### **Rubayet Kamal**

7114 Charlotte Pike APT 622, Nashville TN - 37209 (678) 474-6603 rkamal21@email.mmc.edu

### EDUCATION

eharry Medical College - M.D. 1005 Dr. D.B. Tood, Jr. Blvd, Nashville, TN-37216	2020-2024	
615-327-6204		
University of Alabama at Birmingham - B.S. Neuroscience	2016-2020	
$1720 2^{nd}$ Avenue S, Birmingham, AL-35233	2010 2020	
(205) 934-4011		
Jefferson State Community College - Certified Clinical Medical Assistant	2018	
2601 Carson Rd, Birmingham, AL-35215		
(205) 853-1200		
Trenholm State Community College - Emergency Medical Technician	2016	
1225 Air Base Blvd, Montgomery, AL-36108		
(334) 420-4200		
LEADERSHIP		
President for Meharry Surgery Club	2022-2023	
Established and ran a monthly suture workshop for medical students and created a		
database to help students find mentors		
President of Meharry Global Health Organization	2022-2023	
Helped establish health screenings for the unhoused, international mission trips, and		
other medical volunteering events providing free care		
American College of Cardiology ACC Social Medical Ambassadors	2023-2024	
Help organize and promote for The American College of Cardiology		
Medical Student Member Community		
HEPREP Chair of Student National Medical Association (SNMA)	2023-2024	
High School Professionals Recruitment and Exposure Program (HPREP)	2023 2024	
Provided guidance/ mentorship and early exposure to medine		
for High School Students in low socioeconomic schools		
Co Vice President for Maharmy Oncology Club	2022 2022	
<b>Co-Vice President for Meharry Oncology Club</b> Helped establish informational seminars with oncologists and tours of radiation	2022-2023	
oncology. Established mentorship opportunities for club members		
Vice President of Operations for Cardiology Club	2022-2023	
Organized and oversaw events raising awareness for cardiovascular health, including a	2022 2023	
school-wide Jump Rope For Heart competition during Heart Disease Awareness Week		

and Wear Red for Heart Disease Awareness Day. Also organized meetings with mentors and attendings to help club members develop their knowledge and passion for the field	
<b>Community Service Chair for Saburo Hara Pediatric Society</b> Organized and managed events for underserved children in the Meharry community, including distributing goody bags on Thanksgiving, Happy Healthy Halloween, a health checkup/birthday party for one-year-olds, a baby shower drive, and a high school visit for students interested in pursuing medicine	2022-2023
<b>Communication Chair for Meharry Oncology Club</b> Organized and ran day-to-day club operations, including writing bylaws, creating Zoom links, and distributing invites for speakers. Also established a mentorship program for students interested in Oncology	2021-2022
<b>External Liaison Chair for Meharry Global Health Organization</b> Organized and scheduled events, encouraged student attendance, distributed Zoom links and reminders to speakers and attendees, and presented research at national GSSA meetings	2020-2022
Second Lieutenant – Army National Guard Medical Detachment O1 to O3 after graduation. Alabama National Guard Medical Detachment since 2020	2020-2025

#### PUBLICATIONS AND PRESENTATIONS

<u>A High-fidelity Model Of Real Beating Heart For Training Off-pump Coronary Artery Bypass Graft Surgery</u> International Coronary Congress – Oral Presentation, Abstract **Rubayet Kamal,** Rabin Gerrah

<u>Clinical Outcomes of Cardiac Allografts Recovered by Local Surgeons Compared to Recipient Center</u> <u>Surgeons</u>

The International Society For Heart and Lung Transplantation – Abstract Alexander DeBose-Scarlett, <u>Rubayet Kamal</u>, Enock Adjei, C. D. Keck, S. R. Scholl, Ashish Shah, Bommareddi, Chetan Pasrija, John Trahanas.

Enhanced Surgical Precision through Micro-Monitor Technology: Minimizing Neck Fatigue in Cardiovascular Surgery American College of Surgeons – Podium Presentation Rubayet Kamal, Rabin Gerrah

<u>Concentration of Insufflated Carbon Dioxide During Open Heart Surgery</u> *The Journal of Thoracic and Cardiovascular Surgery JTCVS – Published Paper in Press* DOI.org/10.1016/j.xjtc.2023.07.001 <u>Rubayet Kamal.</u> Rabin Gerrah <u>Reimagining Inpatient Physiologic Monitoring: A Pilot of Wearable Activity Monitors After</u> <u>Cardiac Surgery</u>

Vanderbilt Institute of Clinical and Translational Research (VICTR) Grant

American College of Surgeons (ACS) - Poster Presentation and Abstract <u>Rubavet Kamal</u>, Alexandra DeBose-Scarlett, Qingyuan Song, Zhijun Yin, and Ashish S.Shah

### Antiviral Therapy Utilization and 10-year Outcomes in Resected Hepatitis B Virus- and Hepatitis C Virusrelated Hepatocellular Carcinoma

The Journal of Clinical Oncology – Published Paper : JCO.23.00757R1

Daniel Huang, Joseph Hoang, <u>Rubayet Kamal</u>, Pei-Chien Tsai, Hidenori Toyoda, Ming-Lun Yeh, Satoshi Yasuda, Jennifer Leong, Mayumi Maeda, Chung-Feng Huang, Won Jun Dae, Masatoshi Ishigami, Yasuhito Tanaka, Haruji Uojima, Eichi Ogawa, Hiroshi Abe, Yao-Chun Hsu, Cheng-Hao Tseng, Manaf Alsudaney, Ju Dong Yang, Yoko Yoshimaru, Takanori Suzuki, Joanne Liu, Charles Landis, Chia-Yen Dai, Jee-Fu Huang, Wan-Long Chuang, Myron Schwartz, Yock Young Dan, Carlos Esquivel, Andrew Bonham, Ming-Lung Yu, Mindie Nguyen

Enhancing Medicine: Virtual Translational Learning Across Institutions

American Surgical Congress – Poster presentation

Lonnie Hill, Porsha Brown, <u>Rubayet Kamal</u>, DeCoria McCauley, Mathew Perez, Washington Johnson, Anthony Moreland, Angela Ward, S. Lucchese, Jessica Mpamugo, Derek Wilus, Bolanle Asiyanbola

<u>Virtual Translational Learning: An Inter-Institutional Multi-Specialty Project</u> *American Medical Association AMA ChangeMed 2023 – Poster Presentation* Leiana Hollingsworth, **Rubayet Kamal**, Junie Saint Clair, Andrianna Anderson, Lonnie Hill, Stacia Hollingsworth, Elyse Taylor, and Bolanle Asiyanbola

Non-Invasive Postoperative Monitoring with Wearable Activity Monitors After Cardiac Surgery at Thoracic Surgery Medical Student TSMA – Oral Presentation

Rubayet Kamal, Alexandra DeBose-Scarlett, Qingyuan Song, Zhijun Yin, and Ashish S.Shah

### Antiviral Therapy is Severely Underutilized in Hepatitis B and Hepatitis C Associated Hepatocellular Carcinoma After Liver Resection: A REAL-HCC Study.

The American Association for The Study of Liver Disease AASLD – Published Paper Hepatology Volume76, Issue S1. DOI: 10.1002/hep.32697

Daniel Huang, **Rubayet Kamal**, Clark Bonham, Pei-Chien Tsai, Hidenori Toyoda, Ming-Lun Yeh, Ming-Lun Yeh, Satoshi Yasuda, Jennifer Leong, Joseph Hoang, Mayumi Mae, Chung-Feng Huang, Dae Won Jun, Masatoshi Ishigami, Yasuhito Tanaka, Haruki Uojima, Eiichi Ogawa, Hiroshi Abe, Yao-Chun Hsu, Cheng-Hao Tseng, Yoko Yoshimaru, Takanori Suzuki, Joanne Liu, Charles Landis, Chia-Yen Dai, Jee-Fu Huang, Wan-Long Chuang, Myron E Schwartz, Yock Young Dan, Carlos O Esquivel, Ming-Lung Yu, Mindie H. Nguyen

Antiviral Therapy Improves Survival in Viral-Associated Hepatocellular Carcinoma after Liver Resection but is Severely Underutilized

The American Gastroenterological Association – Published Paper Gastroenterology Volume 162 Issue 7 DOI:10.1016/S0016-5085(22)63455-3 The Digestive Disease Week DDW Sa1396 – Abstract Presentation

> Daniel Huang, **<u>Rubayet Kamal</u>**, Pei-Chien Tsai, Hidenori Toyoda, Ming-Lun Yeh, Satoshi Yasuda, Jennifer Leong, Joseph Hoang, Mayumi Maeda, Chung-Feng Huang, Dae Won Jun, Andrew Bonham, Eiichi Ogawa, Haruki Uojima, Hiroshi Abe, Yao-Chun Hsu, Cheng-Hao Tseng, Joanne Liu, Charles Landis, Chia-Yen Dai, Jee-Fu Huang, Wan-Long Chuang, Myron Schwartz, Yock Young Dan, Carlos O. Esquivel, Ming-Lung Yu, Mindie H. Nguyen, Takanori Suzuki, Yasuhito Tanaka

Antiviral Therapy with Liver Resection for HCV & HBV Related Hepatocellular Carcinoma Meharry-Stanford Summer Research 2021 – Abstract and Oral Presentation **Rubayet Kamal**, Mayumi Maeda, Joseph Hoang, Daniel Huang, Mindie H. Nguyen

<u>Underutilization of Antiviral Therapy Among Resection Patients with Hepatocellular Carcinoma</u> 65th Annual Meharry Student Research Day – Poster presentation <u>Rubayet Kamal</u>, Mayumi Maeda, Joseph Hoang, Daniel Huang, and Mindie H. Nguyen

<u>Antiviral Therapy After Resection/Orthotopic Liver Transplantation for HCV & HBV Related Hepatocellular</u> <u>Carcinoma</u> Nguyen Lab In the Division of Gastroenterology and Hepatology – Oral Presentation

Rubayet Kamal, Mindie H. Nguyen

<u>A Brief Overview of Prion Diseases and Their Impact on India</u> The University of Alabama at Birmingham Spring 2020 Research Expo – Honors thesis presentation <u>Rubayet Kamal,</u> Cristin Gavin

<u>Riders: The Stories Behind the Rescues</u> Featured film presented at 20<sup>th</sup> Annual Sidewalk Film Festival and National Collegiate Honors Council at Boston – Master Film <u>Rubayet Kamal,</u> Vivek Singh, Michelle Foreman

<u>Overview of Parkinson Disease and Initiation/Propagation of α-Synuclein Aggregation in the Nervous</u> <u>System</u> *The University of Alabama at Birmingham Spring 2018 Research Expo* - Video presentation Baraa Hijaz, <u>Rubayet Kamal</u>

#### **RESEARCH EXPERIENCE**

A High-fidelity Model Of Real Beating Heart For Training Off-pump Coronary Artery Bypass Graft Surgery

Activities: Oral presentation. Helped write and edit Abstract

#### Mentor: Dr. Rabin Gerrah

## Enhanced Surgical Precision through Micro-Monitor Technology: Minimizing Neck Fatigue in Cardiovascular Surgery

Activities: Wrote and edit abstract for American College of Surgeons Mentor: Dr. Rabin Gerrah

### Intracardiac Carbon Dioxide Concentration Dynamics During Open Chamber Cardiac Surgery with Pericardial Insufflation

Activities: Wrote manuscript. Accepted in The Journal of Thoracic and Cardiovascular Surgery JTCVS Mentor: Dr. Rabin Gerrah

# Non-Invasive Electrical Cardiometry for Measurement of Hemodynamic Parameters In Children With Congenital Heart Disease

Activities: Wrote a grant for Vanderbilt Institute for Clinical and Translational Research and helped complete an IRB application and Research Design. IRB completed, Grant under review Mentors: Dr. Nhue Do, Dr. Subhendu De

# Meharry Surgical Retreat: understanding the socioeconomic factors that result in decreased match rate and if virtual knowledge transfer can aid in increased matching rates

Activities: Helped run Meharry surgical retreat 2022 and 2023 which we used as a backbone to understand the impact students with low socioeconomic face when preparing for mathing into competitive specialty and how Mentors: Dr. Asiyanbola

#### Clinical Outcome for Transplanted Hearts Procured by Local Surgeons vs Recipient Institution Surgeons

Activities: Wrote manuscript and abstract submitted to TNACS Mentors: Dr. Alexandria DeBose Scarlett, Dr. Ashish Shah, and Dr. John Trahanas

## Reimagining Inpatient Physiologic Monitoring: A Pilot of Wearable Activity Monitors After Cardiac Surgery

Activities: Wrote and was awarded The Vanderbilt Institute for Clinical and Translational Research (VICTR) Grant. Poster presented at The American College of Surgeons ACS. Oral presentation at The Thoracic Surgery Medical Student Association. Manuscript in progress Mentors: Alexandria DeBose Scarlett, Q Song, Z Yin, Ashish Shah

#### Outcomes in Pediatric Cardiothoracic Surgery Between Whole Blood and Component Blood

Activities: Helped write VICTR grant and IRB for whole blood for pediatric route finalized through the Red Cross. IRB is currently processing.

Mentors: Dr. Jennifer Andrews and Dr. Nhue Do

# Antiviral Therapy is Severely Underutilized in Hepatitis B (HBV) and Hepatitis C (HCV)-associated Hepatocellular Carcinoma (HCC) After Liver Resection: A REAL- HCC Study

Activities: Helped with data collection and analysis,

abstract presentation at The American Association for The Study of Liver Disease AASLD - Hepatology Mentors: Mindie H Nguyen, Daniel Huang, Joseph Hoang

### Antiviral Therapy Improves Survival in Viral-Associated Hepatocellular Carcinoma after Liver Resection but is Severely Underutilized

Activities: Helped with data collection, analysis, abstract, and manuscript. Published at The Journal of Gastroenterology, abstract presented at Digestive Disease Week Mentors: Mindie H Nguyen, Daniel Huang, Joseph Hoang

#### Underutilization of Antiviral Therapy Among Resection Patients with Hepatocellular Carcinoma

Activities: Helped with data collection, analysis, and abstract. Poster and oral presentation at the Stanford-Meharry Initiative Research Retreat. Poster presentation at 65th Annual Meharry Student Research Day Mentors: Mindie H Nguyen, Daniel Huang, Joseph Hoang

#### A Brief Overview of Prion Diseases and their Impact on India

Activities: Literature review and thesis on prion disease Mentors: Cristin Gavin

# Used Mathematica software program to find correlation/probability of spillover mapping and related it to the excitatory postsynaptic current between a Purkinje and interneuron

Activities: Work study and research Mentors: Jacques Wadiche

# Performed stereotaxic surgery injecting RAAVs virus into target genes of interest in the inferior olivary nucleus of the medulla oblongata of newborn mice to understand the synaptic connection between the Purkinje cells and interneurons

Activities: Work study and research Mentors: Jada Vaden, Jacques Wadiche

### Performed stereotaxic surgery injecting RAAVs virus into the target cell expressing channel rhodopsin in the hippocampus and then expressing the rhodopsin to observe the difference between neurons Activities: Work study and research

Mentors: Allison Manuel, Jacques Wadiche

#### HONORS, AWARDS, AND GRANTS

American College of Surgeon (ACS) Tennessee Chapter – Dorothy Brown Memorial Scholarship	2023
Vanderbilt Institute for Clinical and Translational Research Grant - VR69581 -Submitted	2024
Association of Black Cardiovascular & Thoracic Surgeons HBCU Scholar	2023

The Edward W. Browne, M.D. '53 Endowed Scholarship	2022
The Society of Thoracic Surgeon (STS) Advocacy Conference Scholarship	2022
Vanderbilt Institute for Clinical and Translational Research Grant - VR63301	2022
Dr. Nelson and Effie Adams Endowed Scholarship	2021
Higher Education Emergency Relief Grant	2021
Graham Ladensohn Scholar - Stanford School of Medicine	2021
Stanford-Meharry Summer Research Fellow	2021
UAB Sparkman Center for Global Health Case Competition	2019
Order of Omega Greek Honors Society	2018
Ethnographic Film accepted and presented at SideWalk Film Festival	2018
Collegiate Honors Scholarship – Merit-based Scholarship	2016
Hess-Abroms Honors Scholarship – Honors Program Scholarship	2016
University Honors Program (UHP)	2016
Undergraduate Video Research Awards Finalist	2017
Federal Pell Grant	2016
Federal Work-Study Grant	2016

### MEMBERSHIPS

Thoracic Surgery Medical Student Association (TSMA) - Active Member Student National Medical Association (SNMA) - Active Member The Society of Thoracic Surgeons (STS) - Medical Student Associate Member American College of Cardiology (ACC) – Medical Student Member Eastern Cardiothoracic Surgical Society (ECTSS) - Medical Student Candidate Member The American College of Surgeons (ACS) - Medical Student Member Tennessee Chapter of The American College of Surgeons (TNACS) - Medical Student Member Tennessee Medical Association Medical Student (TMA-MSS) - Medical Student Member

#### MEDICAL EXPERIENCE

Trauma Surgery	2023
Lehigh Valley Health Network – Allentown, PA	
Pediatrics In-patient	2023
Monroe Carell Children's Hospital at Vanderbilt - Nashville, TN	
Pediatrics Ambulatory	2023
Nashville Metro General - Nashville, TN	
Children's Clinic East - Nashville, TN	
Obstetrics and Gynecology	2022
Nashville Metro General - Nashville, TN	
Physical Therapy and Rehabilitation	2022
Church Health - Memphis, TN	
Optometry	2022
Church Health - Memphis, TN	
Behavior Health Services	2022
Church Health - Memphis, TN	
Family Medicine Ambulatory	2022
Church Health - Memphis, TN	
Substance Addiction Clinic	2022
Meharry Elam Mental Health Center - Nashville, TN	
Psychiatry	2022
Meharry Elam Mental Health Center - Nashville, TN	
Surgical Oncology	2022
Swedish Hospital - Seattle, WA	
General Surgery	2022
Swedish Hospital - Seattle, WA	
Thoracic Surgery	2022
Swedish Hospital - Seattle, WA	
Acute Care Surgery	2022
Swedish Hospital - Seattle, WA	
General Surgery & Surgery Clinic	2022
Nashville General Hospital - Nashville, TN	
Emergency Medicine	2022
Nashville General Hospital - Nashville, TN	
Neurology	2022
Stroke and Heart Attack Prevention Center - Nashville TN	-
Internal Medicine	2022
Broward Health - Broward County, FL	2022
Internal Medicine	2022
Tennessee Healthcare Partners - Smyrna, TN	
Internal Medicine	2022
Tri-Health Good Samaritan Hospital - Cincinnati, OH	2022
EMT First Responder	2016-2020
Care Ambulance (Clanton, AL) – Rural	
EMT First Responder	2015-2016
Care Ambulance (Montgomery, AL) – City	2010 2010
Certified Clinical Medical Assistant	2018
UAB Externship: ENT, Neurology, Endocrinology, Dermatology, Rheumatology, Pulmonary, Ne	

General Surgery, Cardiology, and Cardiographic

### WORK EXPERIENCE

Care Ambulance	2016-2020
1150 S Panama St, Montgomery AL-36107	
(334) 386-3800	
BhamTechRepair – Owner/Manager	2017-2020
Mobile repair service in Birmingham, Alabama	
(678) 474-6603	
King Wireless – Manager/Sales Analyst	2015-2016
103 N Burbank Dr, Montgomery, AL-36117	
(334) 288-2132	
Cotton Wood Golf Club – Trainer, Green Keeper	2013-2016
7160 Byron Nelson Blvd, Montgomery, AL-36116	
(334) 281-3344	

### COMMUNITY SERVICE

Mentor for Student National Medical Association's (SNMA) Health High School Professionals Recruitment and Exposure Program (HPREP) Provided guidance and support to aspiring medical students.	2022-2023
Mentor for Catholic Charities Youth Refugee Mentorship Program Provided advice, encouragement, and helpful resources to refugee youths (ages 9-14) interes medicine.	2022-2023 sted in
Annual Meharry Surgical Retreat with Meharry Surgical Club Assisted in planning and overseeing the Annual Meharry Surgical Retreat and the associated submission.	2022-2023 research
<b>"Meharry Goes Red" with Meharry Cardiology Club</b> Organized campus wide "Meharry Goes Red" event with fellow cardiology club executive boa members to raise healthy heart awareness with the Meharry community.	2022-2023 ard
Health Screening for Two Year Olds with Meharry Pediatric Club Arranged and oversaw two health screenings events for two year olds— one for English spea one for non-English speakers with translators present.	2022-2023 kers and
Nashville Strong Babies Drive-in Baby Shower with Meharry Pediatric Club Helped organize a drive-in baby shower that provided newborn care essentials to parents in r	2022-2023 need.
Happy Healthy Halloween with Meharry Pediatric Club Distributed candy to under-resourced children in the Meharry Community on Halloween.	2022

Suture Clinic with Meharry Surgery Club Organized a monthly suture clinic, collected all supplies via donations, and taught suture tech fellow medical students.	2022-2023 nniques to
Meharry Medical College Covid-19 Data Entry Entered data from Meharry's Covid-19 testing center.	2020-2022
<b>Fundraiser Coordinator for Non-Profit Bestower Foundation</b> Raising funds for construction of school and clinic in Natore, Bangladesh.	2017-2024
Civil Air Patrol – Educator Senior Member – 611313	2018-2020
UHP Community Kitchens Meal Prep	2016-2020
St. Jude Walk/Run to End Childhood Cancer	2016-2020
Shave for St. Jude	2016-2020
Harley Group Benefit Rides for Big Oak Ranch Orphanage	2017-2018
Pike Road Fire Department - Volunteer Fire Rescue EMS	2016-2017
Amedisys Hospice Volunteer	2015-2017

### CERTIFICATIONS

Pediatric Advance Life support PALS – 913111	2022
Advance Cardiac Life Support ACLS- 913111	2022
Basic Life Support BLS- 913111	2022
Prehospital Trauma Life Support PHTLS - 913111	2022
NHA Certified Clinical Medical Assistant CCMA-C7N7P2A9	2018
Alabama State-Certified EMT-Basic-1600459	2016
NREMT Nationally Certified EMT-Basic-E3265562	2016
Emergency Vehicle Operations Certified EVOC	2016

### LANGUAGES

English – Started learning in 8 <sup>th</sup> grade when we immigrated to the US		Fluent
Bangla – Born and Raised in Bangladesh	Fluent	
Arabic – Learned to read and speak pre-immigration		Basic
Hindi – Most if not all entertainment were in Hindi. Able to understand due to similarity		Basic
Mandarin – 3 years in High School and passed Chinese proficiency HSK1		Basic