“DIVERSITY AND HEALTH CARE DISPARITIES”

Beyond the Politico-Legal demise of "AFFIRMATIVE ACTION"

HILTON ALEXANDRIA MARK CENTER
5000 SEMINARY ROAD
ALEXANDRIA, VIRGINIA 22311

SEPTEMBER 29, 2023 — OCTOBER 1, 2023

WWW.AAMPINC.ORG

TABLE OF CONTENTS

WWW.AAMPINC.ORG

WELCOME MESSAGE

THE ASSOCIATION FOR ACADEMIC MINORITY PHYSICIANS, INC.
P.O. Box 271
Stevenson, Maryland 21153-0271

September 30, 2023

Dear Colleagues,

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair."
Charles Dickens, A Tale of Two Cities

You might ask what has a book written over 150 years ago that contrasted the political, economic and social environment that existed in London and Paris nearly 300 years ago has to do with us and this meeting. In fact, we are experiencing some of the same stresses today. In 1954 I was one of nine African American men in the Harvard College first-year class of 1,172 men (0.8 %). Of course, diversity has virtually exploded at some of our colleges and universities since then. When I entered medical school at Tufts in 1958, there were three people of color (2.6%). In 2000 African Americans and Hispanics were 9.5 percent of the nation's physicians. By 2020 this number was still less than 11 percent.

During this year's meeting, we have planned a panel discussion to consider the ramifications of the SCOTUS decision on affirmative action and its potential impact on college and professional diversity, biomedical research and healthcare. Each of us tries to promote diversity, doing our own thing individually or as part of a group. I wonder what it would be like if we could all come together with a combined forceful agenda- sort of like the great march on Washington.

WELCOME TO THE 37th ANNUAL MEETING OF AAMP

Donald E. Wilson, M.D., M.A.C.P.
Executive Director/Founder, Association for Academic Minority Physicians
Dean Emeritus, University of Maryland School of Medicine
Inaugural Vice President for Medical Affairs
University of Maryland , Baltimore

THE ASSOCIATION FOR ACADEMIC MINORITY PHYSICIANS, INC.
P.O. Box 271
Stevenson, Maryland 21153-0271

PRESIDENT'S WELCOME MESSAGE

September 30, 2023

"WELCOME"

Welcome to our 37th Association for Academic Minority Physicians (AAMP) annual scientific meeting, a gathering where the shining minds of our industry assemble to share what they have learned since we last met. This is our first in person meeting since the COVID pandemic. If it is your first time attending, we thank you for stepping into our world! If you are a returning guest, we thank you for coming back! Whether you are attending the first or the fifteenth, we treasure your trust in what we have to offer. We promise to make it worth your while.

The organization continues to work on behalf of those underrepresented to increase diversity within academic medicine and the nation's biomedical workforce, and ultimately within the ranks of healthcare leaders. We remain grateful to the founders of the AAMP for their insight and expertise on how best to support efforts of scientific exchange, especially for our early career and young investigators.

As in years past, we have put together a robust collection of abstract presentations, an energetic keynote speaker, and a panel discussion to whet your appetite for learning.

The coordinators responsible for putting this event together have done a tremendous job. As president of our organization, I extend my sincerest gratitude to the crew for investing their energy and creativity to provide a top-notch event.

Thank you again, and welcome!

Sincerely,

David L. Stewart, M.D., M.P.H.

David L. Stewart, MD, MPH
President, AAMP

OFFICERS: January 1, 2023 – December 31, 2023

EXECUTIVE DIRECTOR

DONALD E. WILSON, M.D

PRESIDENT

DAVID L. STEWART, M.D., M.P.H.

SECRETARY-TREASURER

MEREDITH BOND, PhD.

COUNCILORS

ROBERT A. BARISH, M.D.

FELIX MORALES, M.D.

BOARD OF DIRECTORS

MEREDITH BOND, PhD.

LUTHER T. CLARK, M.D.

ESAM Z. DAJANI, PhD.

MARC A. NIVET, Ed.D, M.B.A.

ELIZABETH O. OFILI, M.D., M.P.H.

VICTOR F. SCOTT, M.D., CHAIR

DAVID L. STEWART, M.D.

LOUIS W. SULLIVAN, M.D.

GERALD E. THOMSON, M.D.

BRUCE W. TROTMAN, M.D.

DONALD E. WILSON, M.D.

THE ASSOCIATION FOR ACADEMIC MINORITY PHYSICIANS, INC

AAMP

THE FOUNDERS

From left to right, Drs. *John L. Townsend, Gerald E. Thomson, Bruce W. Trotman, Louis W. Sullivan, *Carroll M. Leevy, and Donald E. Wilson

*** Deceased**

HISTORY

The Association for Academic Minority Physicians, Inc., (AAMP), was formed in 1986 by six minority academicians (FOUNDERS), who held prominent and visible positions.

The FOUNDERS had previously discussed the striking absence of minorities in academic medicine, particularly in leadership positions, as well as the lack of progress being made to increase underrepresented minority representation in these areas. For example, in 1986 under-represented minorities accounted for only 3% of U.S. medical school faculty 1.9% of professors, and no academic Dean, (except for traditionally minority schools). Moreover, a significant number of the 3% minority faculty was in the traditional minority schools such as Howard, Meharry, Morehouse and Drew. The lack of minority representation (role models) failed to provide a stimulus for young minority students to enter into medical careers. All of this translates into not only less progress academically, but also poorer health care in the U.S. for minority populations.

The FOUNDERS sought to provide a forum for scientific exchange, a clearinghouse for minority academic opportunities, an impetus for more effective utilization of programs targeted toward minorities, and also to develop support for increased training of minorities, particularly at the entry level. On February 25, 1991, the AAMP co-sponsored with HRSA a national consensus meeting in Rockville, Maryland to address these issues.

The AAMP has held successful annual meetings from 1987 through 2022. During this time AAMP supported travel fellowships for young investigators and medical students to attend and present their research at the meeting. The AAMP has a national reputation as an organization dedicated to working on behalf of minorities to effect change. The AAMP published a national journal (JAAMP) for eighteen years. The JAAMP is no longer published due to increasing costs.

From1992 until 2000 with support from the Merck Company Foundation, AAMP sponsored summer research fellowships for medical students. With support from SmithKline Beecham, the AAMP also sponsored junior faculty research awards.

Considering projections indicating that in the year 2030 over 50% of the U.S. population will be “minority,” it is essential that we do all possible to prepare this work force, particularly in the areas of health care, research and education.

37th AAMP Annual Scientific Meeting

Friday, September 29, 2023 - Sunday, October 01, 2023

Friday, September 29th **(Location: Upper Lobby Foyer—Lobby Level)**

Registration	**4:00 - 7:00 PM**
Board Meeting (8)	***5:00 - 6:30 (Cherry Boardroom)***
Reception	**6:00 - 7:30**

Saturday, September 30th **(Location: The Magnolia Room—Lobby Level)**

Registration	**7:30 AM - 11:30 AM**
Continental Breakfast	**7:30 - 8:00**
Welcome	**8:00 - 8:10**
Scientific Session I Abstracts	**8:10 - 9:25**
Cobb Scholars Update	**9:25 - 9:50 *Dr. Randall Morgan***
Health Break	**9:50 - 10:15**
Scientific Session II Abstracts	**10:15 - 11:45**
Keynote Address	**11:45 - 12:15 *Dr. Marie A. Bernard***
ADJOURN (Lunch on Your Own)	**12:15**
Reception (By Subscription)	***6:30 - 7:15 PM (Executive Atrium) - Lower Level***
Dinner (By Subscription)	***7:15 - 9:00 PM (Arbors Room)***

Sunday, October 1st **(Location: The Magnolia Room—Lobby Level)**

Registration	**7:30 - 9:00 AM**
Breakfast	**7:15 - 8:00**
Business Meeting	**8:00 - 8:15**
(Presidential Address/ Executive Director's Update)	
Scientific Session III Abstracts	**8:15 - 9:30**
Special Presentation: E. Albert Reece, MD	**9:30 - 9:50**
Panel on "Impact of SCOTUS Affirmative Action decision on Diversity and Healthcare Disparities	**9:50—11:00**
MENTORING 101-301	**11:00 - Noon**
ADJOURN	

*By Subscription

PROGRAM

SATURDAY, SEPTEMBER 30, 2023
(Location: Magnolia Room—Lobby Level)
(Registration 7:30 A.M.—11:30 A.M.)

8:00 A.M.—8:10 A.M. **Welcome Opening Remarks**
Donald E. Wilson, MD, MACP
AAMP Executive Director

8:10 A.M.—9:55 A.M. **SCIENTIFIC SESSION I**
Esam Z. Dajani, PhD., FACG , Moderator

8:10-8:25 **PHYSICIAN BURNOUT AND THE APPLICATION OF ARTIFICIAL INTELLI GENCE TO PREVENT GREATER HEALTH DISPARITY.** J.A. Washington, III, C.R. Evans; Cardiovascular Research Institute, Morehouse School of Medicine, Atlanta, G.A.

8:25-8:40 **ELUCIDATING THE DIFFERENCES BETWEEN SYSTEMIC AND OCULAR GRAFT VERSUS HOST DISEASE.** J. Bohlen, C. Wandvik, A. Charkhabi, P. Dharmendran, C. Reandeau, X. Cao, and S.B. Sunshine; Department of Ophthal mology and Visual Sciences, University of Maryland School of Medicine, Baltimore, M.D.

8:40-8:55 **PERICENTRAL HYDROXYCHLOROQUINE TOXICITY IN A PATIENT WITHOUT ASIAN ANCESTRY.** R. Gholap, K. Taubenslag; Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, MD, USA; VA Maryland Health Care System, Baltimore VA Medical Center, Baltimore, MD.

8:55-9:10 **THE IMPORTANCE OF CS14 IN CLINCIAL ETEC ISOLATES.** C. Cooney, E. Smith, E.M. Barry; Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, MD

9:10-9:25 **PANCREATIC TUMOR DERIVED 3-DIMENSIONAL ORGANOIDS AS A TOOL TO EVALUATE TREATMENT RESPONSE AND PANCREATIC CANCER STEM CELLS.** Z. Keepers, S. Roy, T. Dukic, B. Bhandary, N. Lamichhane, J. Molitoris, H.D. Shukla; Department of Radiation Oncology, University of Maryland School of Medicine, Baltimore, MD

SCIENTIFIC SESSION I (con't)

9:25-9:50 **"The NIH All of Us Research Workbench: Expanding Opportunities for Career Advancement for the Cobb Scholars"**

COBB INSTITUTE Research Scholars Update , Randall Morgan, MD, MBA

9:50 A.M.—10:15 A.M. HEALTH BREAK

SCIENTIFIC SESSION II

Elizabeth Ofili, MD, MPH, Moderator

10:15-10:30 **COX PROPORTIONAL HAZARDS ANALYSIS OF SURVIVAL WITH TIED SURVIVAL TIMES: THEORY AND BEST PRACTICE IN HEALTH DISPARI TIES RESEARCH.** M. Idris, Morehouse School of Medicine, Atlanta, GA.

10:30 -10:45 **UNDERSTANDING THE CRC USER EXPERIENCE TO BUILD A BETTER CLINICAL TRIAL MANAGEMENT SYSTEM.** T. Taylor[a], J. Morgan-Billingslea[a], C. Holloway[a], K. Tyson[a; a]Morehouse School of Medicine, Atlanta, GA

10:45-11:00 **TRENDS IN PREVALENCE OF DEPRESSIVE SYMPTOMS AND SUICIDAL TENDENCY AMONG US ADOLESCENTS FORECASTING THROUGH 2031; YOUTH RISK BEHAVIOR SURVEILLANCE SYSTEM (YRBSS): 2001-2021.** D. Noor, A. R. Bhuiyan, M. Payton; Department of Epidemiology and Biostatistics, School of Health Sciences, Jackson, MS

11:00-11:15 **THE IMPACT OF EARLY-LIFE ANTIBIOTIC EXPOSURE ON PRE-TERM INFANT INTESTINAL MATURATION.** S. Maini, B. Ma, T. Hazen; Dept. of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD

11:15-11:30 **IMPLEMENTATION OF REQUIRED MENTORED SCHOLARLY RESEARCH COURSE INCREASES MEDICAL STUDENT RESEARCH PRODUCTIVITY.** [1]S. Silva, [2]H. Chen, [3]G. Carey and [4]D. Matteson [1]Student, University of Maryland School of Medicine, Baltimore, MD; [2]Resident Physician In Neurology, National Institutes of Health, Bethesda MD; [3]Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD; [4]Department of Physiology, University of Maryland School of Medicine, Baltimore MD

SCIENTIFIC SESSION II (con't)

11:30-11:45 **USING PATIENT-CENTERED DISSEMINATION AND IMPLEMENTATION FRAMEWORKS AND STRATEGIES IN PALLIATIVE CARE SETTINGS FOR IMPROVED QUALITY OF LIFE AND HEALTH OUTCOMES: A SCOPING REVIEW.** D. Lobaina, S. Burgoa, M. Rao, V. Jhumkhawala, S. M. Zapata, M. Issac, S. Medina, L. Sacca; Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

11:50 P.M.—12:20 P.M. **"KEYNOTE ADDRESS"**
Marie A. Bernard, M.D
Chief Officer for Scientific Workforce Diversity, NIH
"Diversity, Equity, and Inclusion – Maintaining the Forward Momentum"

12:20 P.M. **ADJOURN**

LUNCH ON YOUR OWN

Saturday Evening

6:30 PM – 7:15 PM **Evening Reception** (By Subscription)**
(Location: Executive Atrium—Lower Level)

7:15 PM – 9:00 PM **Dinner**(By Subscription) Business Attire**
(Location: Arbors Room—Lower Level)

Sunday October 1st **(Location: Magnolia Room—Lobby Level)**

7:30 AM-9:00 AM **Registration**

7:15 AM-8:00 AM **Breakfast**

8:00 AM-8:15 AM **BUSINESS MEETING**

PRESIDENTIAL ADDRESS
David L. Stewart, MD, MPH

EXECUTIVE DIRECTOR'S UPDATE
Donald E. Wilson, MD, MACP, AGAF

8:15-9:30 **SCIENTIFIC SESSION III**
Greg Carey, PhD, Moderator

8:15-8:30 **PREVALENCE OF POSITIVE SARS COV-2 2019 TESTING IN A NEONATAL INTENSIVE CARE UNIT IN PUERTO RICO**. C. Maisonet, Z. Reyes, J. Rivera, I. Matías, L. García, I. García; Neonatology Section, Pediatrics Department, University of Puerto Rico School of Medicine, San Juan, P. R.

8:30-8:45 **ENGINEERING THE HINGE REGION OF SHARK ANTIBODY HD1 TO IMPROVE FRAGMENTATION RESISTANCE.** J. Tyson, H. Dooley; University of Maryland School of Medicine, Baltimore, M.D.

8:45-9:00 **EXAMINING THE EFFECTS OF CHRONIC STRESS ON BLA-VP CIRCUIT ACTIVITY.** G.L.V. Virata, R.R. Campbell, D. Martinez, S. Key, R. Chandra, M.K. Lobo; Dept. of Neurobiology, University of Maryland, School of Medicine, Baltimore, MD.

SCIENTIFIC SESSION III (con't)

9:00-9:15 **USE OF EHR TO EXTRACT NORMATIVE EYELID MEASUREMENTS.**
J. Zhou[1,2], B. Radha-Saseendrakumar[2], S. Baxter[2], D. Kikkawa[2]; [1]University of Maryland School of Medicine, Baltimore, MD, [2]Dept. of Ophthalmic Plastic & Reconstructive Surgery, UC San Diego, Shiley Eye Institute, La Jolla, CA.

9:15-9:30 **COORDINATION AND EVALUATION OF THE NIH FACULTY INSTITU TIONAL RECRUITMENT FOR SUSTAINABLE TRANSFORMATION (FIRST) PROGRAM.** M. Hall, Y. Strekalova, K. Chai, D. Sarpong, M. Mubasher, A. Quarshie, M. Idris, L. Pololi, T. McNamara, G. Trevillion, H. Tyree, E. Alema Mensah, T. King Gordon, M. Malouhi, M. Salazar, J. Stiles, P. Pemu, B. Rivers, and E. Ofili; Morehouse School of Medicine, Atlanta, GA

9:30-9:50 **UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE CENTER FOR ADVANCED RESEARCH TRAINING AND INNOVATION (CARTI)**
E. Albert Reece, M.D., Ph.D., M.B.A.
Dean Emeritus and Former University Executive Vice President
Endowed Professor and Director, Center for Advanced Research Training and Innovation (CARTI)
Co-Director, Center for Birth Defects Research

9:50-11:00 **PANEL: "IMPACT of SCOTUS AFFIRMATIVE ACTION DECISION on DI VERSITY and ULTIMATELY HEALTHCARE DISPARITIES."**
Georges Benjamin, MD and Hugh Mighty, MD.
Moderator: Yvette Rooks, MD

11:00-Noon **MENTORING 101-301**

MODERATORS: Bruce W. Trotman, M.D.

Marc Nivet, D.Ed.

MEETING ADJOURN NOON

NEXT YEAR'S MEETING

THE RITZ-CARLTON
CONFERENCE CENTER, NAPLES
2600 TIBURON DRIVE
NAPLES, FL 34109

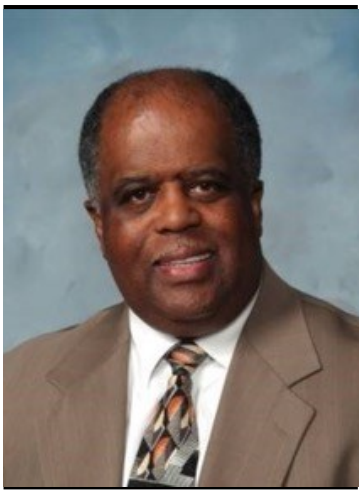
SEPTEMBER 27, 2024 — SEPTEMBER 29, 2024

COBB SCHOLAR'S UPDATE

"The NIH All of Us Research Workbench: Expanding Opportunities for Career Advancement for the Cobb Scholars"

Randall C. Morgan Jr., MD, MBA
Executive Director of the W. Montague Cobb/NMA Health Institute

COBB SCHOLARS UPDATE



Randall C Morgan Jr, MD, MBA
Executive Director of the W. Montague Cobb/NMA Health Institute
Founded the Orthopedic Centers of Northwest Indiana
Diplomat of the American Board of Orthopedic Surgery and American Board of Managed Care Medicine
Sarasota, FL

Dr. Randall C. Morgan, Jr. is an Orthopedic Surgeon and the Executive Director of the W. Montague Cobb/ NMA Health Institute as well as the J. Robert Gladden Orthopedic Society, and he is a member of the Editorial Board for the Journal of Racial and Ethnic Health Disparities -- the Institute's official journal. His past distinguished leadership includes serving as the 95th NMA President. Dr. Morgan is the recipient of several awards for his significant contributions to community service, including the NAACP Joseph Pitts Award for Community Service, and he was elected to the Alpha Omega Alpha, an honor medical society recognizing, advocating for, and inspiring physicians in the care of patients and promotion of health. A Diplomat of the American Board of Orthopedic Surgery and Fellow of the American College of Surgeons, Dr. Morgan serves as Clinical Assistant Professor of Orthopedic Surgery at Florida State School of Medicine, Clinical Assistant Professor of Community Medicine at the University of Connecticut Health Center, and Emeritus Associate Professor of Orthopedic Surgery at Indiana University School of Medicine. During his career, he has given over 200 scientific publications and presentations on healthcare and musculoskeletal disparities. He holds a B.A. in Chemistry from Grinnell College, M.D. from Howard University College of Medicine, and M.B.A. from the University of South Florida. He completed his internship and orthopedic surgery residency at Northwestern University and a fellowship in Pediatric Orthopedics at the Children’s Hospital of Cincinnati. He also holds an honorary doctor of science (Hon. D.Sci.) from his alma mater Grinnell College.

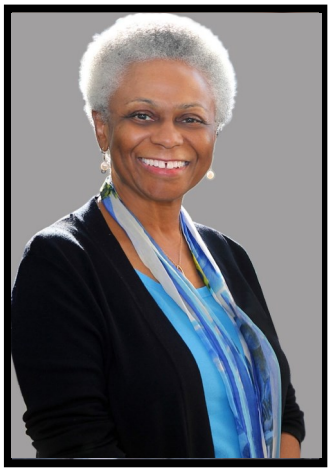
NOTES

KEYNOTE ADDRESS

"Diversity, Equity, and Inclusion – Maintaining the Forward Momentum"

Marie A. Bernard, M.D.
National Institutes of Health (NIH) Chief Officer for Scientific Workforce Diversity (COSWD)

KEYNOTE ADDRESS



Marie A. Bernard, M.D.
NIH Chief Officer for
Scientific Workforce Diversity (COSWD)

Marie A. Bernard, M.D., is the National Institutes of Health (NIH) Chief Officer for Scientific Workforce Diversity (COSWD). As the COSWD, she leads NIH thought regarding the science of scientific workforce diversity, assuring that the full range of talent is accessed to promote scientific creativity and innovation. Dr. Bernard co-led the development of the Fiscal Years 2023 – 2027 NIH-wide Strategic Plan for Diversity, Equity, Inclusion, and Accessibility (DEIA) and is working on its implementation. She is also a cochair of the Advisory Committee to the NIH Director Working Group on Diversity, the NIH Steering Committee Working Group on DEIA, and the NIH UNITE initiative to identify and address any structural racism that may exist within NIH and throughout the biomedical and behavioral workforce. Prior to being selected as the COSWD in 2021, she was Deputy Director of the National Institute on Aging (NIA), where she led a broad range of activities, including cochairing two Department of Health and Human Services Healthy People 2020/2030 objectives – 1) Older Adults, and 2) Dementias, including Alzheimer's disease. Until October 2008, she was the endowed professor and founding chair of the Donald W. Reynolds Department of Geriatric Medicine at the University of Oklahoma College of Medicine and Associate Chief of Staff for Geriatrics and Extended Care at the Oklahoma City Veterans Affairs Medical Center. She has held numerous national leadership roles and received accolades for her national leadership in geriatrics research, teaching, and clinical practice. She has lectured and published widely in her area of research, nutrition and function in older adults, with particular focus on underrepresented populations.

Dr. Bernard earned her A.B. from Bryn Mawr College, Bryn Mawr, Pennsylvania, and her M.D. from University of Pennsylvania, Philadelphia. She trained in internal medicine at Temple University Hospital, Philadelphia, where she served as chief resident. She received additional training through the Association of American Medical Colleges Health Services Research Institute, the Geriatric Education Center of Pennsylvania, and the Wharton School Executive Development Program.

NOTES

SPECIAL PRESENTATION

"UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE CENTER FOR ADVANCED RESEARCH TRAINING AND INNOVATION (CARTI)"

E. Albert Reece, M.D., Ph.D., M.B.A.
Dean Emeritus and Former University Executive Vice President
Endowed Professor and Director, Center for Advanced Research Training and Innovation (CARTI)
Co-Director, Center for Birth Defects Research, UMSOM

SPECIAL PRESENTATION

E. Albert Reece, MD, PhD, MBA

Former Dean and University Executive Vice President
CARTI Endowed Professor, Obstetrics, Gynecology and Reproductive Sciences
Director, Center for Advanced Research Training and Innovation (CARTI)
Senior Scientist, Center for Birth Defects Research, UMSOM

E. Albert Reece, MD, PhD, MBA, is the former Executive Vice President for Medical Affairs, UM Baltimore; Professor and former Dean of the University of Maryland of the School of Medicine. He is also a professor in the departments of Obstetrics and Gynecology, Medicine, and Biochemistry & Molecular Biology. He is a member of the prestigious National Academy of Medicine (NAM).

Originally from Jamaica, West Indies, Dr. Reece completed a Bachelor of Science degree with honors (Magna Cum Laude) from Long Island University; a M.D. degree from New York University School of Medicine; a Ph.D. degree in biochemistry from the University of the West Indies, Kingston, Jamaica; and a MBA degree from the Fox School of Business & Management of Temple University. He completed an internship and residency in obstetrics and gynecology at Columbia University Medical Center, and a postdoctoral fellowship in Maternal-Fetal Medicine at Yale University School of Medicine. He remained on the full-time faculty at Yale for almost 10 years, during which he served as Clinical Instructor from '82 to '84; Assistant Professor from '84 to '87; and received accelerated promotion to Associate Professor in 1987. In November 1990, at the age of 39, he was recruited by Temple University to serve as the Abraham Roth Professor and Chairman of the Department of Obstetrics, Gynecology and Reproductive Sciences. Between 2001 and 2006, he served as Vice Chancellor of the University of Arkansas for Medical Sciences and dean of the College of Medicine. In 2006, he was recruited by the University of Maryland to serve in his current capacity. In 2010, Dr. Reece served as Acting President of the University of Maryland.

In addition to his administrative responsibilities, Dean Reece is actively involved in research and education (see "Research Interests" below). He is a sought after Visiting Professor and Lecturer at numerous institutions both nationally and internationally. He has also published extensively in the scientific literature: 12 books including revisions; 5 monographs; and more than 500 articles, chapters, and abstracts. He recently served as Chair of the Council of Deans of the Association of American Medical Colleges. He serves or has served on many governmental and civic organizations and committees such as, the FDA, the IOM, the NIH, the Secretary of Health & Human Services Committee on Infant Mortality, The March of Dimes Birth Defects Foundation, the Massachusetts General Hospital Scientific Advisory Committee, the Board (Chairman) of the Nelly Berman Classical Music Institute, and the Agnes Irwin School for Girls. He receives numerous special recognitions and awards including, the Distinguished Leadership Award in 2009 and the 2010 Berson Medical Alumni Achievement Award in Health Sciences from his alma mater, New York University School of Medicine, and the 2010 Distinguished Service Award from Loma Linda University.

Dean Reece is married to Sharon Reece, MA, JD, LLM, a visiting associate professor of Law at the University of Maryland School of Law. They have three daughters: Kelie (PhD); Brynne (DDS), and Sharon-Andrea (JD).

NOTES

GENERAL DISCUSSION

Meet the mentors. Member student interaction
Students, Trainees, Guest, Members

ABSTRACTS

SESSION I

PHYSICIAN BURNOUT AND THE APPLICATION OF ARTIFICIAL INTELLIGENCE TO PREVENT GREATER HEALTH DISPARITY. J.A. Washington, III, C.R. Evans; Cardiovascular Research Institute, Morehouse School of Medicine, Atlanta, G.A.

The purpose of this study is to examine the potential threat of health disparities worsening due to the growing phenomenon of physician burnout and how artificial intelligence can be applied to mitigate this threat. The methodology consists of a literature review of publications within the U.S. National Institutes of Health's National Library of Medicine (NIH/NLM) PubMed Central® (PMC), specifically articles that address physician burnout and health disparities (n = 46) plus articles that explored artificial intelligence and improvements in health disparity (n = 124) during the onset of the COVID-19 pandemic in March 2020 through July 31, 2023.

The literature frequently cited the additional practice and social burdens and disparity endured by primary and specialty women physicians, leading to higher risk of burnout, with disparity more severe among ethnic and racial minority women physicians. The literature also acknowledged the importance of minority physicians and healthcare providers to enhance the patient experience and outcomes of minority patients. Although mentioned in a number of studies, physician burnout as a contributor to worsening health disparities was grossly understudied and not clearly elucidated.

Artificial intelligence (AI) was touted for its promise and potential, but, as a mitigator of physician burnout and health disparities, AI is still within a largely unproven stage. Documentation of AI improving the efficiency of medical care was negated by the evidence of bias in clinical algorithms for AI noted in other articles. In conclusion, this literature review reiterates the urgent need for underrepresented racial and ethnic minority physicians to work in concert with the technology sector to evaluate and redesign clinical algorithms free of racial bias before the newly developed AI can have the dual effect of significantly mitigating physician burnout and health disparities in the United States.

ELUCIDATING THE DIFFERENCES BETWEEN SYSTEMIC AND OCULAR GRAFT VERSUS HOST DISEASE. J. Bohlen, C. Wandvik, A. Charkhabi, P. Dharmendran, C. Reandeau, X. Cao, and S.B. Sunshine; Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, M.D.

Introduction: Graft-versus-host disease (GVHD) affects ~50% of post-hematopoietic stem cell transplant patients, affecting multiple tissues including the eyes, spleen, intestines, mouth, skin, and liver. There are significant challenges to treating patients with GVHD. The immune mediated graft versus tumor response is critical to the therapeutic success of the stem cell transplant in treating the underlying hematologic malignancy but creates challenges to controlling the graft versus host disease. What is unique about the eye is that it does not require a graft versus tumor response as the cancer cells are not present in the eye and the eye is a relatively immune privileged site. A better understanding of the immune mediated changes that occur in the eye as compared to the rest of the body will allow for a more targeted treatment for ocular GVHD. We hypothesize that studying the transcriptional changes between the systemic and ocular tissue will highlight key differences between the development of graft versus host disease in the eye as compared to the rest of the body.

Methods: An HLA-matched GVHD mouse model was used in this study, comprised of two groups: (1) a control group of T cell and B cell depleted (TBCD-BM) mice without splenocytes; and (2) TBCD-BM mice with splenocytes. Systemic GVHD and ocular GVHD severity scores were assessed on days 5, 12, 17, 28, and 37. Mice were sacrificed on days 15 and 20 to collect ocular and systemic tissues. Quantitative PCR (qPCR) was performed to analyze the fold changes of granzyme B (GZMB), TNF-alpha, and IFN-gamma in the cornea and spleen of each group.

Results: qPCR results of GZMB, TNF-alpha, and IFN-gamma in the cornea and spleen from mice sacrificed on day 15 and 20 were obtained. On day 15, GZMB shows a 40-fold increase in the cornea and 2 fold increase in the spleen (log-fold difference: 1.3); TNF-alpha does not show a significant change in expression in the cornea, while the spleen has a five-fold increased expression (log-difference: 0.7); IFN-gamma both the cornea and spleen have a 40-fold increase in expression (log-fold difference: 0). On day 20, the expression of GZMB in the spleen shows a 2000-fold increase, while in the cornea, it has a 7-fold increase (log-fold difference: 2.5); TNF-alpha has a 7-fold increase in the spleen in both the control and GVHD groups, while in the cornea, it does not show significant change in expression (log-fold difference: 0.9); IFN-gamma has a 20 fold increase in the cornea and an 80 fold increase in the spleen (log-fold difference: 0.6).

Conclusions: The transcription of GZMB, TNF alpha and IFN gamma results support our hypothesis that there is a mechanistic difference in the development of systemic and ocular GVHD. The differential expression of these key genes involved in the immune response suggests that the underlying mechanisms driving GVHD progression vary between the cornea and spleen. Our research also shows an interesting correlation between ocular and systemic GVHD scores and the transcriptional changes. Initially, at day 12, ocular severity scores differed significantly between the control and GVHD groups, but by day 20, they are not significantly different. This trend is supported by the corneal GZMB and IFN-gamma expression which show a decline in fold change on day 20. In contrast, systemic severity scores are significantly more severe by day 37, which is supported by the massive 2000-fold increase in GZMB and 100-fold increase in IFN-y in the spleen tissue on day 20. In summary, the results suggest distinct mechanisms driving the progression of GVHD in ocular and systemic tissues.

PERICENTRAL HYDROXYCHLOROQUINE TOXICITY IN A PATIENT WITHOUT ASIAN ANCESTRY. R. Gholap, K. Taubenslag; Department of Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, MD, USA; VA Maryland Health Care System, Baltimore VA Medical Center, Baltimore, MD.

This case aims to raise awareness about the potential for more peripheral hydroxychloroquine (HCQ) retinopathy in patients without East Asian ancestry.

More peripheral HCQ toxicity has been reported in patients with East Asian ancestry but has not be described in other racial groups. A 54-year-old woman with African, Latin, and Native American ancestry with seropositive rheumatoid arthritis was referred for possible hydroxychloroquine (HCQ) retinopathy. She had a 20-year history of HCQ use at 400mg daily dosing, normal renal function, and no history of tamoxifen use. Review of optical coherence tomography revealed rapid, bilateral macular thinning beginning after 13 years of HCQ use with progressive ellipsoid loss in the peripapillary region and along the arcades beginning after 15 years of HCQ use, sparing the perifovea. There was corresponding visual field loss best seen on the 24-2 test and hyperautofluorescence in the areas of ellipsoid loss. She was asymptomatic without nyctalopia and there was no arteriolar attenuation, bone spicules, or disc pallor. Hydroxychloroquine was discontinued in consultation with her rheumatologist.

Current consensus on HCQ retinopathy does not recommend 24-2 visual field testing or widefield autofluorescence, except in East Asian patients. Therefore, more peripheral toxicity may be underreported in patients without East Asian ancestry. Further study is merited to determine the incidence of relatively peripheral retinopathy in other biosocial groups, especially in patients with complex racial backgrounds who are frequently underrepresented in studies.
.

THE IMPORTANCE OF CS14 IN CLINCIAL ETEC ISOLATES. C. Cooney, E. Smith, E.M. Barry; Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, MD

Enterotoxigenic Escherichia coli (ETEC) is a primary causative agent of diarrhea in travelers and young children in low-to-middle-income countries but there is currently no licensed vaccine targeting ETEC. ETEC adhere to small intestinal epithelia via colonization factors (CFs) and secrete heat-stable toxin (ST) and/or heat-labile toxin (LT), causing dysregulated ion transport and water secretion. Among the different colonization factors ETEC expresses, the Global Enteric Multicenter Study (GEMS) identified CS14 as the only minor CF statistically associated with moderate-to-severe diarrhea and was recommended for inclusion in future ETEC vaccines. We aimed to assess mechanisms of expression regulation and confirm the role of CS14 in adhesion to human intestinal cells using a series of clinical isolates.

Purpose and Methods: Eleven different clinical isolates, all originating from Pakistan, were grown on CFA agar, as a control, or CFA agar with the iron chelator deferoxamine mesylate (200 μM DFOM) or CFA agar with bile salts (0.15%) to induce expression of CS14. Expression was evaluated using Western Blotting, agglutination with anti-CS14 antibody and visualized by immunogold electron microscopy. Cell adhesion assays were performed using the HT-29 intestinal cell line with and without inhibitory antibodies. The csuD gene, encoding the CS14 tip adhesin was sequenced using Sanger sequencing in order to determine if gene polymorphisms are responsible for the different levels of CS14 expression and cell adhesion.

Results: Western blotting revealed low to no expression of CS14 when the isolates were grown on CFA agar with the iron chelator DFOM, but consistently increased levels of expression (in 100%) of isolates) when grown in the presence of bile salts. These results were confirmed by agglutination assays with anti-CS14 antibody and immuno-electron microscopy using anti-CS14 antibodies. Two out of three isolates tested demonstrated increased adherence to HT-29 cells following growth in bile salts. Adherence by these two isolates was inhibited by anti-CS14 antibodies. Adherence was also inhibited, to a lesser extent, by pre-incubation with antibodies targeting a homologous CF, CS4. Sequence analysis of CS14 tip adhesin-encoding gene csuD showed for hotspots for SNPS, which are consistent with previously sequenced csuD genes from isolates from diverse geographical regions.

Conclusions: These results support the importance of a role for CS14 in ETEC colonization and for consideration as a target antigen in ETEC vaccine development strategies.

PANCREATIC TUMOR DERIVED 3-DIMENSIONAL ORGANOIDS AS A TOOL TO EVALUATE TREATMENT RESPONSE AND PANCREATIC CANCER STEM CELLS. Z. Keepers, S. Roy, T. Dukic, B. Bhandary, N. Lamichhane, J. Molitoris, H.D. Shukla; Department of Radiation Oncology, University of Maryland School of Medicine, Baltimore, MD

Introduction: Pancreatic cancer (PC) is the third most lethal cancer in the United States with a median 5-year survival rate of ~10%. The current standard of care for locally advanced PC is chemotherapy and often radiation therapy (RT) or chemo-RT. Currently, there are multiple schedules and doses of RT or chemo-RT utilized, primarily based on institutional and provider preference. There is a limited role for patient-specific molecular information or genetic profiling to guide RT or chemo-RT. In an attempt to make treatment more precise, researchers have cultured minced tissue fragments from resected pancreatic tumor tissue in 3-D Matrigel culture to create pancreatic tumor organoids (PTOs).

Methods: The PTOs utilized in this work were derived from cancerous tissues of preclinical models and grown in Matrigel (3-D conditions). Cancer associated fibroblasts were co-cultured with pancreatic tumor cells, and the tumor microenvironment (TME) was characterized for expression of alpha-SMA and vimentin using immunofluorescence. PTOs and preclinical models were treated with photon RT and 3-BP, and morphological response was monitored using brightfield microscopy. Overall metabolic response was monitored and quantified using Optimal Metabolic imaging (OMI). Expression of cancer stem cell markers OCT-4, SOX2, and Nanog were demonstrated via immunofluorescence and western blotting for treatment groups.

Results: With regard to expression of alpha-SMA and vimentin, PTOs exhibited a fibrotic microenvironment similar to in vivo tumors. Untreated tumor organoids and in vivo tumors both exhibited proliferative growth of 6-fold the original size after ten days. In contrast, no growth was observed in organoids and in vivo tumors treated with 8 Gray (Gy) of fractionated RT (2 fractions). Interestingly, a combination of 100 μM of 3-BP + 4 Gy of RT showed pronounced growth and metabolic inhibition compared to 3-BP alone or 4 Gy of radiation alone. Further, the identification of OCT-4, SOX2, and Nanog indicated the presence of cancer stem cells in tumor organoids which might have some role in resistance to therapies for pancreatic cancer.

Conclusions: Tumor organoids have the potential to be used as surrogates for determining effective treatment doses and the role of pancreatic cancer stem cells in treatment resistance.

SESSION II

COX PROPORTIONAL HAZARDS ANALYSIS OF SURVIVAL WITH TIED SURVIVAL TIMES: THEORY AND BEST PRACTICE IN HEALTH DISPARITIES RESEARCH. M. Idris, Morehouse School of Medicine, Atlanta, GA.

The purpose of this study was to examine how dominant approaches for dealing with survival times in the Cox proportional hazards model influence the accuracy of estimates when using different approximations, including Exact, Breslow, Efron, Jittered. We conducted a series of simulations to investigate bias in estimated parameters and their standard errors when using different approximation methods to show how decisions about methods for dealing with ties can shape the substantive findings that result. We show that accuracy depends critically on two factors: 1) Prevalence (P), the relative frequency of tied survival times 2) Dispersion (D), the degree of concentration of the data on small number of times. The Breslow method exhibits the most amount of bias, while the Exact method (originally proposed by Cox) exhibits the least amount of bias relative to other approximations. All four method perform uniformly well when the data contain a relatively small proportion of tied event times (say, when $P < 30\%$). Moreover, even when the proportion of ties in the data is relatively high, there is little difference in the degree of bias obtained by each approach when those ties are relatively widely dispersed (that is, when $D > 30\%$). Finally, the degree of bias introduced by the various approximations decreased steadily with sample size: While the maximum bias for the simulations with $N = 60$ is a substantial 30 percent, that maximum decreases to about 4 percent with $N = 600$, and to about one half of one percent with $N = 6000$. We conclude with practical recommendations on reporting around ties in survival data best practices on selecting approximation methods given different configuration of ties for health disparity researchers.

UNDERSTANDING THE CRC USER EXPERIENCE TO BUILD A BETTER CLINICAL TRIAL MANAGEMENT SYSTEM. T. Taylor[a], J. Morgan-Billingslea[a], C. Holloway[a], K. Tyson[a;]
[a]Morehouse School of Medicine, Atlanta, GA

Overview

Research demonstrates that measuring coordinator activity over time can provide a pattern showing where study assignments result in maximum productivity. The historical data can also help establish a precedent for the site, which can assist with workload assignments and budget negotiations with sponsors. Therefore, Morehouse School of Medicine's (MSM) Clinical Trials Office (CTO) created and integrated a task and time-tracking application into a clinical trials management system (CTMS). This project applied a usability testing framework to evaluate the research coordinator's ease of use and satisfaction with the application. The knowledge gained from this study will help leaders understand how the research coordinator interacts with the product, with the goal of implementing design recommendations to improve user experience.

Methods

Researchers identified CRCs working in the Clinical Research Center at MSM. They were then purposively sampled (via direct email) to schedule appointment sessions with the Research Navigator. Researchers used a guided assessment, including moderated tasks, semi-structured interviews, and a survey to assess the coordinator's application use. The same process was used for each coordinator. Coordinators were encouraged to think out loud and give honest feedback. It was also reiterated that the application was being tested, not the coordinator. Afterward, researchers downloaded the text into a Word document and manually performed thematic analysis. Transcripts were then de-identified, stripping all personal identifiers from the data. The System Usability Scale (SUS) score was calculated by summing the odd-numbered questions and subtracting 5. The even-numbered questions were summed and 25 was subtracted from each value. The SUS score equals (Odd Sum + Even Sum) x 2.5. Lastly, descriptive analysis was performed in Excel.

Results

Nine coordinators completed the user assessment testing. All coordinators completed the tasks assigned, although one consistently showed hesitancy. Formatting and workflow arose as recurring themes. It was also identified that creating a standard definition for each activity would help with tracking. The average score for the system usability scale was 57.5, and a user guide was the most requested feature.

Conclusion

Improving the CTMS user experience by engaging primary end users, such as clinical research coordinators, will allow for more productive and accurate reporting of tasks and project allocation. Thus leading to proper workload distribution, which can help improve job satisfaction and mitigate burnout.

burnout.

TRENDS IN PREVALENCE OF DEPRESSIVE SYMPTOMS AND SUICIDAL TENDENCY AMONG US ADOLESCENTS FORECASTING THROUGH 2031; YOUTH RISK BEHAVIOR SURVEILLANCE SYSTEM (YRBSS): 2001-2021. D. Noor, A. R. Bhuiyan, M. Payton; Department of Epidemiology and Biostatistics, School of Health Sciences, Jackson, MS

Objective: Transient turbulent phase of physiological and psychosocial changes left adolescents vulnerable to psychological disorders like depression, fourth leading cause of global disability. Suicide is the second leading cause of death among US teens. Overlooking depressive symptoms in adolescents increasing suicide rates. Aim of the study to estimate the depressive symptoms and suicidal tendency among US adolescents over time and forecasting through 2031 since no such data available.

Methods: Data from Youth Risk Behavior Surveillance System by CDC were extracted and analyzed from 2001 to 2021 using SPSS complex sample module and Microsoft excel. Depressive symptoms and suicidal tendency was assessed using survey questions “sad or hopeless”, “considered suicide”, “made a suicide plan” and “attempted suicide”. Logistic regression analysis, odds ratio (with 95% CI) was performed to establish the associations of depressive symptoms, suicidal tendency and sex. Robust method expert modeler of time series modeler is used for future projections.

Results: A total of 161,445 adolescents are included from 2001 to 2021 for trend analysis. If the uptrend continues like past two decades, prevalence of depressive symptoms and suicidal tendency (considered suicide, made a plan, attempted suicide) is expected to reach 70%, 36%, 24%, and 10.7% respectively in 2031. Female adolescents (OR=3.3; 95%CI: 3-3.6) had more depressive symptoms and suicidal tendency. Participants with depressive symptoms (OR=2.6, 2.4, 2.6; 95%CI: 2.4-2.8, 2.2-2.5, 2-3.4) had more suicidal tendency.

Conclusion: Health policies, future research and mitigation supports should be gender-specific and focused to curb depressive symptoms and suicidal tendency among teens to prevent future epidemics.

THE IMPACT OF EARLY-LIFE ANTIBIOTIC EXPOSURE ON PRE- TERM INFANT INTESTINAL MATURATION. S. Maini, B. Ma, T. Hazen; Dept. of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD

The use of antibiotics in neonates has been shown to increase multi-drug resistant (MDR) Enterobacteriaceae such as E. coli and Klebsiella pneumoniae, reduce commensals and beneficial bacteria such as Bifidobacterium, and diminish biodiversity in the gut microbiome. The combined effect of this impedes early intestinal development, increasing the likelihood of severe infections such as sepsis and necrotizing enterocolitis in neonates. To investigate this further, Klebsiella pneumoniae strains were isolated from 20 infants (Gestational Age< 33 weeks) who received a high dosage of antibiotics (>4 days) within the first week of their lives, resulting in an immature intestinal barrier function known as "leaky gut" with high Intestinal Permeability (IP). These strains were then compared to Klebsiella pneumoniae strains isolated from 20 infants (Gestational Age< 33 weeks) who did not receive antibiotics and had a matured intestinal barrier with low IP. In order to assess the genetic diversity and presence of antibiotic resistance genes (ARGs) in K. pneumoniae, whole genome sequencing was performed. Our data suggests that antibiotics select for particular Klebsiella lineages and high IP infants showed an increased load of antibiotic resistance genes from Klebsiella strains. These results yield clinically meaningful information about antibiotic gene clusters that can exacerbate the age- appropriate development of the gut microbiome, providing further need for antibiotic stewardship.

IMPLEMENTATION OF REQUIRED MENTORED SCHOLARLY RESEARCH COURSE INCREASES MEDICAL STUDENT RESEARCH PRODUCTIVITY. 1S. Silva, 2H. Chen, 3G. Carey and 4D. Matteson 1Student, University of Maryland School of Medicine, Baltimore, MD; 2Resident Physician In Neurology, National Institutes of Health, Bethesda MD; 3Department of Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD; 4Department of Physiology, University of Maryland School of Medicine, Baltimore MD

Background: To promote physician participation in research efforts and provide formal research training to a broader population of medical students, many medical schools have incorporated scholarly research programming requirements into their curricula. The impact of required versus elective scholarly research in graduate medical education (GME) is rigorously debated; however, there is a paucity of published data to support these claims. Therefore, in 2013, the University of Maryland School of Medicine (UMSOM) rigorously investigated the impact of research in GME by implementing the Foundations of Research and Critical Thinking (FRCT) pre-clerkship course requirement. This course was first required for the graduating class of 2017. The FRCT course provides foundational education in a variety of research fields (e.g., biomedical, clinical, translational, population etc.) and requires all students to complete a mentored research-based Scholarly Project and report. Importantly, publication is not a course requirement. Herein, we present the results of a longitudinal study examining trends in UMSOM medical student research productivity before and after the implementation of FRCT.

Objectives: To determine how incorporating a required, mentored scholarly project in the pre-clerkship curriculum impacts medical student scholarly output.

Methods: Here we compare and present data from the graduating classes of 2013-2022. All data was collected by the Offices of Admissions and Student Research using the AMCAS application after approval by the UMSOM institutional review board. All personal identifying information was removed from the aggregate raw data prior to performing data analysis. Scholarly output data was collected using the Scholarly Products section of the ERAS application, were deidentified and were validated according to a standardized set of inclusion criteria and most importantly, “scholarly products must have arisen from work that began after matriculating at UMSOM”. These data were aggregated and analyzed in Microsoft Access™, Microsoft Excel™, and R™.

Results & Discussion: Our results show that using graduation data from 2013-2016 (pre-FRCT) as a baseline, by 2022, scholarly productivity (numbers of publications, conference abstracts and research awards) among MD graduates had steadily increased to 2.78-fold. Among all MD graduates, the observed increase in total scholarly output was attributable to roughly equal increases in numbers of publications and presentations. In this group, most of their publications were co-authored articles. In contrast, among the graduates in the top 10th percentile (top 10th) for research productivity, the increase in publications was primarily attributable to first-authorships. Remarkably, in the top 10th, scholarly productivity approached equivalency with research-focused MD-PhD degree graduates. Scholarly output among MD-PhD graduates did not significantly change in any category over the analysis period. This supports our conclusion that the observed increase in scholarly productivity among MD graduates is driven by a change unique to the MD curriculum. Similarly, from 2013-2022, the number and duration of pre-matriculation research experiences did not change significantly, demonstrating that the observed increase in scholarly productivity is not attributable to selection bias during the admissions process.

Conclusion: The implementation of the FRCT Course has enabled students at UMSOM to dramatically increase their research scholarly output.

USING PATIENT-CENTERED DISSEMINATION AND IMPLEMENTATION FRAMEWORKS AND STRATEGIES IN PALLIATIVE CARE SETTINGS FOR IMPROVED QUALITY OF LIFE AND HEALTH OUTCOMES: A SCOPING REVIEW. D. Lobaina, S. Burgoa, M. Rao, V. Jhumkhawala, S. M. Zapata, M. Issac, S. Medina, L. Sacca; Charles E. Schmidt College of Medicine, Florida Atlantic University, Boca Raton, FL.

The purpose of this scoping review is to explore
patient-centered D&I frameworks and strategies that have been adopted in PC settings to improve behavioral and environmental determinants influencing health outcomes through evidence-based programs and/or protocols.

Methods: The five step Arksey and O'Malley's (2005) York framework methodology was utilized to guide the scoping review: (1) identify research questions; (2) search for relevant studies; (3) select studies relevant to the research questions;
(4) chart the data; and (5) collate, summarize, and report results.

Results: A total of 38 eligible studies were retained for analysis. Only 6 out of the 38 (16%) included studies applied a D&I theory and/or framework. The RE-AIM framework was the most prominently cited (n=3), followed by the Diffusion of Innovation Model (n=2), the CONNECT framework (n=1), and the Transtheoretical Stages of Change Model (n=1). The most commonly reported ERIC strategy was strategy #6 "Develop and organize quality monitoring systems", as it identified in all 38 of the included studies.

Conclusion: This scoping review describes D&I efforts to translate research and change practice in U.S. palliative care settings. Results may contribute to informing and guiding future D&I initiatives for dissemination/adaptation, implementation, and sustainability efforts to improve patient health outcomes and personal satisfaction with care received.

SESSION III

PREVALENCE OF POSITIVE SARS COV-2 2019 TESTING IN A NEONATAL INTENSIVE CARE UNIT IN PUERTO RICO. C. Maisonet, Z. Reyes, J. Rivera, I. Matías, L. García, I. García;
Neonatology Section, Pediatrics Department, University of Puerto Rico School of Medicine,
San Juan, P. R.

Determine the prevalence of positive SARS COV 2 (COVID 19) testing, the possibility of vertical transmission, post-exposure infection, and pre-operatory positive testing in a Neonatal Intensive Care Unit in Puerto Rico.

Introduction: Incidence and occurrence of vertical transmission of COVID-19 in neonatal intensive care units (NICU) has not been widely documented. In the NICU, this is crucial, as COVID-19 transmission affects patients, healthcare workers, parents, and entire families. The aim of this study is to provide clinical guidance for adequate screening and control in the NICU.

Methods: We performed a retrospective review of medical records. Data was obtained from the admission logs in the Neonatal Intensive Care Unit.
Results. Out of 116 SARS COV 2 tests, 3 were reported as positive, for 0.03%. These cases were associated with prior exposure to SARS COV 2.

Conclusion: Proper hand washing, isolation of positive cases, and use of personal protective equipment are effective for the prevention of SARS COV-2 transmission in neonates in the Neonatal Intensive Care Unit setting. In addition, due to a low

prevalence of positive tests, a thorough assessment of clinical relevance, and cost versus benefit should be done in limited resource areas.

ENGINEERING THE HINGE REGION OF SHARK ANTIBODY HD1 TO IMPROVE FRAGMENTATION RESISTANCE. J. Tyson, H. Dooley; University of Maryland School of Medicine, Baltimore, M.D.

The use of monoclonal antibodies (mAbs) has revolutionized cancer treatment by providing unique and effective targeted therapies. These antibodies exhibit diverse mechanism of action, triggering potent anti-tumor responses while minimizing toxic effects. Shark VNAR human Fc fusion mAbs (shAbs) have potential for use in vivo, possessing the desirable effector functions and half-life of human antibodies, but with a much smaller binding site for practical use. However, the issue of instability arises due to fragmentation near the hinge region of these proteins during production, storage, and application. Previous studies have revealed that this fragmentation is the result of the presence of contaminating proteases and excess dissolved oxygen. To address this challenge, we hypothesize that reengineering the hinge region via the introduction of a point mutation and deletion of a protease binding site will result in increased stability. DNA sequencing has confirmed that the re-engineered short hinge was successfully introduced into the shAb HD! vector. Future work will include comparing the stability of the short hinge with that of the original hinge region. By addressing the issue of instability through reengineering the hinge region, we anticipate a more reliable model for potential therapeutic applications in the treatment of cancer.

EXAMINING THE EFFECTS OF CHRONIC STRESS ON BLA-VP CIRCUIT ACTIVITY.

G.L.V. Virata, R.R. Campbell, D. Martinez, S. Key, R. Chandra, M.K. Lobo; Dept. of Neurobiology, University of Maryland, School of Medicine, Baltimore.

Introduction: Major depressive disorder (MDD) is highly prevalent, afflicting millions globally with symptoms such as anhedonia and social avoidance. The onset of MDD has been linked to chronic stress, however, it is unclear how the promotion of depressive symptoms is being mediated by stress-induced alterations to brain circuitry. Disruptions to the brain's reward circuit caused by chronic stress are theorized to promote depressive symptoms, with human studies suggesting hypofunction of the ventral pallidum (VP) being linked to motivation deficits and MDD-associated symptoms. How chronic stress is impacting VP activity, leading to these deficits is still unknown. The basolateral amygdala (BLA) is an afferent VP region that regulates emotional processing and learning and is susceptible to stress-induced changes in neural activity. Therefore, we focused on how chronic stress impacts BLA-VP circuitry to promote social avoidance in mice. We hypothesized that chronically stressed, socially avoidant mice will have decreased activity in VP-projecting BLA neurons.

Methods: A chronic social defeat stress (CSDS) paradigm was used to induce stress in male mice, and stress susceptibility was assessed using a social interaction test. Using qPCR, we measured the effects of stress on expression levels of immediate early genes in the BLA and VP. To assess the effects of chronic stress on neural activity within VP-projecting BLA neurons, we infused retroAAV-GFP into the VP of male mice and examined Fos protein expression in GFP labeled cells within the BLA following CSDS and social interaction.

Results: Resiliently stressed CSDS mice spent more time interacting with novel mice compared to both unstressed controls and susceptibly stressed CSDS mice, whereas susceptibly stressed CSDS mice spent the least amount of time interacting compared to all groups. Assessing neural activity in stressed mice compared to unstressed controls, c-Fos mRNA expression decreased in the VP but increased in the BLA. However, Fos protein expression decreased in VP-projecting BLA neurons.

Conclusions: Chronic stress caused individual differences in social interaction. Additionally, chronic stress impacts neural activity in the BLA-VP circuit, with decreases in neural activity in the BLA-VP circuit being observed in stressed mice. On-going experiments include examining changes in BLA-VP activity by measuring Fos protein expression in male and female mice using a chronic witness defeat stress paradigm. Ultimately, our goal is to understand how stress-induced perturbations of neural circuitry mediate MDD-related symptoms.

USE OF EHR TO EXTRACT NORMATIVE EYELID MEASUREMENTS. J. Zhou[1,2], B. Radha-Saseendrakumar[2], S. Baxter[2], D. Kikkawa[2]; [1]University of Maryland School of Medicine, Baltimore, MD, [2]Dept. of Ophthalmic Plastic & Reconstructive Surgery, UC San Diego, Shiley Eye Institute, La Jolla, CA.

MRD1 is the distance from the margin of the upper lid to the central corneal reflex and relative changes in MRD1 are implicated in many diseases like cranial nerve palsies, orbital trauma, Grave's disease, etc. MRD measurements are recorded in primary gaze with a ruler held up to the patient's eye and normative MRD measurements are from patients not considered to have ptosis or eyelid retraction. Clinical literature defines this range to be 2.5 to 5mm. The measurements can be entered into EPIC via progress notes or the ophthalmology exam tab, Kaleidescope.

Purpose and Methods: We are primarily looking to identify and discriminate normative MRD1 measurements by age group, ethnicity, race, and sex using EHR extraction and secondarily comparing data entry methods and their impact on MRD. Retrospective EHR data was extracted from EPIC on all adult patients seen by UC San Diego Ophthalmic Plastic & Reconstructive Surgery. To protect PHI, only MRN, date of birth, sex, race, ethnicity, diagnosis, progress notes, Kaleidescope measurements, and encounter info were extracted. We defined "normal" MRD as the diagnoses of skin lesion, lid lesion, dry eye, squamous blepharitis, neoplasm of uncertain behavior, cosmetic procedures, common diagnoses seen in our patient population that aren't known to impact eyelid measurements. Our analysis yielded normative MRD1 measurements from 911 patients from Kaleidescope and 1215 patients from progress notes with 310 patients overlapping the two datasets. R programming language was used for all data analysis. First, data wrangling methods and natural language processing were performed to clean-up data for statistical analysis. Then, univariate analysis was done comparing the different age groups, sexes, ethnicities, and races with ANOVAs and t-tests. Multivariate analysis was done with a mixed effect linear model, to see if age group, sex, ethnicity, race, and data entry method served as predictors for MRD1 measurements.

Results: In our normative patients, we had 1.5% aged 18-27, 3.1% aged 28-37, 5.8% aged 38-47, 10.3% aged 48-57, 23.5% aged 58-67, 29.8% aged 68-77, 17.1% aged 78-87, 7.4% aged 88-97 and 1.5% aged 98+. There were 70.3% white patients, 10.7% Asian, 2.1% black, 0.4% Pacific Islander, 0.3% American Indian, 12.3% mixed race / other, and 3.3% unknown. 83.9% of patients were not Hispanic and 62.6% of patients were female. In a univariate ANOVA done across races, a p-value of 0.042 demonstrated significance and a post-hoc test demonstrated a p-value of 0.04 between white and unknown subgroups and 0.06 for unknown and Asian. In the mixed-effect multi-variate linear regression, age by decade was a significant predictor of MRD1, with age group 48-57 differing from 18-27 by –2.37 (-4.19, -4.67, 95% CI, p-value = 0.014), age group 68-77 differing from 18-27 by -1.7 (-3.45, 0.05, 95% CI, p-value = 0.057), 88-97 and 98+ age groups also saw significant decreases in MRD. Most surprising was the strong difference in recorded MRDs from Kaleidescope data entry versus process notes – progress notes were –0.24 lower (-0.28, -0.21, 95% CI, p-value < 0.0001).

Conclusion: Age by decade and to a lesser extent, race, are promising predictors of MRD, but larger sample sizes are needed to confidently draw conclusions. This project shows it is possible to get normative MRD values from EHR extraction, but standard entry methods will be needed across practitioners to get consistent measurements. From this dataset, we can further explore and quantify how other diagnoses that are known to have eyelid changes like ptosis, dermachalasis, thyroid eye disease, etc. impact MRD.

COORDINATION AND EVALUATION OF THE NIH FACULTY INSTITUTIONAL RECRUITMENT FOR SUSTAINABLE TRANSFORMATION (FIRST) PROGRAM. M. Hall, Y. Strekalova, K. Chai, D. Sarpong, M. Mubasher, A. Quarshie, M. Idris, L. Pololi, T. McNamara, G. Trevillion, H. Tyree, E. Alema Mensah, T. King Gordon, M. Malouhi, M. Salazar, J. Stiles, P. Pemu, B. Rivers, and E. Ofili; Morehouse School of Medicine, Atlanta, GA

The purpose of the NIH Faculty Institutional Recruitment for Sustainable Transformation (FIRST) Program is to transform the culture at NIH-funded extramural institutions by building a self-reinforcing community of scientists committed to diversity and inclusive excellence. The FIRST Program will test the primary hypothesis that a cohort and cluster design model of faculty hiring, sponsorship, continual mentoring, and support for professional development, embedded within an institution implementing evidence-based practices to create academic cultures of inclusive excellence, will achieve significant improvements in metrics of institutional culture and biomedical research workforce diversity.

Methods: The FIRST Coordination and Evaluation Center (CEC) evaluation approach is grounded in the realist evaluation (RE) framework, which focuses on identifying what configurations of program context, processes, and outcomes work, for whom, and in what circumstances. The initial elements of the FIRST Program Logic Model and initial program theory come from the official NIH documents, including the public request for applications RFA-RM-20-022/RFA-RM-21-025. Collaborative working groups (WGs) and the Executive Steering Committee (ESC) have representation from each cohort awardee institution, the CEC, NIH program officers and project scientists. The ESC approves the evaluation plan, data governance, data sharing agreement, and publication policy. The WGs co-create common metrics and associated common data elements (CDE) on institutional culture, inclusive excellence, and faculty-centered support. CEC architected data repository platforms and the analyses of multi-level (individual, hiring unit and institution) data collected by FIRST institutions, are based on the CDEs and will test the study primary hypotheses. The Louis W. Sullivan and Donald E. Wilson Awards for Inclusive Excellence, planned for the Second Annual Grantees Conference in May 2024, will support FIRST Program dissemination and communication.

Results: 15 Cohort institutions have been on-boarded (12 institutions plus 3 partnering institutions) over 3 Cohort award cycles. Planned enrollment of 180 FIRST faculty will have biomedical research focus areas across NIH Centers and Institutes.

NOTES