conrad SA, Vanchiere JA, Orr AW, Kevil CG, **Bhuiyan MAN**. Disparities in Prevalence and Trend of Methamphetamine-Associated Cardiomyopathy in the United States. *Journal of the American College of Cardiology*. 2023 May 9;81(18):1881-3.
 28. Remex NS, Abdullah CS, Aishwarya R, Nitu S, Traylor J, Hartman B, King J, **Bhuiyan MAN**, Kevil CG, Orr AW, Bhuiyan MS, Sigmar1 null mice develops lung pathological changes associated with pulmonary fibrosis, inflammation, and altered surfactant proteins levels over aging, *Journal: Frontiers in Physiology*. 14, 493., **2023**

29. Reekes TH, Ledbetter CR, Pardue S, Alexander JS, Stokes KY, **Bhuiyan MAN**, ... & Disbrow E.A. (2023). Elevated plasma sulfides are associated with cognitive dysfunction and brain atrophy in human Alzheimer's disease and related dementias. *Redox Biology*, 102633. **2023**
30. Aishwarya R, Abdullah CS, Remex NS, Nitu S, Hartman B, King J, **Bhuiyan MAN**... & Bhuiyan MS (2023). Pathological Sequelae Associated with Skeletal Muscle Atrophy and Histopathology in G93A* SOD1 Mice. *Muscles*, 2(1), 51-74. **2023**
31. Baldwin WM, Dayton RD, Bivins AW, Scott RS, Yurochko AD, Vanchiere JA, **Bhuiyan MAN**... & Murnane KS (2023). Highly socially vulnerable communities exhibit disproportionately increased viral loads as measured in community wastewater. *Environmental Research*, 115351. **2023**
32. Patton MJ, Orihuela CJ, Harrod KS, **Bhuiyan MAN**, Dominic P, Kevil CG, ... & Gaggar A (2023). COVID-19 bacteremic co-infection is a major risk factor for mortality, ICU admission, and mechanical ventilation. *Critical Care*, 27(1), 1-12. **2023**
33. Ross MM, Sagrera C, McPherson P, Smith DG, **Bhuiyan MAN**, Tinsley MS, Goeders NE, Patterson JC, Murnane KS. Use of virtual meeting and survey technology to assess Covid-19 related mental wellbeing of healthcare workers. *Ethics, Medicine, and Public Health*. 2023 January 28:100860. **2023**
34. **Bhuiyan MAN**, Davis T, Arnold C, Motayar N, Bhuiyan MS, Smith D, Murnane K, Densmore K, Bailey S, Kevil C, Using The Social Vulnerability Index to Assess COVID-19 Vaccine Uptake in Louisiana, *Journal, GeoJournal*. **2022**
35. Abdullah CS, Remex NS, Aishwarya R, Nitu S, Kolluru GK, Traylor J, Hartman B, King J, **Bhuiyan MAN**, Hall N, Murnane KS. Mitochondrial dysfunction and autophagy activation are associated with cardiomyopathy developed by extended methamphetamine self-administration in rats. *Redox Biology*. 2022 Dec 1; 58:102523. **2022**
36. Sagrera CE, Magner J, Temple J, Lawrence R, Magner TJ, Avila-Quintero VJ, McPherson P, Alderman LL, **Bhuiyan MAN**, Patterson JC, Murnane KS. Social media use and body image issues among adolescents in a vulnerable Louisiana community. *Frontiers in Psychiatry*. 2022; 13. **2022**
37. Thotamgari, SR, Babbili, A, Jakulla, RS, **Bhuiyan MAN** & Dominic, P (2022). Sex Differences in In-Hospital Outcomes of Catheter Ablation for Atrial Fibrillation. *Journal of Cardiovascular Electrophysiology*. **2022**
38. Sahith Reddy Thotamgari, Udhayvir Singh Grewal, **Bhuiyan MAN**, Zain Ul Abideen Asad, Paari Dominic, The association of cardiac arrhythmias with chimeric antigen receptor T cell therapy in hospitalised patients: Insights from National Inpatient Sample, *European Journal of Cancer*, Volume 174, 2022, Pages 131-133, ISSN 0959-8049, <https://doi.org/10.1016/j.ejca.2022.07.019>. **2022**
39. Shah AN, Rasnick E, **Bhuiyan MAN**, Wolfe C, Bosse D, Simmons JM, Shah SS, Brokamp C, Beck AF. Using Geomarkers and Sociodemographics to Inform Assessment of Caregiver Adversity and Resilience. *Hosp Pediatr*. 2022 Aug 1;12(8):689-695. doi: 10.1542/hpeds.2021-006121. PubMed PMID: 35909177. **2022**
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41. Thotamgari SR, Sheth AR, Ahmad J, Bawa D, Thevuthasan S, Babbili A, **Bhuiyan MAN**, Brar V, Duddyala N, Amorn A, Dominic P. Low left atrial appendage emptying velocity is a predictor of atrial fibrillation recurrence after catheter ablation. *J Cardiovasc Electrophysiol*. 2022 Jun 2; doi: 10.1111/jce.15580. [Epub ahead of print] PubMed PMID: 35652828. **2022**
42. Batra V, Murnane KS, Knox B, Edinoff AN, Ghaffar Y, Nussdorf L, Petersen M, Kaufman SE, Jiwani S, Casey CA, Terhoeve S, **Bhuiyan MAN**, Dominic P, McNeil S, Patterson J 2nd. Early onset cardiovascular disease related to methamphetamine use is most striking in individuals

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