The Johns Hopkins University School of Medicine



The Joseph Meyerhoff Symphony Hall May 25, 2022 | two-thirty o'clock

The Johns Hopkins University School of Medicine

CLASS of 2022 Convocation

The Joseph Meyerhoff Symphony Hall May 25, 2022 | two-thirty o'clock

Order of Procession

GRAND MARSHAL

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

THE GRADUATES

Marshals

Loyal Goff, Assistant Professor of Institute of Genetic Medicine **Katherine Chretien**, Associate Dean for Medical Student Affairs

THE FACULTY

Marshals James Eshleman, Professor of Pathology Marc Halushka, Professor of Pathology

THE DEAN OF THE MEDICAL FACULTY THE DEANS AND HONORED GUESTS

Marshals

Erika Darrah, Associate Professor of Medicine Colleen Christmas, Associate Professor of Medicine

Order of Events

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine, presiding

PROCESSIONAL

The audience is requested to stand as the Academic Procession moves onto the stage

OPENING

Roy C. Ziegelstein, Sarah Miller Coulson and Frank L. Coulson, Jr. Professor of Medicine and the Mary Wallace Stanton Professor of Education

WELCOME

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

GREETINGS

Cory J. White, Ph.D. and 2021 Johns Hopkins University School of Medicine Alumna

COMMENTS

Katherine Chretien, Associate Dean for Medical Student Affairs

Vignesh Sadras, Medical Student

Peter J. Espenshade, Associate Dean for Graduate Biomedical Education

Kaitlin Wood, Graduate Student

ADDRESS

Richard Axel, M.D.

University Professor and Co-Director, Zuckerman Institute for Mind Brain Behavior Investigator, Howard Hughes Medical Institute

ANNOUNCEMENT OF AWARDS

Katherine Chretien, Associate Dean for Medical Student Affairs

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

Kevin W. Sowers, President, Johns Hopkins Health System and Executive Vice President, Johns Hopkins Medicine

Order of Events

ANNOUNCEMENT OF TEACHING AWARDS AND SPECIAL AWARDS

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

PRESENTATION OF MASTERS AND DOCTOR OF PHILOSOPHY DIPLOMAS

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

Roy C. Ziegelstein, Sarah Miller Coulson and Frank L. Coulson, Jr. Professor of Medicine and the Mary Wallace Stanton Professor of Education

Peter J. Espenshade, Associate Dean for Graduate Biomedical Education

THE GRADUATE STUDENT OATH

Administered by **Erika Darrah**, Associate Professor of Medicine

PRESENTATION OF DOCTOR OF MEDICINE DIPLOMAS

Paul B. Rothman, The Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

Roy C. Ziegelstein, Sarah Miller Coulson and Frank L. Coulson, Jr. Professor of Medicine and the Mary Wallace Stanton Professor of Education

Katherine Chretien, Associate Dean for Medical Student Affairs

THE OATH OF HIPPOCRATES

Administered by

Robert Shochet, Senior Director for Patient Experience, Professor of Medicine, Psychiatry and Behavioral Sciences, Albert Einstein College of Medicine and Former Director, JHUSOM Colleges Advisory Program

CLOSING

Theodore L. DeWeese, Interim Dean of the Medical Faculty and Chief Executive Officer, Johns Hopkins Medicine

RECESSIONAL

Student Awards

THE PAUL EHRLICH RESEARCH AWARDS

The Paul Ehrlich Awards were established to honor Dr. Paul Ehrlich with funding originally granted by Dr. Emanuel Libman. The awards, which recognize student research contributions, are presented each year at Young Investigators' Day.

> Awarded to Fadi Paul Jacob (2019-2020) Andy Siyuan Ding (2021-2022)

THE MICHAEL A. SHANOFF RESEARCH AWARD

The award is made annually to a student for significant research contribution in the medical sciences. The award is made possible by a bequest from the family and friends of the late Dr. Michael A. Shanoff, who earned his undergraduate degree and M.D. and Ph.D. degrees from the Johns Hopkins University.

> Awarded to Di Wu (2020-2021)

THE DAVID ISRAEL MACHT RESEARCH AWARD

The David Israel Macht Research Award was established in 1983 by the family of Dr. Macht to commemorate the centenary of his birth. Dr. Macht was a member of the faculty of the Departments of Pharmacology and Medicine in the early part of this century and was a pioneer investigator in the field of opiate alkaloids. The Award is intended to recognize excellence in investigation by a student in the School of Medicine.

> Awarded to Francesco Simonetti (2020-2021)

THE SOL GOLDMAN AWARD

The Sol Goldman Award is given annually to a Johns Hopkins medical student who is recognized by the faculty of the Department of Medicine, Division of Geriatric Medicine and Gerontology, for excellence in geriatrics and for exceptional sensitivity to older patients. This award is made possible by an endowment given by the family of Sol Goldman to perpetuate an interest in and commitment to geriatric medicine and gerontology among medical students.

> Awarded to: Caroline Frances Plott

THE ALICIA SHOWALTER REYNOLDS RESEARCH AWARD

This award was created by the School of Medicine Dean's Office in 1996, to honor the memory of Alicia Showalter Reynolds, a Ph.D. student in the Department of Pharmacology and Molecular Sciences from 1992 until her untimely death in 1996. It is given in recognition of contributions to research undertaken by a Ph.D. candidate in the School of Medicine.

Awarded to

Melesse Lonse Nune (2020-2021) Clinton Ogega (2021-2022)

THE MARTIN AND CAROL MACHT RESEARCH AWARD

The Martin and Carol Macht Research Award is awarded to a doctoral candidate whose research evidences elegance in science, originality in thought and creativity in approach. The Award was made possible by a donation from the Macht family of Cincinnati, Ohio.

> Awarded to James Osei-Owusu (2020-2021)

Student Awards

THE METTE STRAND RESEARCH AWARD

The Mette Strand Research Award was established in 1998 as an enduring legacy to graduate education and to honor the contributions to science and education made by Dr. Strand as a Professor of Pharmacology and Molecular Sciences from 1977 until her untimely death in 1997. The award is made possible by the generous contributions of her colleagues and friends as a tribute to her contribution to humanity in the quest for a vaccine against schistosomiasis, her unyielding devotion to science and her role in the training of a generation of graduate students of this institution.

> Awarded to Thao Phuong Phan (2020-2021)

THE NUPUR DINESH THEKDI RESEARCH AWARD

This award was established in 2002 to honor the memory of Nupur Dinesh Thekdi, an M.D.-Ph.D. student in the School of Medicine from 1996 until his untimely death in 2001. The award was made possible by the generous contributions of his family and friends and is given to honor outstanding research contributions made by a student in the School of Medicine.

> Awarded to Alexandra Nicole Rindone (2021-2022)

THE BAE GYO JUNG AWARD

The Bae Gyo Jung Research Award was established in 2006 by friends and family in memory of Bae Gyo Jung, who was a predoctoral student in the department of Biological Chemistry.

Awarded to Caitlin Julia Bowen (2021-2022)

THE W. BARRY WOOD STUDENT RESEARCH AWARD

The W. Barry Wood Student Research Award recognizes present commitment and future promise in research.

> Awarded to Hursuong Vongsachang (2018-2019)

THE HAROLD LAMPORT BIOMEDICAL RESEARCH PRIZE

The memory of Dr. Harold Lamport, a distinguished investigator, is honored by this prize established by the Lamport Foundation. The prize recognizes research contributions.

> Awarded to Andrew Thomas Schilling (2019-2020)

THE HARRY C. SALTZSTEIN PRIZE FOR MEDICAL WRITING

This prize was established in 1990 by the family of Dr. Saltzstein, a 1914 graduate of the Johns Hopkins University School of Medicine, to recognize his life long interest in medical writing. The award is given to that student who has exhibited excellence in medical writing as judged by a faculty committee.

> Awarded to James Joseph Whitbread, Jr. (2018-2019) Dana Kathleen Goplerud (2021-2022)

STUDENT AWARDS

THE EXCELLENCE IN MEDICAL STUDENT **RESEARCH AWARD**

This award is given annually to students whose efforts in basic biomedical, clinical, or public health research is noteworthy and found deserving of special recognition.

Awarded to

Thomas Khanh Hung Le (2018-2019) Siddhartha Srivastava (2018-2019) Andy Siyuan Ding (2018-2019) Youkyung Sophie Roh (2018-2019) Gregory Rocco Toci, Jr. (2018-2019) Caroline Frances Plott (2018-2019) Michael Johnathan Charles Bray (2019-2020) Larisa Elise Breden (2019-2020) Trevor William Glenn (2019-2020) Vorada Sakulsaengprapha (2019-2020) Shirley Lynn Wang (2019-2020) James Joseph Whitbread, Jr. (2019-2020) John Paul Bliamptis (2019-2020) John Bae Korleski (2019-2020)

THE HARVEY CUSHING MEDICAL STUDENT HUNTERIAN RESEARCH AWARD

This award is presented by the Department of Neurosurgery to a medical student who has demonstrated aptitude, dedication and achievement in neurosurgical research and who shows promise for a career in neurosurgery.

Awarded to **Timour Al-Khindi**

Ethan Joseph Cottrill Yohannes Kebede Tsehay

SYLVAN SHANE PRIZE IN ANESTHESIOLOGY AND CRITICAL CARE MEDICINE

This prize, established by Dr. Sylvan Shane, a former member of the faculty in Anesthesiology and Critical Care Medicine, recognizes an outstanding medical student making a career choice in Anesthesiology.

> Awarded to Olive Tang

THE HASKINS K. KASHIMA, M.D. PRIZE IN OTOLARYNGOLOGY-HEAD AND **NECK SURGERY**

This prize, which honors Dr. Haskins K. Kashima, a former Professor in the Department of Otolaryngology-Head and Neck Surgery, recognizes an outstanding medical student who has chosen a career in Otolaryngology-Head and Neck Surgery.

> Awarded to Anna Christina Clements

WILLIAM H. WELCH AWARD

The William H. Welch Award recognizes outstanding achievement in Pathology by a medical student.

> Awarded to Michelle Dewi Colbert

Student Awards

THE W. BRUCE FYE PRIZE IN THE HISTORY OF MEDICINE

The prize is made possible by the generosity of W. Bruce Fye (Johns Hopkins BA '68, MD '72, MA in History of Medicine, '78), a prominent cardiologist and historian of medicine who is the past president of both the American College of Cardiology, the American Osler Society, and the American Association for the History of Medicine, and who served as Professor of Medicine and History of Medicine at the Mayo Clinic. In a long and wide-ranging career as a clinician-historian, Fye's books and articles have consistently demonstrated the relevance of historical thinking to medical research, training, practice, and policy. He established this prize in 2018 to encourage Johns Hopkins medical students to gain experience in historical research and writing and to appreciate how the history of medicine provides valuable perspective on current and future challenges and opportunities in medical practice, education, and research.

> -Awarded to

> > Margo Ann Peyton

THE FRANK H. NETTER, M.D. MEMORIAL SCHOLARSHIP IN MEDICAL ART

The medical illustrator, Frank H. Netter M.D., is known world-wide for his ability to distill complex medical subject matter into clear, effective teaching images. Dr. Netter was not only a skilled draftsman, but knowledgeable in anatomy, physiology, and pathology through his medical training. Family and friends established this scholarship to recognize a student in Art as Applied to Medicine who displays a similar balance of medical and scientific knowledge with the artistic skills that he exhibited throughout his career. Winners of this award have excelled in their academic courses; displayed exceptional art expression; and most importantly utilized both resources to create well-designed and effective didactic illustrations.

> Awarded to Ting I. Wang Jason Brady

PHI BETA KAPPA Honor Society

In recognition of excellent academic performance during their studies in the School of Medicine the following students have been elected to Phi Beta Kappa:

> Zachary Richard Murphy Ashton Annalouise Shaffer

WARFIELD T. LONGCOPE PRIZE IN CLINICAL MEDICINE

The award established in honor of Dr. Longcope, Director of the Department of Medicine from 1922 to 1946, recognizes that graduating student entering the field of medicine whose performance in clinical medicine exemplifies in outstanding fashion the academic excellence and the human qualities that mark the true physician.

> Awarded to Dana Kathleen Goplerud

HELEN AND HAROLD HARRISON AWARD

The Harrison Award recognizes the remarkable achievements of Doctors Helen and Harold Harrison. The award was established by Dr. Harrison's house officers and colleagues during his many years as Chief of Pediatrics at the Baltimore City Hospitals. This award recognizes outstanding proficiency in pediatrics.

> Awarded to Alexa Morgan Mullins

Student Awards

WILLIAM STEWART HALSTED AWARD IN SURGERY

This award, established in honor of Dr. Halsted, the first professor and director of the Department of Surgery, recognizes that graduating student entering the field of surgery whose proficiency in the discipline is deemed outstanding by the faculty of the Sections of Surgical Sciences.

> Awarded to James Joseph Whitbread, Jr.

EMILY SIMMS HALLER PRIZE

The Emily Simms Haller Prize in Obstetrics was established in 1993 to honor outstanding medical students for their work in obstetrics. Dr. Haller used the Hopkins Hospital Clinics and Labor and Delivery Suite as a site for regular medical student education. Dr. Haller is beloved by decades of students for her teaching and is recognized for her clinical excellence. She is a wife and mother of Hopkins' physicians. The prize was created by colleagues, friends, and family.

> Awarded to Alexandra Elisabeth Norton

SOCIETY FOR ACADEMIC EMERGENCY MEDICINE AWARD

This award recognizes a senior medical student who has demonstrated excellence in the specialty of emergency medicine.

> Awarded to Melissa Marie Staley

AMERICAN ACADEMY OF NEUROLOGY PRIZE FOR EXCELLENCE IN NEUROLOGY

This prize is awarded by the American Academy of Neurology annually to a graduating medical student who exemplifies outstanding scientific achievement and clinical acumen in Neurology or Neuroscience and outstanding personal qualities of integrity, compassion, and leadership.

> Awarded to Seva G. Khambadkone

THE STEPHEN J. RYAN, M.D. PRIZE IN OPHTHALMOLOGY

Stephen J. Ryan, a graduate of the Johns Hopkins University School of Medicine, Class of 1965, established this prize in honor of his dedication to medical excellence and his affiliation with the Johns Hopkins School of Medicine and the Wilmer Eye Institute. This prize is awarded to a graduating Johns Hopkins medical student with an outstanding academic record who is entering the field of Ophthalmology.

> Awarded to Yesha Shah

DAVID E. ROGERS AWARD

This award was established by the Johns Hopkins Health System, in honor of David E. Rogers, Dean of the School of Medicine from 1968-1971. The award is presented annually to two students who have exemplified the highest standards of professionalism, medical ethics, and community leadership.

> Awarded to Cody Lee Call Kori Anahi Porosnicu Rodriguez

TEACHING AWARDS

GEORGE J. STUART AWARD

The Stuart Award was established in 1969 following the bequest of a grateful patient, George J. Stuart of Washington, D.C. Dr. Stuart stipulated that the income from his bequest be presented to an outstanding clinical teacher in the School of Medicine. The selection is made by the senior students.

> Awarded to Khalil Georges Ghanem Department of Medicine

W. BARRY WOOD, JR. AWARD

The W. Barry Wood, Jr. Award for Excellence in Teaching is awarded annually to the teachers voted by the students in the preclinical years to have been most inspirational and/or effective.

> *Awarded to* **Henry Fessler** Department of Medicine

HOUSE STAFF AWARD

The House Staff Teaching Award, established by the Johns Hopkins Medical Student Senate, is awarded annually for excellence in clinical teaching by a member of the house staff. Its purpose is to recognize an individual's contributions, but also to emphasize the importance that the students attach to the concept of house officers as teachers.

> Awarded to Colin Fadzen Department of Surgery

GRADUATE STUDENT TEACHING AWARD

The Graduate Student Teaching Award, established in 1986 by the Graduate Student Association, recognizes excellence in teaching and mentoring at the graduate level in the biomedical sciences.

Awarded to

Erika Darrah Department of Medicine-Clinical and Molecular Rheumatology

THE JOHNS HOPKINS UNIVERSITY ALUMNI ASSOCIATION EXCELLENCE IN TEACHING AWARD

This award, established in 1992 by the Johns Hopkins University Alumni Association, recognizes the critical importance of teaching at Johns Hopkins.

> Awarded to Tinsay Woreta Department of Medicine-Gastroenterology

PROFESSORS' AWARD FOR EXCELLENCE IN TEACHING

The Professors' Award for Excellence in Teaching was established in 1981 by the Advisory Board of the Medical Faculty and is intended to honor each year members of the faculty whose teaching is judged to have had a profound effect on students in the School of Medicine.

Awarded to

Angelo De Marzo Department of Medicine for teaching in the biomedical sciences

Julianna Jung Department of Medicine for teaching in the clinical sciences

TEACHING AWARDS

MARTIN D. ABELOFF AWARD FOR LIFETIME ACHIEVEMENT IN MEDICAL AND BIOMEDICAL EDUCATION

The Martin D. Abeloff Award for Lifetime Achievement in Medical and Biomedical Education, the highest of the Institute for Excellence in Education's honors, is named for Dr. Martin D. Abeloff, whose long and illustrious career at Johns Hopkins left an indelible mark. Dr. Abeloff was at Hopkins beginning in 1966, and served as Director of the Sidney Kimmel Comprehensive Cancer Center from 1992 until his passing in 2007. He was a visionary leader, a superb physician and a world class scholar, in addition to being a much respected colleague and mentor. His educational leadership on the Committee on Educational Values and Rewards led to the formation of the IEE.

> Awarded to Janet R. Serwint Department of Pediatrics

THE LISA J. HEISER AWARD FOR JUNIOR FACULTY CONTRIBUTION IN EDUCATION

The Lisa J. Heiser Award for Junior Faculty Contribution in Education is named in honor of Lisa J. Heiser, M.A., Assistant Dean for Faculty Development and Equity, Johns Hopkins Medicine, 2006-2011. Lisa was the embodiment of what makes Johns Hopkins Medicine special; smart and multitalented, combining fierce tenacity and commitment with tremendous personal warmth, friendliness and collegiality. The Heiser award is given to a junior faculty member, in her/his career 5 years or less on faculty, who has made an outstanding contribution in medical/biomedical education, and shows great promise for future meaningful contributions to medical and biomedical education.

> *Awarded to* Angela M. Orozco Department of Medicine

IEE TEACHING AWARDS

The Teaching Awards are intended to recognize outstanding achievement in teaching. Three awards are given: one for those on faculty less than 10 years, one for those on faculty 10 or more years, and one specifically for part-time faculty.

Awarded to

Rakhi P. Naik Department of Medicine on faculty less than 10 years

Jessica L. Colburn Department of Medicine on faculty 10 or more years

Fatima Sheikh Department of Medicine on faculty part-time

IEE LEADERSHIP AND MENTORING AWARD

The Leadership and Mentoring Award is intended to recognize outstanding achievement in mentoring. The recipient is selected based on the training experiences and success of the nominee's mentees. Mentoring is defined as the process of guiding, supporting, and promoting the training and career development of others. Mentors may contribute in many areas, including, but not limited to intellectual growth and development, career development, professional guidance and advocacy.

> *Awarded to* Mary C. Corretti Department of Medicine

TEACHING AWARDS

IEE EDUCATIONAL SCHOLARSHIP AWARD

The Educational Scholarship Award is designed for the faculty member who has a body of educational scholarship work. We define scholarship broadly and include not only publications, but also workshops, other dissemination and contributions to other institutions.

> *Awarded to* Sean Tackett Department of Medicine

IEE EDUCATIONAL INNOVATION AWARD

The Educational Innovation Award recognizes an individual or, in rare cases, a two-person team, for having developed a resource that directly improves medical or biomedical education. This award is meant to encourage faculty members to creatively apply their talents to improve the academic needs of learners on a national scale.

Awarded to **CLOSLER**

IEE EDUCATIONAL PROGRAM AWARD

The Educational Program Award is intended to recognize a noteworthy medical or biomedical team responsible for a teaching program which has been implemented for five years or less. Programs are judged on their impact on learners, including learner satisfaction, educational outcomes attained, and scholarship and recognition.

> Awarded to 3-Act Model Curriculum

Post-Baccalaureate Certificates

with title of capstone

Anil K. Mathur; B.S., University of Rajastham, 1982; Certificate in Clinical Informatics. *Precision Medicine Center of Excellence Registry Process for Discovery Cohort.*

Steven D. Miller; B.S., University of Maryland (College Park), 2006; M.D., Raymond and Ruth Perelman School of Medicine at University of Pennsylvania, 2012; Certificate in Clinical Informatics. *The Process Improvement of Biologic Infusions and Injections for Children with Inflammatory Bowel Disease* (P3-IBD).* **Clifford Mitsuo Takemoto**; B.S., University of California (Davis), 1985; M.D., University of California (Irvine), 1989; Certificate in Clinical Informatics. *Feasibility Assessment for Converting St. Jude Children's Research Hospital Electronic Medical Record Data for Sickle Cell Disease to the OMOP Common Data Model.*

Nana Ama Tiwaa; B.S., George Mason University, 2015; Certificate in Clinical Informatics. *Telemedicine at Children's National Hospital: Assessing Quality within their Telehealth Consortium.*

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MASTERS OF ARTS

with title of essay

Jason Brady; B.F.A., University of New Haven, 2019; Medical and Biological Illustration. *An Animated Portrayal of Normal Placentation and the Pathophysiology of Placenta Accreta Spectrum.*

Paul William Child III; B.A., College of Saint Benedict and St. Johns University, 1978; M.A., James Madison University, 1984; Ph.D., University of Notre Dame, 1992; History of Medicine. *The Dean Disordered: Jonathan Swift and the Humoral Body.***

Shi Yao Li; B.S., University of Toronto, 2017; Medical and Biological Illustration. *Exploring the Sinonasal Cavity in Three Dimensions: Teaching Otolaryngology Surgical Trainees Clinical Anatomy Using a Web-Based Learning Resource.*

Jiyu Lim; B.S.C., Imperial College University of London, 2014; M.B.B.S., 2017; Medical and Biological Illustration. *Animating a Novel Mechanism of Cell Migration: Signal Transduction Excitable Network (STEN).* Annelis Gabriela Rivera-Del Rio; B.S., Florida International University, 2017; Medical and Biological Illustration. *Rethinking the Evolution of Temporal Fenestrae in Turtles: An Interactive Application for Comparative Anatomy and Phylogenetics.*

Michelle Marie Silva; B.A., University of California (Santa Cruz), 1994; History of Medicine. *Second Skin: Linen as a Proxy for the Body in Early Modern England.*

Jennifer Anne Wang; B.S., University of Michigan (Ann Arbor), 2017; Medical and Biological Illustration. Understanding Percutaneous Cholangioscopy: Designing and Evaluating Novel Multimedia Tools for Patients and Physicians.

Ting I Wang; B.S., University of British Columbia, 2014; Medical and Biological Illustration. *3D Visualization of Genetic Mutations in Pancreatic Intraepithelial Neoplasia.*

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Class of 2022 Convocation | Johns Hopkins University School of Medicine

MASTERS OF SCIENCE

with title of essay/capstone

Abdulaziz Abdulrahman Alaqeel; B.B.A., King Saud University, 2012; Health Sciences Informatics. *The Application of Telemedicine to Improve Medial Diagnosis: A Pilot Student at Wilmer Eye Institute to Examine the Impact of Teleophthalmology on Residents' Education.***

Kelley Cooper; B.S.N., Texas Tech University, 2020; Anatomy Education M.S. Program.*

Marli Collier Crabtree; B.S., James Madison University, 2018; Anatomy Education M.S. Program.*

Isaiah Dorendorf; B.S., North Dakota State University, 2016; Anatomy Education M.S. Program.*

Jessica Dinora Flores; B.S., Stony Brook University, 2017; Biomedical Engineering. *Direct Reconstruction of Anatomical Change in Low-Dose Lung Nodule Surveillance.**

Heather Anne Foley; B.A., Bryn Mawr College, 2009; B.S.N., Villanova University, 2016; Applied Health Sciences Informatics. *Support of the Clinical Informatics Team at Johns Hopkins Bayview Medical Center.***

Mukesh Hamal; M.S., Vrije University, 2009; Ph.D., 2018; Applied Health Sciences Informatics. *Utilization* of Social Determinants of Health-Related ICD-10-CM Codes Among Hospitalized and Emergency Department Patients in Maryland, United States, 2016-2018.**

Maheen Imam; M.B.B.S., Dow Medical College - University of Karachi - Karachi - Pakistan, 2008; Applied Health Sciences Informatics. *A Protocol on Adoption of Price Transparency Tool.*

Madhu Jalan; M.S., Brown University, 1995; Applied Health Sciences Informatics. *Adolescent Mental Health App Concept for Rose Health*.

John Gibbons Jordan, Jr.; M.D., University of North Carolina School of Medicine (Chapel Hill), 2007; Applied Health Sciences Informatics. *PMAP Resource* to Facilitate Initial Requirements for Developing CDS Modules or ML Algorithms.*

Kelley Marie Kempski; B.S., University of Delaware, 2018; Biomedical Engineering. *Application of the Generalized Contrast-to-Noise Ratio to Assess Photoacoustic Image Quality.***

Zehan Li; B.S., Purdue University, 2018; Health Sciences Informatics. *Effects of Information Presentation Modalities on Antibiotic Reassessment Decision-Making in PICU: A Comparison Study.***

Chantelle Yi Yan Lim; B.S., University of Rochester, 2019; Biomedical Engineering. N/A.**

Brian J. Martin; B.S., Millersville University, 2018; Anatomy Education M.S. Program.*

Anis Keven Massoudi; M.B.B.S., University of the Witwatersrand - Johannesburg, 2009; M.S.C., Imperial College University of London, 2011; Applied Health Sciences Informatics. *Digital Health Technology in Ophthalmology in the COVID-19 Age.***

Hannah Mohr; B.S., University of Iowa, 2020; Anatomy Education M.S. Program.*

Natasha Sunil Palamuttam; B.S., University of California (Irvine), 2019; Health Sciences Informatics. Association Between Intraoperative Blood Pressure Variability Measures and In-Hospital Mortality in Cardiac Surgery Patients.**

Daymond Romell'o Parrilla; B.S., University of South Carolina (Columbia), 2016; Cellular and Molecular Medicine.*

MASTERS OF SCIENCE

with title of essay/capstone

Jessica Patricoski; B.A., Texas Christian University, 2020; Health Sciences Informatics. *Improving Data Quality in an Institutional Clinical Trial Data Repository to Support Patient-Trial Matching*.

Brittany Ann Pielstick; B.S., Brigham Young University, 2018; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics.**

Eric Antonio Roman; B.A., University of California (Davis), 2019; B.S., 2019; Anatomy Education M.S. Program.*

Kerry Elizabeth Smith; B.S., University of Massachusetts (Lowell), 2003; Applied Health Sciences Informatics. Validating Cost Accuracy of a Real Time Prescription Benefit Tool.**

Claire Audrey Zurn; B.Eng., University of Minnesota (Twin Cities), 2019; Biomedical Engineering.

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with title of dissertation

William Aisenberg; B.S., University of Maryland (College Park), 2012; Cellular and Molecular Medicine. *Multi-Ubiquitination of TRPV4 Reduces Channel Activity Independent of Surface Localization.***

Timour Al-Khindi; B.S., University of Toronto, 2011; Neuroscience. *Investigating the Molecular Basis of Retinal Direction-Selective Circuitry.*

Jawara Antar Allen; B.S., Duke University, 2012; Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. *Enterotoxigenic Bacteroides fragilis (ETBF) Induces Genetic and Epigenetic Changes in Colon Epithelial Cells Which Contribute to Tumorigenesis.*

Casey Nicole Barber; B.S., Randolph-Macon Woman's College, 2013; Biological Chemistry. *Phosphatidic Acid-Producing Enzymes' Regulation of Synaptic Vesicle Recycling*.

Elana Ben-Akiva; B.S., Massachusetts Institute of Technology, 2015; *Biomedical Engineering. Biomimetic Polymeric Particle Therapeutics for Enhanced Drug Delivery and Cancer Immunotherapy.*

Dmitriy Gennadyevich Bobrovnikov; B.S., Oregon State University, 2015; Program in Molecular Biophysics. *New Biophysical Tools for Studying and Manipulating DNA*.

Caitlin Julia Bowen; B.S., Cornell University, 2014; Human Genetics. *Genetic and Environmental Modifiers* of Vascular Ehlers-Danlos Syndrome Reveal Novel Mechanisms and Therapeutic Strategies.

Macauley Smith Breault; B.S., Muhlenberg College, 2015; Biomedical Engineering. *Distributed Brain Networks Encode Internal States Reflecting Past Performance During Movements in an Uncertain Environment.*

Cody Lee Call; B.S., Florida State University, 2015; Neuroscience. *Remyelination in the Cerebral Cortex.*** Katherine Cascino; B.A., Colgate University, 2015; Cellular and Molecular Medicine. Assessing Immune Responses to Acute Viral Infections Using High-Parameter Flow Cytometry.*

Kyle Steven Cavagnini; B.S., University of North Carolina (Asheville), 2014; Biological Chemistry. *Genetic and Epigenetic Regulation of Hepatic Fatty Acid Metabolism.*

Vikram Chandrashekhar; B.S., Johns Hopkins University, 2016; Biomedical Engineering. *Developing Integrated Tools for Terabyte-Scale Image Pre-Processing*, *Registration, and Visualization.***

Calvin Chang; B.S., Johns Hopkins University, 2013; Biomedical Engineering. *The Development of Nanofiber Hydrogel Composite Microparticles and Mesenchymal Stem Cell Delivery for Myocardial Infarction Repair.**

Yi-Ting Chang; B.S., National Taiwan University, 2013; Neuroscience. *Rule-Based Modulation of Sensorimotor Transformation Across Cortical Areas*.

Tianyi Chen; B.Eng., Vanderbilt University, 2017; Biomedical Engineering. *Structured Light for Data-Driven Quantitative Tissue Imaging.*

Lionel Tat Wei Chia; B.S., National University of Singapore, 2011; M.Sc., London School of Hygiene and Tropical Medicine, 2012; Pathobiology. *The Role* of the High Mobility Group A1Proteins in Pancreatic Cancer and Desmoplasia.**

Shih-Ching Chou; B.S., National Tsing Hua University, 2011; M.S., 2013; Pharmacology and Molecular Sciences. *Role of Poly (ADP-Ribose)-Dependent Epigenetic Regulation Mediated by ZZZ3 in Ischemic Stroke.**

Margaret Ramona Chow; B.S., Johns Hopkins University, 2014; Biomedical Engineering. *Towards Integrating Vestibular Implant Stimulation of the Semicircular Canals and the Otolith End Organs to Drive Posture, Gait, and Eye-Stabilizing Reflexes.***

with title of dissertation

Michael Dominic Claiborne; B.A., Western Washington University, 2011; Molecular Biology and Genetics-Program in Immunology. *Novel Modulations* of mTORC1 Signaling and Downstream Effectors Enhance CD8+ T Cell Responses.

Emily Katherine Cook; B.S., University of Pittsburgh, 2014; Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. *Identification of Substrates of the E3 Ubiquitin Ligase, UBE3A, and Understanding Their Roles in Neurodevelopmental Disorders.**

Ethan Joseph Cottrill; B.S., Ohio University, 2013; M.S., Johns Hopkins University, 2015; Biomedical Engineering. *Biomimetic, Mussel-Inspired, Bioactive Bone Graft Substitute Materials Comprising Extracellular Matrices: Novel Compositions and Methods for Bone Grafts and Fusions.*

Ruoxian Deng; B.S., University of Shanghai for Science and Technology, 2012; Biomedical Engineering. *Regulation of Periosteal Myeloid-Lineage Cells for Cortical Bone Formation.*

Danielle Whitney Dillard; B.S., San Jose State University, 2017; Cellular and Molecular Medicine. *Neoantigen Characterization as a Function of Response to PD-1 Blockade in Lung Cancer.*

Kathleen Taylor DiNapoli; B.S., Wake Forest University, 2016; Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. *Computational Modeling of Cell-Substrate Interactions.***

Joelle Martie Dorskind; B.S., Lehigh University, 2013; Cellular and Molecular Medicine. Laminar-Specific Innervation by Layer II/III Neurons in the Somatosensory Cortex.**

Brittany Lee Dunkerly-Eyring; B.A., College of Notre Dame, 2015; Pharmacology and Molecular Sciences. *Role of Tuberin S1365 Phosphorylation in Mechanistic Target of Rapamycin Complex 1 Regulation.** **Daniel Ehrens**; B.S., Escuela de Medicina Ignacio A. Santos Technologico de Monterrey, 2012; Biomedical Engineering. *Network Subspace Analysis to Track Seizure Genesis and Electrical Stimulation Effects for Seizure Control in an in vivo Model of Epilepsy.*

Morgan Brittney Elliott; B.S., St. Louis University, 2015; Biomedical Engineering. *Developing a Pro-Regenerative and Durable Small-Diameter Graft as an Arterial Conduit.**

Lauren Taylor Evans; B.S., Canisius College, 2016; Human Genetics. *Centrioles Function as Signaling Centers to Control Proliferation in Cells with Centriole Amplification.**

Ashley Lenore Farris; B.S., University of Kansas, 2015; Biomedical Engineering. *Facile Oxygen Delivery for Craniofacial Bone Tissue Engineering.***

Arianna Lee Franca Anzmann; B.A., Franklin and Marshall College, 2012; M.S., Johns Hopkins University, 2015; Human Genetics. *Harnessing the Power of -Omics to Uncover Novel Targets of Investigation in Mitochondrial Disorders.**

Emily Jane Fray; B.A., University of San Diego, 2015; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. *Characterization and Longitudinal Analysis of Reservoir Dynamics in Non-Human Primate Models of HIV-1 Infection.**

Timothy Edward Gilpatrick; B.S., University of Delaware, 2012; Biomedical Engineering. *Methods Development for Targeted Nanopore Sequencing.*

Daniel Giovinazzo; B.A., Johns Hopkins University, 2012; M.S., 2012; Neuroscience. *The Role of Hydrogen Sulfide in the Pathophysiology of Alzheimer's Disease.*

with title of dissertation

Deanna Murphy Goldstein; B.A., New York University, 2014; M.A., Northern Illinois University, 2016; Functional Anatomy and Evolution. *External and Internal Carpal Morphology of Knuckle-Walking Apes Among Mammals.*

Kristin Maria Gunnarsdottir; B.S., Reykjavik University, 2010; Biomedical Engineering. Source-Sink Connectivity: A Novel Interictal EEG Marker of the Epileptic Brain Network.**

Runze Han; B.S., Washington University in St. Louis, 2016; Biomedical Engineering. *Advanced Motion Models for Rigid and Deformable Registration in Image-Guided Interventions.*

Shuo Han; B.S., Tsinghua University, 2014; Biomedical Engineering. *Cerebellum Parcellation from Magnetic Resonance Imaging Using Deep Learning.*

Yuan He; B.S., Peking University, 2013; Biomedical Engineering. Deciphering Genetics of Gene Expression and Chromatin Accessibility Via Integration of Large-Scale Genomic Data.**

Talia Rose Henkle; B.S., University of Kentucky,2014; Molecular Biology and Genetics-Program inImmunology. Development of a Novel, SpontaneousHigh Risk HPVE6/E7-Expressing Carcinoma in MurineCervicovaginal Tract.*

Dongeun Heo; B.S., Georgetown University, 2015; Neuroscience. *Transcriptional Regulation of Oligodendrocyte Differentiation in the Aging Brain.***

Xirui Hou; B.S., University of Science and Technology of China, 2014; Biomedical Engineering. *Magnetic Resonance Imaging of Cerebrovascular Reactivity.*

Yizong Hu; B.S., Tsinghua University, 2016; Biomedical Engineering. *Kinetics-Based Particle Size Engineering of Polymeric Gene Delivery Vehicles.* John Leslie Hunyara; B.S., Drexel University, 2014; Biochemistry, Cellular and Molecular Biology Training Program-Neuroscience. *Development and Regeneration Potential of Intrinsically Photosensitive Retinal Ganglion Cells.***

Shelby Marie Hutcherson; B.S., University of Virginia, 2016; Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. Diverse Effects in the Innate and Adaptive Immune System of Mice Caused by a Dominant Negative CARD11 Allele.*

Fadi Paul Jacob; B.S., Cornell University, 2014; Neuroscience. *Modeling Human Brain Development and Disease Using Primary Glioblastoma and Human Stem Cell-Derived Organoids.*

Ye Eun Jeong; D.Pharm., Duksung Women's University, 2016; Pathobiology. SF3B2 Downregulation Protects Central Nervous System Neurons from Inflammatory Injury.

Yea Ji Jeong; D.V.M., Konkuk University, 2014; Pathobiology. *Morphological and Transcriptomic Characterization of Invasion in Pancreatic Cancer Organoids.**

Hanjie Jiang; B.S., Peking University, 2013; M.Sc., 2015; Pharmacology and Molecular Sciences. *Mechanistic Studies on NEDD4 Family HECT E3 Ubiquitin Ligases.*

Dennisse Venettia Jimenez-Cyrus; B.S., Howard University, 2007; Cellular and Molecular Medicine. *Developmental Establishment of Adult Neural Stem Cells in the Mammalian Brain.***

Qingchu Jin; B.S.E., Shanghai Jiao Tong University, 2017; Biomedical Engineering. *Estimating the Probability of Cardiac Cellular Arrhythmias and its Applications.*

with title of dissertation

Natalie Shay Joe; B.S., Fort Lewis College, 2016; Cellular and Molecular Medicine. *Advancing Triple-Negative Breast Cancer Therapies with Mebendazole.*

Kelli Johnson; B.S., University of Northern Colorado (Greeley), 2013; Cellular and Molecular Physiology. *Complex Cholinergic Signaling in the Mouse Intestinal Epithelium.**

Tyler Andrew Jones; B.S., College of William and Mary, 2015; Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. *CARD11 Disease Associated Mutations and Their Effects on Immunity and Lymphoma.***

Seva G. Khambadkone; B.S., Ohio State University, 2012; Cellular and Molecular Medicine. Neurobehavioral Consequences of Perinatal High-Fat Diet Exposure: Toward Understanding and Intervention.

Akash Khanna; B.S., University of Maryland (College Park), 2009; Neuroscience. *Behavioral Evidence for a General Cognitive Map: Inference in a Multidimensional Abstract Stimulus Space.*

Kevin James Kostlan; B.S., University of California (Davis), 2012; M.S., Johns Hopkins University, 2014; Biomedical Engineering. *Biologically-Informed Computational Models of Harmonic Sound Detection and Identification.***

Timothy Evin Gottlieb Krueger; B.S., University of Wisconsin (Madison), 2016; Pharmacology and Molecular Sciences. *Targeting LSD1 for Direct Effects and Induction of Anti-Tumor Immunity Against Lethal Prostate Cancer.*

Brandon Krishna Lam; B.S., University of Florida, 2015; Molecular Biology and Genetics-Program in Immunology. *Development of Novel Tools to Therapeutically Modulate and Model the Immune Response to Cancer and Infection.*** **Christine Lam**; B.A., University of California (Berkeley), 2015; Cellular and Molecular Medicine. *Integrated Transcriptomic and Proteomic Analysis Reveals Role of the Hexosamine Biosynthetic Pathway in Invasion and Metastasis of Hepatocellular Carcinoma.***

Lisa Nicole Learman; B.A., Oberlin College, 2016; Cellular and Molecular Medicine. *Mechanism of Homer1A Expression in Neurons and Disruption in Persistent mTORC1 Signaling.***

Kevin Ho-Yin Leung; B.S., University of California (Davis), 2016; Biomedical Engineering. *Deep Learning in Nuclear Medicine and Molecular Imaging for Improved Clinical Outcomes.*

Adam Li; B.S., University of California, 2015; Biomedical Engineering. *Localizing the Epileptogenic Zone: A Dynamical Systems Perspective.*

Tingjiao August Li; D.Pharm., Purdue University, 2016; Pharmacology and Molecular Sciences. *Endogenous Siglec-8 Ligands are Sialylated Keratan Sulfates Presented on MUC5B, DMBT1 and RPTPZ in the Human Esophagus, Airways and Brain Respectively.*

Raleigh Miller Linville; B.S., Boston University, 2016; Biomedical Engineering. *Tissue-Engineered Microvessel Models of the Human Blood-Brain Barrier.**

Chin-Fu Liu; B.S., National Chiao Tung University, 2011; Biomedical Engineering. *Developing Integrated Machine Learning Models for Automatic Computer*-*Aided Diagnosis in Ischemic Acute Stroke MRI.*

Ran Liu; B.S., Johns Hopkins University, 2016; Biomedical Engineering. *A Data-Driven Basis for Clinical Recommendations on Sepsis and Septic Shock in the Intensive Care Unit.***

Elena López Ortega; B.S., Pablo de Olavide University, 2013; M.S., Universidad de Sevilla, 2014; Cellular and Molecular Medicine. *Visualizing Cortical Plasticity Induced by Sensory Stimulation In Vivo.***

with title of dissertation

Alana Maree MacDonald; B.S., Binghamton University, 2017; Molecular Biology and Genetics-Program in Immunology. *Delivery of IL-2 to the T Cell Surface Through Phosphatidylserine Permits Robust Expansion of CD8 T Cells.*

Kirstin Leigh Maulding; B.S., Texas A&M University, 2016; Cellular and Molecular Medicine. *Dissociating the Effects of RNA and Translated Protein Toxicity in C9 ALS.*

Courtney Jeanne McCann; B.S., Worcester Polytechnic Institute (Worcester), 2014; Cellular and Molecular Physiology. *Heterogeneous Nuclear Ribonucleoprotein A2/B1 Regulates the Abundance of the Copper-Transporter ATP7A, and its Localization Depends on Cellular Copper Levels.*

Daniel Robert Monaco; B.S., University of Virginia, 2016; Pathobiology. *Expanding the Utility of Phage Immunoprecipitation Sequencing.***

Anna Joyce Moyer; B.S., University of Alabama, 2015; M.S., 2015; Human Genetics. *Down Syndrome as a Complex Genetic Disorder*.**

Stephanie Lynn Myers; B.S., University of Notre Dame, 2012; D.V.M., Texas A&M University, 2016; Cellular and Molecular Medicine. *Targeting the Sterol Regulatory Element-Binding Protein (SREBP) Pathway in Pancreatic Ductal Adenocarcinoma.*

Jennifer Nguyen; B.S., Mercer University, 2015; Pharmacology and Molecular Sciences. Adenine Nucleotide Translocase as a Regulator of Chronic Obstructive Pulmonary Disease and Cytoskeletal Function.*

Nam-Phong Tran Nguyen; B.S., University of Texas (Austin), 2014; Human Genetics. *Contextualizing Substance Use Genetic Risk Using Single-Nucleus RNA-Sequencing of the Reward Circuitry of the Human Brain.* **Tim Oldfield Nieuwenhuis**; B.S., Dickinson College, 2017; Human Genetics. *Discovering Technical And Biological Drivers of Variation in Bulk RNA-Sequencing.*

Michael Nickolas Noback; B.S., Harvey Mudd College, 2011; Pharmacology and Molecular Sciences. Adolescent Social Isolation Alters Reward-Seeking Behavior and Increases DeltaFosB Expression in Mice.**

Melesse Lonse Nune; B.S., University of Georgia, 2012; Program in Molecular Biophysics. *Biochemical* and Structural Studies of the Roles of FACT and Ubp10 in Histone H2B Deubiquitination and Nucleosome Dynamics.*

Ayah Nuriddin; B.A., American University, 2009; History of Medicine. *Liberation Eugenics: African Americans and the Science of Black Freedom Struggles*, 1890-1970.*

Patience Ifeyinka Odeniyide; B.S., University of North Carolina (Chapel Hill), 2010; M.D., Indiana University School of Medicine - Indianapolis, 2014; Cellular and Molecular Medicine. *Targeting Farnesylation as a Novel Therapeutic Approach in HRAS-Mutant Rhabdomyosarcoma*.

Clinton Ogega; B.S., Johns Hopkins University, 2014; Pharmacology and Molecular Sciences. *Utilization* of Soluble Receptor Binding Proteins to Characterize Molecular and Phenotypic Features of Memory B Cell and Neutralizing Antibody Responses in Hepatitis C Virus or Severe Acute Respiratory Syndrome Coronavirus 2 Infection.

Ikeoluwa Adeshina Osei-Owusu; B.A., Johns Hopkins University, 2015; Human Genetics. *Genomic Contributions to Self-Injurious Behavior in Autism* Spectrum Disorder.*

James Osei-Owusu; B.S., University of Ghana, 2012; Cellular and Molecular Physiology. *Molecular Biology, Structure, and Physiology of Proton-Activated Chloride Channel.*

with title of dissertation

John Paul Tsu Ouyang; B.S., University of Maryland (College Park), 2016; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. *Exploring Germ Granule Function in Small RNA Biology.***

Rebecca Wen-Yi Pak; B.S., University of California (Berkeley), 2015; Biomedical Engineering. Development of Minimally-Invasive Optical Neuroimaging Systems for Clinical Helmet Implementation and Monitoring of Freely Moving Animals.**

Xingyi Pan; B.S., University of Michigan, 2015; Cellular and Molecular Medicine. *Epigenetics in Modulating Macrophages and Cancer Associated Fibroblasts in Pancreatic Ductal Adenocarcinoma.**

Sangwoo Park; B.S., Korea Advanced Institute of Science and Technology, 2012; Biophysics and Biophysical Chemistry. *Sliding and Clustering of Nucleosome Core Particles Illuminate the Biophysical Principles of Chromatin Organization.*

Garrett James Patrick; B.A., Washington University in St. Louis, 2015; Molecular Biology and Genetics-Program in Immunology. S. aureus-*Induced IL-36 Triggers Plasma Cell IgE Class Switching and Allergic Disease.*

Lauren Brown Peiffer; B.S., University of California (Los Angeles), 2006; D.V.M., Iowa State University of Science and Technology, 2012; Cellular and Molecular Medicine. Investigating the Relationship Between Gastrointestinal Microbiota, Androgen Receptor Axis-Targeted Therapies, and Checkpoint Inhibition in the Treatment of Advanced Prostate Cancer.

Kira Avery Perzel Mandell; B.S., William and Mary College, 2018; Human Genetics. *Leveraging the Whole Methylome to Elucidate the Relationship Between Schizophrenia and DNA Methylation in the Human Brain.* **Minh-Tam Nguyen Pham**; B.S., Bates College, 2015; Cellular and Molecular Medicine. *Topoisomerase 2 Beta Facilitates Chromatin Reorganization During Androgen Receptor Induced Transcription and Contributes to Chromoplexy in Prostate Cancer.***

Thao Phuong Phan; B.S., Korea Advanced Institute of Science and Technology, 2016; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. *Centrosome Copy Number Regulation in Development and Disease.***

Michael James Pokrass; B.S., University of Virginia, 2013; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. *Cell Cycle Coordinated Mechanisms Regulate Signaling Dynamics and Fate Determination in the Mammalian Embryo.**

Michael Alan Powell; B.S., United States Military Academy, 2004; Biomedical Engineering. *Generic* Drug Repurposing for Pandemic Response: Alpha-1 Adrenergic Receptor Antagonists for the Prevention of Severe COVID-19 Symptoms.

Kelly Renee Rhodes; B.S., University of Maryland (College Park), 2016; Biomedical Engineering. *Polymeric Particle-Based Drug Delivery Platforms for Immune Modulation.*

Alexandra Nicole Rindone; B.S., Rensselaer Polytechnic Institute, 2015; Biomedical Engineering. Quantitative 3D Imaging of the Cranial Microvascular Environment at Single-Cell Resolution.

Cristina Rossi; M.Eng., Imperial College University of London, 2015; Biomedical Engineering. *Mechanisms* of Motor and Perceptual Learning in Locomotor Adaptation.

Yuan Rui; B.S., University of Oklahoma, 2015; Biomedical Engineering. Engineering Polymeric Nanoparticles for Non-Viral Delivery of Nucleic Acid Drugs and the CRISPR/Cas9 Gene Editing Platform.*

with title of dissertation

Samuel Louis Scharff; B.S., University of Oklahoma, 2011; History of Medicine. *The Mask of Expertise: Hervey Cleckley, Psychiatry, and Law in 20th Century America.*

Ehsan Sedaghat Nejad; B.S., Iran University of Science and Technology (Tehran), 2009; M.S., Sharif University of Technology, 2012; Biomedical Engineering. *Adaptive Control of Saccades.*

Manuel Alejandro Seman Senderos; B.S., Universidad Nacional Autonoma de Mexico, 2012; Cellular and Molecular Medicine. *Targeting the Collagen Secretome in Fibrotic Disease.***

Julie Kristin Shade; B.S.E., Johns Hopkins University, 2017; Biomedical Engineering. *Machine Learning and Computational Cardiac Modeling for Clinical Decision Support in Patients with Cardiovascular Disease.***

Alaina Shumate; B.S., Stanford University, 2016; Biomedical Engineering. *The Development and Application of Computational Methods for Genome Annotation.*

Caroline Siebald; B.A., University of Oxford, 2013; Human Genetics. *Pre-Patterning and Activity-Dependent Mechanisms Shape Neuronal Diversity in the Cochlea.*

Francesco Roberto Simonetti; M.B.Ch.B., University of Milan, 2010; Cellular and Molecular Medicine. *Persistence by Division: A Study of HIV-1 Reservoir Quantification and its Maintenance Through Antigen-Driven T Cell Proliferation.***

Stephanie Leanne Lynn Slania; B.S., University of Illinois (Urbana-Champaign), 2015; Biomedical Engineering. *Molecular Imaging of Inflammation-Related Biomarkers in Cancer, Fibrosis, and Neurodegenerative Disease.** **Daniel Francis Quinn Smith**; B.A., Hunter College, 2017; Cellular and Molecular Medicine. *Investigating the Melanin-Based Immune Response and Microbial Pathogenesis in Galleria Mellonella and Anopheles Gambiae*.

Sarah Marie Somers; B.S., Pennsylvania State University, 2014; Biomedical Engineering. *Mimicking* the Biophysical Niche of Native Skeletal Muscle for the Formation of a 3D, Tissue-Engineered Skeletal Muscle Construct.**

Cynthia Rose Steinhardt; A.B., Princeton University, 2016; Biomedical Engineering. *A Modeling Perspective on Developing Naturalistic Neuroprosthetics Using Electrical Stimulation.*

Benjamin Joselson Strober; B.S., Johns Hopkins University, 2015; Biomedical Engineering. *Modeling the Impact of Genetic Variation on Gene Expression.*

Debebe Theodros; B.S., University of Florida, 2012; Molecular Biology and Genetics-Program in Immunology. *HIDE1 is a Novel Regulator of Myeloid Cell Biology in Health and Human Disease.*

Neha Thomas; B.S., Drexel University, 2017; M.S., 2017; Biomedical Engineering. *Neural Efficiency of Haptic Feedback and Autonomous Control in Upper-Limb Prostheses.*

Tessy Mariam Thomas; B.S., University of Houston, 2015; Biomedical Engineering. *Investigation of Native Sensorimotor Representations for the Development of a Bi-Directional BMI.**

Alexander Yanning Trick; B.S., University of Illinois (Urbana-Champaign), 2016; Biomedical Engineering. Portable Rapid On-Cartridge Magnetofluidic Purification and Testing (PROMPT) Platform for Point-of-Care Infectious Disease Diagnostics.

with title of dissertation

Shang-Jui Tsai; B.S., National Yang-Ming University School of Medicine, 2009; Neuroscience. *A Synthetic System for Rerouting Signaling Pathways Implicated in Chronic Pain.*

Hannah Jensen Vaughan; B.S., Duke University, 2016; Biomedical Engineering. *Engineered Therapeutic Plasmids and Nanoparticle Delivery Vehicles for Targeted Treatment of Hepatocellular Carcinoma.**

Anthony John Veltri; B.S., Wayne State University, 2015; Program in Molecular Biophysics. *Molecular States of the Ribosome Regulate the Transcriptome by Linking Protein Synthesis and mRNA Decay.***

Neha Rajiv Verma; B.E., Thadomal Shahani Engineering College, 2012; M.S., Johns Hopkins University School of Medicine, 2015; Health Sciences Informatics Ph.D. Program. *Development and Impact* of a Telemedicine Platform with a Task-Shifting Digital Assistant to Support Frontline Health Workers and its Dissemination as a Digital Public Good.

Elizabeth Anne Vincent; B.A., Yale University, 2015; Human Genetics. *Single-Cell RNA Sequencing Reveals Cell-Type-Specific Effects of RET Loss-of-Function in the Developing Murine Enteric Nervous System.*

Huilei Wang; B.S., Johns Hopkins University, 2016; Biomedical Engineering. *Characterizing the Role of Lysyl Oxidase Like-2 in Vascular Stiffening.*

Wenying Wang; B.S., Tsinghua University, 2016; Biomedical Engineering. *Prediction and Control of Image Properties in Advanced Computed Tomography.*

Rachel Leah Weinberg; B.S., University of Maryland (College Park), 2013; Cellular and Molecular Medicine. *Elucidating Mechanisms of Pain in Hereditary Palmoplantar Keratodermas.* **Robin Ashley Welsh**; B.A., Smith College, 2009; M.S., 2012; Molecular Biology and Genetics-Program in Immunology. *Understanding the In vivo Role of the Class II Accessory Molecule H2-O in the Development of Autoimmunity.**

Jennifer Ausland White; B.S., Texas A&M University, 2013; Pharmacology and Molecular Sciences. *Accurate Characterization and Measurement of HIV-1 Decay and the Stable Latent Reservoir.*

Kaitlin May Wood; B.S., Gonzaga Univ - Spokane, 2014; Human Genetics. *Identifying Requirements for Farnesylated Prelamin A Processing and Pathways Disrupted When Processing is Blocked.*

Annie Ai-Li Wu; B.S., Johns Hopkins University, 2011; Molecular Biology and Genetics-Program in Immunology. *Immune Profiling of Mouse and Human Pancreatic Cancer.*

Di Wu; B.S., University of Maryland (College Park), 2014; Biomedical Engineering. *Deconstruction of How Signaling Forms Arise in Cells: Rational Design of a Chemically Inducible Trimerization System & Pacsin2 Localization Elucidates Membrane Cortex Organization.*

Pengwei Wu; B.S., Zhejiang University, 2016; Biomedical Engineering. *Improved Image Quality in Cone-Beam Computed Tomography for Image-Guided Interventions.*

Olivia Yang; B.S., University of California (San Diego), 2014; Biophysics and Biophysical Chemistry. *Probing Mechanisms of Genome Maintenance Using Single Molecule Methods.*

Stephanie Yang; B.A., Bryn Mawr College, 2015; Human Genetics. *Unraveling the Genetic Architecture and Biological Pathways of Mitochondrial DNA Copy Number.*

with title of dissertation

Joseph K. Yu; B.S., Rice University, 2013; Biomedical Engineering. *Exploration of Arrhythmia Dynamics and Mechanisms Arising from Remuscularization of the Infarcted Ventricles.**

Benjamin Logan Zaepfel; B.S., University of Arizona, 2017; B.S., 2017; Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. *RNA-Centric Investigation of RNA-Binding Protein Behavior in Health and Disease.*

Pengfei Zhang; B.S., Tsinghua University, 2013; Biomedical Engineering. *Microfluidic Platforms Toward Multiplexing Digital Bioassays for Infectious Disease Diagnosis.*

Lily Zheng; B.S., Duke University, 2016; Human Genetics. *Probabilistic Inference of Clone Trees from Multi-Region Sequencing of Tumors.*

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Graduate Student Oath

As I embark on my career as a scientist, I willingly pledge that:

I will practice and support a scientific process that is based on logic, intellectual rigor, personal integrity, and an uncompromising respect for truth;

I will perform my professional activities and interactions with scientific integrity and respect for the field and my peers;

I will acknowledge my role as an ambassador of science to the public, and strive to be honest, respectful, and unbiased with engaging the public;

I will value my work and its contribution to the scientific community;

I will never let the potential for personal recognition or advancement cause me to act in a way that violates the public trust in science or in me as a scientist;

I will foster a community that is inclusive of all and recognize that diversity cultivates innovation, creativity, and progress;

I will acknowledge and honor the contributions of scientists who have preceded me and become a worthy role model deserving of respect by those who follow me;

And I will always be cognizant that my work is for the advancement of knowledge and the benefit of all humanity.

By pronouncing this Oath, I declare my commitment to these professional standards and goals.

Jareatha Abdul-Raheem; B.S., Massachusetts Institute of Technology, 2017.

Prachi Aggarwal; B.A., Washington University in St. Louis, 2018.

Sandra Ahn; B.A., Wellesley College, 2006; M.A., American University, 2011.

Timour Al-Khindi; B.S., University of Toronto, 2011.

Jawara Antar Allen; B.S., Duke University, 2012.

Danielle Brooke Amundsen; B.S., University of Minnesota (Twin Cities), 2018.

Neha Sahai Anand; B.A., Yale University, 2017; B.A., 2017.

Alexandra Jeanne Berges; B.S., Johns Hopkins University, 2017.

John Paul Bliamptis; B.A., University of Chicago, 2015.

Joon Ying Boon; B.A., Boston University, 2005; Ph.D., 2016.

Daniel Borota; B.A., Johns Hopkins University, 2014.

David Basem Rayed Botros; B.S., Indiana University (Bloomington), 2018.

Caitlin Julia Bowen; B.S., Cornell University, 2014.

Michael Johnathan Charles Bray; B.S., University of Toronto, 2015; M.S., 2018.

Larisa Elise Breden; B.S., University of New Mexico, 2017.

Austin Gregory Burns; B.S., University of Central Florida, 2017.

Eleanor Madison Burton; B.A., Johns Hopkins University, 2018.

Jack Alexander Campbell; B.A., Johns Hopkins University, 2017.

Giorgio Caturegli; B.A., Yale University, 2018; B.S., 2018.

Alejandro O. Chara; B.S., Johns Hopkins University, 2017.

Jenny Chen; B.A., Stanford University, 2017.

Jonlin Chen; B.S., Cornell University, 2017.

Lena W. Chen; B.A., University of Chicago, 2017.

Mary Chen; B.S., Pennsylvania State University, 2016.

Xinyi Chen; B.S., Johns Hopkins University, 2017.

Annie Minkyung Cho; B.A., Johns Hopkins University, 2016.

Michael Dominic Claiborne; B.A., Western Washington University, 2011.

Lauren Elizabeth Claus; B.A., Harvard University, 2016.

Anna Christina Clements; B.S., Johns Hopkins University, 2017.

Chelsea Frances Moriarty Coffield; B.A., Smith College, 2014; B.A., 2014.

Michelle Dewi Colbert; B.S., Arizona State University, 2016.

Zoe Leah Cosner; B.S., University of Miami, 2017.

Ethan Joseph Cottrill; B.S., Ohio University, 2013; M.S., Johns Hopkins University, 2015.

Nicholas Omid Daneshvari; B.A., University of California (Berkeley), 2018.

Andy Siyuan Ding; B.A., University of California (Berkeley), 2016; B.A., 2016.

Ethan Dyer; B.S., Georgia State University, 2013.

Tina Esfandiary; B.A., University of Florida, 2017; B.S., 2017.

Darya Fadavi; B.S., University of California (Berkeley), 2017.

Jennifer Lynn Franke; B.S., Georgetown University, 2018.

Abhishek Gami; B.S., Johns Hopkins University, 2017.

Catalina Garzon; B.S., Florida International University, 2016.

Timothy Edward Gilpatrick; B.S., University of Delaware, 2012.

Daniel Giovinazzo; B.A., Johns Hopkins University, 2012; M.S., 2012.

Trevor William Glenn; B.A., University of Pennsylvania, 2018.

Dana Kathleen Goplerud; B.S., Brown University, 2015.

Joshua Gray; B.S., University of North Carolina (Chapel Hill), 2018.

Lillian Hayes; B.A., Brown University, 2018.

Waverley Ying He; B.A., Harvard University, 2018.

Fadi Paul Jacob; B.S., Cornell University, 2014.

Hulaimatu Jalloh; B.A., Princeton University, 2017.

Sun Young Jang; B.S., Johns Hopkins University, 2018.

Amanda Joy Jones; B.S., University of Maryland (College Park), 2017.

Seema Kacker; B.S., Massachusetts Institute of Technology, 2010.

Seva G. Khambadkone; B.S., Ohio State University, 2012.

Alexander Kim; B.A., University of California (Berkeley), 2015; B.A., 2015; M.S., University of California (San Francisco), 2016.

Timothy Yushin Kim; B.S., Yale University, 2016.

Srujan Kopparapu; B.A., University of California (Davis), 2017; B.S., 2017.

John Bae Korleski; B.A., Johns Hopkins University, 2017.

Priyanka Kumar; B.A., Harvard University, 2018.

Thomas Khanh Hung Le; B.S., University of California (Berkeley), 2015.

Andrew Scott Lea; B.A., Harvard University, 2014; M.S., University of Oxford, 2015; D.Phil., 2020.

Evelyn Mae Leland; B.S., University of Minnesota (Twin Cities), 2017.

Angela Lin Liang; B.A., Princeton University, 2017.

Jason Anthony Liew; B.A., University of Rochester, 2016.

Elizabeth Liu; B.A., Johns Hopkins University, 2016.

Brian Dennis Lo; B.S., Johns Hopkins University, 2016.

Gilberto Oscar Lobaton; B.S., University of Florida, 2017.

Robert Kearney Lord; B.A., Harvard University, 2008.

Heba Mahjoub; B.S., University of Pittsburgh, 2018.

Sri Harshavardhan Malapati; B.S., College of William and Mary, 2018.

Sasicha Manupipatpong; B.S., Emory University, 2017.

Samantha Sarah Massenzio; B.S.E., Princeton University, 2018.

Malcolm Alexander Matheson; B.S., Northeastern University, 2012.

Glory Ezinne Mgboji; B.S., University of Maryland (College Park), 2017.

Mohamed Abdelmonem Mohamed; B.S., University of Central Florida, 2016.

Yoon Ji Moon; B.A., University of Pennsylvania, 2017.

John Mina Morkos; B.S., Stanford University, 2017.

Ethan Jeremy Morris; B.S., Emory University, 2017.

Alexa Morgan Mullins; B.A., Stanford University, 2016.

Vasu V. Munjapara; B.A., Case Western Reserve University, 2018.

Zachary Richard Murphy; B.A., University of Michigan - Flint, 2013; M.A., Purdue University, 2015.

Jaclyn Le Nguyen; B.A., University of Southern California, 2017; B.S., 2017.

Alexandra Elisabeth Norton; B.A., Vanderbilt University, 2011.

Michael Tianhao Ou; B.S., Johns Hopkins University, 2016.

Sharon Ka-yan Pang; B.A., Hunter College, 2017.

Kaushik Parvathaneni; B.S., University of Southern California, 2018.

Garrett James Patrick; B.A., Washington University in St. Louis, 2015.

Margo Ann Peyton; B.A., University of Pennsylvania, 2011.

Zaw Hlyan Phyo; B.S., University of California (Los Angeles), 2016; M.S., Johns Hopkins University, 2018.

Caroline Frances Plott; B.S., Emory University, 2015; M.S., Columbia University in the City of New York, 2016.

Kori Anahi Porosnicu Rodriguez; B.A., Columbia University in the City of New York, 2017.

Rochelle Prokupets; B.S., University of Miami, 2018.

Laura Elizabeth Pugh; B.S., College of William and Mary, 2015.

Jacob Stuart Roberts; B.S., Washington and Lee University, 2017.

Youkyung Sophie Roh; B.A., Harvard University, 2014.

Kwame Amancio Romero-Sackey; B.S., Emory University, 2018.

Mary Rostom; B.S., University of Pittsburgh, 2018.

Jake Austin Ruddy; B.S., Pennsylvania State University, 2016.

Rahul Sachdev; B.S., University of California (Davis), 2014.

Vignesh Sadras; B.S., Johns Hopkins University, 2018.

Vorada Sakulsaengprapha; B.S., Johns Hopkins University, 2018.

Anthony Albert Salerno; B.S., York University (Canada), 2014; M.S., University of Toronto, 2018.

Samuel Louis Scharff; B.S., University of Oklahoma, 2011.

Andrew Thomas Schilling; A.B., Princeton University, 2017.

Ashton Annalouise Shaffer; B.A., Bryn Mawr College, 2011.

Yesha Shah; B.B.A., University of Texas (Austin), 2018; B.S., 2018.

Feras Shamoun; B.S., University of Toronto, 2016.

Aria Ce Shi; B.S., Massachusetts Institute of Technology, 2018.

Galen Shi; B.A., Johns Hopkins University, 2016.

Nicholas Siegel; B.S., Johns Hopkins University, 2014.

Harisa Spahic; B.S., University of Notre Dame, 2018.

Siddhartha Srivastava; B.S., University of Texas (Dallas), 2017.

Melissa Marie Staley; B.S., Johns Hopkins University, 2017.

Andrew David Supron; B.A., Rice University, 2018; B.S., 2018.

Matthew Ryan Tan; B.S., Johns Hopkins University, 2018.

Olive Tang; B.A., Harvard University, 2015.

Derek Sher-Zheng Teng; B.A., Johns Hopkins University, 2017.

Debebe Theodros; B.S., University of Florida, 2012.

Gregory Rocco Toci, Jr.; B.S., Drexel University, 2017.

Yohannes Kebede Tsehay; B.A., Wheaton College (Massachusetts), 2014.

Brittany Chen-Jin Tsou; B.S., Johns Hopkins University, 2016.

Hursuong Vongsachang; B.A., Harvard University, 2016; M.P.H., Johns Hopkins Bloomberg School of Public Health, 2021.

Shirley Lynn Wang; B.S., Northeastern University, 2017.

James Joseph Whitbread, Jr.; B.S., Washington State University, 2018.

Annie Ai-Li Wu; B.S., Johns Hopkins University, 2011.

Julie Sunjoo Yi; B.S., Duke University, 2016.

Catherine Yiing Yi Yip; B.S., Duke University, 2017.

Shanna Li Yue; B.A., Bowdoin College, 2016.

Nancy Jianing Zhou; B.A., Washington University in St. Louis, 2018.

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The Oath of Hippocrates

I do solemnly swear... by that which I hold most sacred... That I will be fully committed to those I serve... and just and loyal to the profession of medicine and its members... That I will lead my life... and practice my art... in uprightness and honor... That into whatsoever house I shall enter... it shall be for the good of the sick... to the utmost of my power... holding myself aloof from wrong ... from corruption ... and from the tempting of others to vice... That I will exercise my art... solely for the care of my patients... and will give no drug ... and perform no operation ... without justifiable purpose... nor ever suggest it ... That whatsoever I shall see or hear ... of the lives of men and women ... which is not fitting to be spoken... I will keep inviolably secret... These things I do promise... and in proportion as I am faithful to this my oath ... may happiness and good repute be ever mine... the opposite if I shall be forsworn.

Medal of the Frances Watt Baker, M.D. and Lenox D. Baker, Jr., M.D. Deanship



JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

In 1997 Dr. Edward D. Miller commissioned sculptor Neil Estern to create a medal commemorating the endowment of the Baker deanship. The medal was struck in bronze. Design of its obverse is based on John Singer Sargent's group portrait of four major figures associated with the founding of the School of Medicine – William H. Welch, William Osler, Howard A. Kelly, and William S. Halsted. Silversmith Henry P. Hopkins, III designed and produced the chain of the medal which incorporates silver medallions inscribed with names of each individual who has served as Dean of the Medical Faculty. Included are blank medallions which will be inscribed with the name of each successive dean in years to come. The medal is worn by the dean on ceremonial occasions. When not in use, the medal is on display in the Office of the Dean.

William H. Welch 1893 - 1898

> William Osler 1898 - 1899

William H. Howell 1899 - 1911

J. Whitridge Williams 1911 - 1923

> Lewis H. Weed 1923 - 1929

Alan M. Chesney 1929 - 1953

> **Philip Bard** 1953 - 1957

Thomas B. Turner 1957 - 1968

> David E. Rogers 1968 -1971

Russell H. Morgan 1971 - 1975

> **Richard S. Ross** 1975 - 1990

Michael E. Johns 1990 - 1996

Edward D. Miller Interim Dean 1996 - 1997

Edward D. Miller 1997 - 2012

Paul B. Rothman 2012 -





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