Courtney Michelle Campbell, M.D., Ph.D.

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EDUCATION AND TRAINING

Feb 2019 – Present	The Ohio State University Wexner Medical Center, Columbus, OH <i>Postdoctoral Researcher,</i> Department of Cell Biology and Physiology <i>Clinical Research Fellow,</i> Comprehensive Amyloidosis Clinic Physician Scientist Training Program
July 2017 – Present	The Ohio State University Wexner Medical Center, Columbus, OH <i>Fellow, Cardiovascular Medicine</i> Physician Scientist Training Program Department of Internal Medicine
July 2015 – June 2017	The Ohio State University Wexner Medical Center, Columbus, OH <i>Resident Physician, Internal Medicine</i> Department of Internal Medicine Physician Scientist Training Program
June 2007 - May 2015	Vanderbilt University School of Medicine, Nashville, TN Doctor of Medicine Medical Scientist Training Program (MSTP)
July 2009 - June 2013	Vanderbilt University School of Medicine, Nashville, TN Doctor of Philosophy Department of Pharmacology
Sept 2005 - June 2006	Harvard University, Cambridge, MA Masters of Arts in History of Science
Sept 2002 - June 2006	Harvard College , Cambridge, MA <i>Bachelor of Arts in History and Science</i> Cum Laude
Aug 1998 - May 2002	Highland Park High School , Dallas, TX <i>Graduated Salutatorian</i> Summa Cum Laude

BOARD CERTIFICATION

August 2019 Internal Medicine Board Certification

February 2019 – Present	 Comprehensive Amyloidosis Clinic, The James Cancer Center The Ohio State University Wexner Medical Center, Columbus, OH Development of early diagnostic approaches for cardiac amyloidosis and evaluation of incidence in orthopedics populations Mentors: Yvonne Efebera, MD, Rami Kahwash, MD, Naresh Bumma, MD, and Ajay Vallakati, MBBS Medical Student Mentees: Victoria DuBose-Briski, Cyril Ayuk Mbeng Takem Baiyee, Brandon Rodgers Internal Medicine Resident Mentee: Sri Vedachalam
February 2019 – Present	 Paul M. L. Janssen, Ph.D. Laboratory The Ohio State University, Columbus, OH Ongoing translational projects related to cardiac amyloidosis, non-ischemic cardiomyopathy, and n-methyl-d-aspartate receptor antagonism in human heart failure
July 2008 – June 2013	 Alfred L. George, Jr., M.D. Laboratory Vanderbilt University School of Medicine, Nashville, TN Dissertation: Pharmacological Targeting of Gain of Function KCNQ1 Mutations Predisposing to Atrial Fibrillation Dan M. Roden, M.D., Dissertation Committee Chair Utilized current and voltage patch-clamp technique and electrophysiological analysis, identified novel pharmacological susceptibility of AF mutations, created rabbit and guinea pig four chamber myocyte isolation and culture method, developed potassium channel adenoviral gene delivery technique, plus mastery of fundamental gene cloning, transfection, and cell culture methods Elucidated voltage-gated potassium channels contribution to epilepsy susceptibility; assessed oxidative stress impact on AF susceptibility on potassium channels; collaborated on pharmacological targeting of hERG channels Provided isolated rabbit myocytes and experimental training for five Vanderbilt laboratories
Aug 2012 – March 2015	 Michael J. Fowler, M.D., Co-Director of Shade Tree Clinic Vanderbilt University School of Medicine, Nashville, TN Evaluated the efficacy of implementing the systematic use of comprehensive glucometer reports at Shade Tree Clinic, a medical student run free clinic Focused on medical decision making and medical student education in addition to patient comprehension and type 2 diabetes mellitus control

July 2010 - Aug 2010	 Molecular Biology of Aging - Special Topics Course Marine Biological Laboratory, Woods Hole, MA Course encompassed model systems, mitochondrial defects and oxidative stress, DNA mutations and repair, telomeres and cellular senescence, mammalian aging and evolutionary considerations. Experiments assessed mechanisms of oxidative stress damage and resistance in short and long lived bivalve species resulting in two publications Mentors: Steve Austad, Ph.D, Gary Ruvkun, Ph.D., and Zoltan Ungari, Ph.D.
May 2008 - June 2008	 Heidi E. Hamm, Ph.D. Laboratory Vanderbilt University School of Medicine, Nashville, TN Conducted platelet aggregation studies to determine differences in the downstream pathways involved in platelet function in both normal human subjects and patients with a continuum of type II diabetes from insulin resistance to full-blown disease
July 2007 - Sept 2007	 Dan M. Roden, M.D. Laboratory Vanderbilt University School of Medicine, Nashville, TN Optimized a genotyping assay for early zebrafish somitogenesis and analyzed in sit hybridization to investigate the role of sodium- channel related signaling in zebrafish cardiac development Co-Mentor: Sameer Chopra, M.D., Ph.D.
Jan 2007 - May 2007	 Aestus Therapeutics Research Analyst, North Brunswick, NJ Identified candidate drugs for neuropathic pain and amyotrophic lateral sclerosis (ALS) through microarray screens and pathway analysis; wrote and edited grant and patent applications Mentors: CSO Lillian Chang, Ph.D. and CEO Tage Honore, Ph.D.
Sept 2004 - May 2006	 Douglas A. Melton, Ph.D. Laboratory Harvard University, Boston, MA Examined the directed differentiation of human and mouse embryonic stem cells towards endoderm and ideally pancreatic beta islet cells through media augmentation, growth factor screening, and high throughput chemical screening methods Utilized florescence activated cell sorting (FACS), immunohistochemistry, and immunofluorescence; taught embryonic cell culture technique Co-Mentor: David A. Shaywitz, M.D., Ph.D.
Oct 2002 - May 2004	 Mark T. Keating, M.D. Laboratory Children's Hospital Boston, Boston, MA Analysis of mouse cardiomyocyte regeneration after injury with Myo1 overexpression and investigation of zebrafish cardiomyocyte regeneration via in situ hybridization and gene chip analysis Co-Mentor: Ellen Lien, Ph.D.

June 2003 - Aug 2003	 Paul DeSousa, Ph.D. Laboratory Roslin Institute, Edinburgh, Scotland, UK Using immunocytochemistry and high-resolution fluorescence microscopy, investigated human embryonic stem cell extracellular matrix to enable the development of a completely defined environment for hES cell culture and maintenance
Aug 2000 - May 2002	 Eric N. Olson, Ph.D. Laboratory University of Texas Southwestern Medical School, Dallas, TX Investigated genetic muscular development in mice, looking specifically at myogenic bHLH transcription factors in the regulation of MEF2C in vertebrate myogenesis Co-Mentor: M. Renee Valdez, MD., Ph.D.
2019 – Present	 Comprehensive Amyloidosis Clinic Research Mentor Mentor medical students and residents in clinical research projects within our Comprehensive Amyloidosis Clinic Medical students have contributed to 4 accepted abstracts, including one first author abstract, at national and international meetings Resident developed a first author abstract accepted at national meeting
2017 – Present	 Cardiovascular Medicine Educator Teach at least two formal lectures per cardiology in-patient service and consult block, give a clinical case lecture annually, and present cardiovascular medicine grand rounds every two years
2015 – Present	 OSU MSTP Mentor The Ohio State University, Columbus, OH Mentor OSU MSTP students at all stages considering physician- scientist careers within internal medicine though 1-on-1 sessions and panel discussions
2013 - 2015	 Vanderbilt Physical Diagnosis Educator Vanderbilt University School of Medicine, Nashville, TN Teach small groups of first and second year medical student physical diagnosis skills at the Center for Experiential Learning & Assessment (CELA), up to 12 students per session
2008 - 2015	 Senior Clinical Student, Shade Tree Clinic Vanderbilt University School of Medicine, Nashville, TN Teach first and second year medical student volunteers how to take vitals, do phlebotomy, obtain a patient history, conduct a physical exam, write notes, understand pathophysiology of our patients' illnesses and reasons for our therapeutic approach

2009 - 2015	 Pharmacology Department Representative for the MSTP Vanderbilt University School of Medicine, Nashville, TN Aid MSTP students in navigating the dual degree requirements, provide resources and guidance for classes and qualifying exams, and guide preparations for department presentations Liaison for the Pharmacology Department to both current and prospective Vanderbilt MSTP students
2009 - 2013	 Vanderbilt MSTP Seminar Series Senior Mentor Vanderbilt University School of Medicine, Nashville, TN Taught junior MSTPs scientific presentation skills and guided in preparation of a hour long presentation for our weekly MSTP seminar
2010 - 2013	 Pharmacology Graduate Student Mentor Vanderbilt University School of Medicine, Nashville, TN Held review sessions and mock qualifying exams for Pharmacology Department graduate students
2008 - 2012	 Responsible Conduct of Research (RCR) Course Leader Vanderbilt University School of Medicine, Nashville, TN Developed and co-taught week long course with lecture and case discussions for newly matriculated MSTP students (10-12 students) Course Director: Larry Swift, Ph.D., MSTP Associate Director
2008 - 2012	 Vanderbilt Mini-MSTP Days Vanderbilt University School of Medicine, Nashville, TN Developed and taught interactive science & medicine modules to rotating groups of 10-15 middle school students for a total of over 100 students annually
2004 - 2005	 Cardiology Department Volunteer, Pilot Patient Education Program Boston Medical Center, Boston, MA Taught current in-patients about their cardiovascular disease, tests, and treatments using a pilot online module system
2004 - 2006	 Peer Tutor, Bureau of Study Counsel Harvard College, Boston, MA Tutored Harvard students one-on-one for courses including Stem Cells & Cloning, Biology, Human Physiology, and Writing
SERVICE EXPERIENCE	
Nov 2007 - Present	 Harvard Alumni Interviewer Harvard Club of Central Ohio, Columbus, OH Harvard Club of Middle Tennessee, Nashville, TN Interview and write an evaluation with admission recommendations of 2-5 high school seniors annually for Harvard's undergraduate class

August 2015 – June 2017	 Ohio State Housestaff Education Committee Meets monthly to discuss issues and develop changes for OSUMC Internal Medicine residency education
Aug 2007 - April 2015	 Clinical Volunteer, Shade Tree Clinic Vanderbilt University School of Medicine, Nashville, TN Lead a small medical team under attending supervision to provide care for acute and chronic illnesses for Nashville residents with limited resources
Aug 2007 - April 2015	 Spanish Interpreter, Shade Tree Clinic Vanderbilt University School of Medicine, Nashville, TN Interpret for Spanish-speaking patients in their interactions with the medical team, social services, and patient health education
Aug 2007 - May 2009	 Vanderbilt School of Medicine Tour Guide Vanderbilt University School of Medicine, Nashville, TN Gave hour long tours for prospective medical students interviewing at Vanderbilt School of Medicine Provided overnight housing for interviewees as a Student Host
July 2006 - Aug 2006	 Medical Volunteer, Hospital Nacional de Niños Asociación Cultural de Intercambio – Costa Rica, San José, Costa Rica Provided general and neonatal patient care assistance, played with children - particularly long-term residents, aided in school work, and helped in the blood donor clinic
May 1999 - May 2002	 Junior Hospital Volunteer Baylor Medical Center at Garland, Garland, TX Over 500 hours providing patient, family, and clerical support
June 1999 - Aug 1999	 Radiology Department Volunteer Baylor Medical Center at Garland, Garland, TX Before the digital era of medical records, improved organization of patient medical records and radiology films and developed a system for sending and receiving outside radiology films
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2017 – Present	 OSU Women in Cardiology, Co-Chair Organizing and planning events for female fellows in cardiology both as mentors and mentees
2007 - 2013	 Spanish Services Representative, Shade Tree Clinic Mentored and trained Vanderbilt undergraduate Spanish interpreter volunteers

- Provided translation services as needed for clinic administration and clinic pharmacy
- Represented Shade Tree Spanish Services at community events

2007 - 2013	 Vanderbilt MSTP Recruiting Host Co-host for MSTP interview weekends (2007-2013) Co-hosted admitted students for Second Look Weekend (2008)
2011	 Vanderbilt Curriculum 2.0 MSTP Redesign Committee Faculty and student committee coordinated the modification of the MSTP programming based on changes to the medical school curriculum
2008 - 2011	 Vanderbilt MSTP Career Development Workshop Chair 2011 Chair, 2009 Planning Committee Led 7 fellow MSTP to plan a workshop for our 90+ MSTP student body which included participation by over 30 physician-scientists from inside and outside of Vanderbilt Biannual workshop provides formal exposure to research options during residency, the variety of career paths chosen by physician scientists, work-life balance discussion, and navigating the post-doc to faculty appointment interval
2008 - 2011	 Vanderbilt Responsible Conduct of Research (RCR) Committee Chair Designed the two-phase RCR curriculum for MSTP students Wrote case studies for the "Introduction to RCR" curriculum Annual re-evaluation and update of the curriculum with Associate MSTP Director Larry Swift, Ph.D. and 4 member student committee
2007 - 2011	 Vanderbilt MSTP Student Advisory Committee (SAC) Appointed class representative by the MSTP Leadership Team 2007-2010; Ad Hoc Member 2011 as Career Development Workshop Chair Provides advice to the MSTP Leadership during monthly meetings about all aspects of program administration and curriculum Develops curricular enhancements and MSTP student recruitment
2007 - 2011	 Vanderbilt MSTP Community Outreach Committee Chair Chair 2010, Committee 2007-2009, Chair Emeritus 2011 Organized over 20 MSTP students in developing and running the Mini-MSTP Days event for over 100 local middle school students Coordinated MSTP student volunteering efforts for Vanderbilt's Center for Science Outreach including Boys Exploring Science and Technology Camp (BEST) and Girls and Science Camp (GAS)
2008-2009	 Vanderbilt MSTP M3 Transition Committee Worked with medical school administration and registrar to increase flexibility in the return from graduate training to the 3rd year of medical school for MSTP students
2008 - 2010	 Academic Medicine Interest Group Leader Planned informational talks and panels with invited guest speakers as part of Vanderbilt's <i>Careers in Medicine</i> program

2009	 Shade Tree Clinic Executive Director Selection Committee Invited to interview and select the Shade Tree Clinic Executive Directors at Vanderbilt based on prior service and volunteer record with the clinic
2008	 Editor-in-Chief, <i>The Paddle</i> Led over 50 medical students to update, write essays, develop new content and redesign Vanderbilt University School of Medicine's <i>Unofficial Guide</i>
2003 - 2006	 Campus Director, House and Neighborhood Development (HAND) Campus Director 2004-2006, Adams House Coordinator 2003-2006, Harvard Public Service Network Advisory Board representative 2004-2006 Led 12 undergraduate house coordinators in their house-wide volunteer mentoring and tutoring relationships with their paired local Cambridge elementary school and coordinated larger one-shot events like hosting a kids' haunted house and campus-wide clothing drive
2004 - 2006	 Ann Radcliffe Trust Faculty and Student Advisory Committee As WISHR (Women in Science at Harvard-Radcliffe) liaison, attended monthly meetings to discuss campus issues related to raising awareness of women's issues at Harvard and beyond As grant subcommittee member, awarded up to \$20,000 annually in grants to Harvard undergraduate student organizations to support initiatives that promote the development of Harvard women's leadership, community involvement, and visibility
2002 - 2006	 Captain, Harvard Intramurals Captain for Adams House volleyball team, played on basketball, soccer and crew teams Captain for Weld freshman soccer team, played on volleyball and basketball teams
2005	 Co-Director, National Symposium for the Advancement of Women in Science (NSAWS) Co-led 10 students in developing the second NSAWS, a two-day event with talks, panels, and workshops, bringing in leading women scientists from across the country for an audience of over 200 graduate, undergraduates and high school students NSAWS Logistics Committee member for the first NSAWS in 2003
2002 - 2005	 Vice-President, Women in Science at Harvard-Radcliffe (WISHR) On an executive board of 10 with over 1000 members that planned study breaks, Big/Little Sis mentorship program, coordinated a speakers series, provided community service opportunities, fundraised, and maintained alumni network Vice-President 2004-2005, Co-Chair of Community Service and Career Speaker's Series 2003-2004, member 2002-2003

2002 - 2005	 News Editor and Writer, Harvard Science Review Edited the news section, editorial board member, and contributing writer for the Harvard undergraduate science publication
2003 - 2005	 Editor-in-Chief, Journal of the Hippocratic Society Led an editorial board of 6 and design team of 2, which accepted articles from12-15 writers per issue for this twice annual publication of the Harvard-MIT Hippocratic Society, an undergraduate organization for students interested in health careers addressing scientific, socio-political, economic, legal and ethical arenas related to health through events and publications
2002 - 2004	 Public Relations Chair, Harvard-MIT Hippocratic Society Coordination publicity of events and annual conference across both Harvard and MIT campuses and the greater Boston area Chair of Public Relations Committee, prior Harvard Publicity Coordinator
SCHOLARSHIPS	S AND FELLOWSHIPS
2020-2021	 Center for Clinical and Translational Science TL1 Mentored Training Award The Ohio State University Awarded to post-doctoral investigators to support training of clinician- scientists who can lead the design and oversight of future clinical investigations critical to address the nation's biomedical, behavioral, and clinical needs. Funded through the National Center for Clinical and Translational Science and NIH Ruth L. Kirschstein National Research Service Award program.
2019	 Center for Clinical and Translational Science Research Award The Ohio State University Awarded to investigators to support core services to enable preliminary work and generate data for new or ongoing projects with the ultimate goal of furthering clinical and translational research
2012 - 2015	 Ruth L. Kirschstein National Research Service Award for Individual Pre-doctoral MD/PhD Fellowship National Heart Lung and Blood Institute Awarded to highly promising pre-doctoral students in a combined MD/PhD degree training program for support during their mentored dissertation research training and clinical training under the guidance of outstanding faculty sponsors
2011 - 2012	 Greater Southeast Affiliate Predoctoral Fellowship American Heart Association Awarded to full-time predoctoral students with superior scientific proposals and with excellent potential research careers in cardiovascular and stroke research
2010	 Vanderbilt Dissertation Enhancement Grant Vanderbilt Graduate School of Arts and Sciences Awarded to graduate students to enhance already outstanding dissertation projects by permitting the addition of a new dimension, additional breadth, or other worthwhile extensions

2007 - 2008	 Meade Haven M.D./Ph.D. Scholarship Vanderbilt University School of Medicine Awarded to support fully an outstanding Vanderbilt MD/PhD candidate
2005	 Harvard Stem Cell Institute Summer Internship Harvard University Awarded to support undergraduate students with a focused and challenging summer research experience in a cutting-edge stem cell science laboratory
2002 - 2006	 Senator Robert C. Byrd Honors Scholarship U.S. Department of Education Awarded to support and recognize exceptionally able high school seniors who show promise of continued excellence in postsecondary education
GRANTS AND AWA	RDS
2020	 Amyloidosis Foundation Junior Researcher Travel Grant Awarded to outstanding junior researchers presenting at the International Symposium on Amyloidosis
2018	 OSU PSTP APSA Travel Grant Awarded to PSTP trainee to represent OSU Physician Scientist Training Program at the American Physician Scientist Association Annual Meeting
2011 & 2013	 Vanderbilt MSTP Travel Grant Awarded to MSTP students presenting at a national scientific meeting
2011 & 2013	 Vanderbilt Graduate Student Travel Grant Awarded to select graduate students presenting at a national conference
2012	 Vanderbilt MSTP Keystone Grant Full support to represent Vanderbilt at the National M.D./Ph.D. Keystone Symposia awarded to an MSTP student with excellent scientific quality
2010	 Ellison Medical Foundation Grant Awarded to fully support students admitted to the Marine Biological Laboratory's <i>Molecular Biology of Aging</i> course in Woods Hole, MA
2006	 Adams House Arms Awarded to graduating seniors for outstanding service and citizenship to the Harvard Adams House community
2005	 Harvard Pre-Medical Institute Award Awarded to women in science to participate in the pilot year of summer pre-medical institute designed to engender medical literacy and inspire the next generation of medical scientist

NATIONAL AND STATE HONORS

2002	National Merit Scholar
2001 & 2002	AP Scholar with Distinction
2000	National Kodak Young Leaders Award Winner
2000, 2001, & 2002	President's Student Service Award
1999	Duke Talent Identification Program – National Recognition
1999 & 2001	Texas State Science Fair
	3 rd State, Microbiology
	2 nd Regional, Microbiology
	Honorable Mention Regional, Microbiology
	Special Award: Dallas County Dental Society
2001 & 2002	Scholar-Athlete & All-State Academic
2000 & 2002	Texas State Soccer Champions

LANGUAGES

Spanish – Proficient; French – Reading Knowledge; Ancient Greek – Basic

PUBLICATIONS

Campbell CM and Kahwash R. Will complement inhibition be the new target in treating COVID-19 related systemic thrombosis? Circulation, 2020 April.

Campbell CM, Cassol C, Cataland SR, and Kahwash R. Atypical Haemolytic Uremic Syndrome: A Case Report of a Rare Cause of Reversible Cardiomyopathy. European Heart Journal Case Reports, 2020 March 12.

Campbell CM, Abraham WT, and Kahwash R. Optimizer Smart in the treatment of moderate-to-severe heart failure. Future Cardiol. 2020 Jan;16(1):13-25. PMID: 318252245.

Uppal S, Liu J, **Campbell CM**, and Patel V. MINOCA: An Increasingly Recognized Group of MI Patients. October 24, 2019. American College of Cardiology - Continuing Medical Education Case. <u>http://www.acc.org</u>.

Campbell CM, Patel V, Uppal S, Liu J. Elevated Troponin and Reduced Ejection Fraction in Sepsis. January 14, 2019. American College of Cardiology - Continuing Medical Education Case. <u>http://www.acc.org</u>.

Yang Z, Prinsen JK, Bersell KR, Shen W, Yermalitskaya L, Sidorova T, Luis PB, Hall L, Zhang W, Du L, Milne G, Tucker P, George AL Jr, **Campbell CM**, Pickett RA, Shaffer CM, Chopra N, Yang T, Knollmann BC, Roden DM, Murray KT. Azithromycin Causes a Novel Proarrhythmic Syndrome. Circ Arrhythm Electrophysiol. 2017 Apr;10(4). PMID: 28408648

Bersell K, Montgomery JA, Kanagasundram AN, **Campbell CM**, Chung WK, Macaya D, Konecki D, Venter E, Shoemaker MB, and Roden DM. Partial duplication and Poly(A) insertion in KCNQ1 Not Detected by Next-Generation Sequencing in Jervell and Lange-Nielsen Syndrome, Circ Arrhythm Electrophysiol. 2016 Jun;9(6). PMCID: 27286732.

Campbell CM, Campbell JD, Thompson CH, Vanoye CV, George AL. Selective Targeting of a Gain-offunction KCNQ1 Mutations Predisposing to Atrial Fibrillation. Circ Arrhythm Electrophyiol. 2013. Oct;6(5):960-6. PMCID: 3892565 Potet F, Lorinc AN, Chaigne S, Hopkins CR, Venkataraman R, Stepanovic SZ, Lewis LM, Days E, Sidorov VY, Engers DW, Zou B, Afshartous D, George AL, **Campbell CM**, Balser JR, Li M, Baudenbacher FJ, Lindsley CW, Weaver CD, Kupershmidt S. (2012) Identification and characterization of a compound that protects cardiac tissue from human ether-a-go-go-related gene (hERG)-related, drug-induced Arrhythmias. J Biol Chem. 2012 Oct 2. PMCID: 23033485

Ungvari Z, Csiszar A, Sosnowska D, Philipp EE, **Campbell CM**, McQuary PR, Chow TT, Coelho M, Didier ES, Gelino S, Holmbeck MA, Kim I, Levy E, Sonntag WE, Whitby PW, Austad SN, Ridgway I. Testing Predictions of the Oxidative Stress Hypothesis of Aging Using a Novel Invertebrate Model of Longevity: The Giant Clam (*Tridacna Derasa*). J Gerontol A Biol Sci Med Sci. 2012 Aug 17 PMCID: 22904097

Ungvari Z.,* Ridgway I.,* Philipp E.E.,* **Campbell C.M.**, McQuary P., Chow T., Coelho M., Didier E.S., Gelino S., Holmbeck M.A., Kim I., Levy E., Sosnowska D., Sonntag W.E., Austad S.N., and Csiszar A. (2011) Extreme Longevity Is Associated With Increased Resistance to Oxidative Stress in *Arctica islandica*, the Longest-Living Non-Colonial Animal. J Gerontol A Biol Sci Med Sci, 66(7):741-50.

Jorge B.S.,* **Campbell C.M.**,* Miller A.R., Rutter E.D., Gurnett C.A., Vanoye C.G., George A.L., Jr., and Kearney, J.A. (2011) Voltage-gated potassium channel KCNV2 (KV8.2) contributes to epilepsy susceptibility. Proc Natl Acad Sci USA, 108:5443-5448. [*equal contribution]

De Sousa P., Fletcher J, **Campbell C.M.**, Harkness L., Ferrier T., and Gardner J. (2004) Human embryo stem cells: defining their attributes, cell culture requirements, and relevance to large animals. Anim Sci Pap Rep 22:107-118.

ORAL PRESENTATIONS

Campbell C.M., Kearney J.A., and George A.L. Electrophysiological Characterization of Kv8.2, a Candidate Genetic Modifier of Seizure Severity in the Scn2aQ54 Epilepsy Model. Vanderbilt Emphasis Forum, Nashville, TN; May 2009.

POSTER PRESENTATIONS

Campbell CM, Bumma N, Efebera Y, Sharma N, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, and Vallakati A.. High price and US insurance practices delay and limit access to Tafamidis for patients with transthyretin cardiac amyloidosis: A Single Center Experience. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Campbell CM, Mbeng CA, Rodgers B, Bumma N, Efebera Y, Sharma N, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, and Vallakati A. Orthopaedics History Preceding Diagnosis of Cardiac Amyloidosis: Timing and Variation by Subtype. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Campbell CM, Mbeng CA, Rodgers B, Bumma N, Efebera Y, Sharma N, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, and Vallakati A. Initiation of Cardiology Care in Cardiac Amyloidosis: A Single Center Experience. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Ozga M, Zhao Q, Benson D, Elder P, Williams N, Bumma N, Rosko A, Chaudhry M, Khan A, Devarakonda S, Kahwash R, Vallkati A, **Campbell CM,** Parikh S, Almaani S, Prosek J, Redder E, Efebera Y, and Sharma N. AL Amyloidosis: The Prognostic Impact of Cytogenetic Abnormalities on Organ Involvement and Survival, International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Ozga M, Zhao Q, Benson D, Elder P, Williams N, Bumma N, Rosko A, Chaudhry M, Khan A, Devarakonda S, Kahwash R, Vallkati A, **Campbell CM**, Parikh S, Almaani S, Prosek J, Redder E, Efebera Y, and Sharma N. AL Amyloidosis: Maintenance Therapy following Autologous Stem Cell Transplant (ASCT), International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Ozga M, Zhao Q, Benson D, Elder P, Williams N, Bumma N, Rosko A, Chaudhry M, Khan A, Devarakonda S, Kahwash R, Vallkati A, **Campbell CM**, Parikh S, Almaani S, Prosek J, Redder E, Efebera Y, and Sharma N. Development of a New Hybrid Staging System for AL amyloidosis: Incorporating BNP, Troponin, and dFLC in Patients with AL amyloidosis, International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Bumma N, Efebera Y, Sharma N, **Campbell CM**, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, Freimer M, Redder E, Kahwash R, Vallakati A, and LoRusso S. Feasibility of the combination of Tafamidis and mRNA interfering therapy in patients with transthyretin (ATTR) amyloidosis. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Bumma N, Efebera Y, Sharma N, **Campbell CM**, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, Vallakati A, and Parikh S. Renal outcomes in patients with AL amyloidosis undergoing autologous stem cell transplant who have achieved CR/VGPR. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Bumma N, Sharma N, **Campbell CM**, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, Vallakati A, and Efebera Y. Favorable outcomes with autologous stem cell transplant in AL amyloidosis patients with extensive organ involvement. International Symposium on Amyloidosis, Tarragona, Spain, September 2020.

Vedachalam S, Braga JR, Mben CA, Rodgers B, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Bumma N, Efebera Y, Kahwash R, Vallakati A, and **Campbell CM**. Distinct Electrocardiogram Findings of Cardiac Amyloidosis by Major Amyloid Type. Heart Rhythm Society Scientific Sessions, San Diego, CA, May 2020. (conference canceled)

Campbell CM, Foreman B, Sosh DL, Carter R, Lee VH, and Orsinelli DA. Timing and Yield of Long-term Cardiac Rhythm Monitoring for Atrial Fibrillation Detection in Embolic Stroke of Undetermined Source, American College of Cardiology Scientific Session, Chicago, March 2020.

Campbell CM, Foreman B, Sosh DL, Carter R, Lee VH, and Orsinelli DA. False Atrial Fibrillation Alerts from Implantable Loop Recorders in Patients with Embolic Stroke of Undetermined Source, American College of Cardiology Scientific Session, Chicago, March 2020.

Foreman B, **Campbell CM**, Carter R, Sosh DL, Orsinelli DA, and Lee VH. The Yield of Transthoracic and Tranesophageal Echocardiograms in Ischemic Stroke Work-up. American College of Cardiology Scientific Session, Chicago, March 2020.

Huang A, Janssen PML, Kahwash R, and **Campbell CM.** Memantine Is Associated with Decreased Hospital Admission for Heart Failure Exacerbation, But Not Arrhythmia: A Single-Center Study, American College of Cardiology Scientific Session, Chicago, March 2020.

Redder E, Bittengle J, Pfund K, **Campbell CM**, Bumma N, Sharma N, Parikh S, Almaani S, Prosek J, LoRusso S, Freimer M, Kahwash R, Vallakati A, and Efebera Y. Rehabilitation of the Amyloidosis Patient. National Comprehensive Cancer Network Annual Conference, Orlando, FL, March 2020. (conference canceled)

Hare A, Peczkowski KK, Fazlollahi F, Mashali M, Huang AW, Kiduko SA, Saad NS, Elnakish MT, **Campbell CM**, and Janssen PML. Positive Inotropic Response to (-)-Epigallocatechin-3-Gallate in Isolated Human Myocardium. Biophysics, San Diego, CA, February 2020.

Mashali M, Saad, NS, Canan BD, Elnakish MT, Chung JH, Kiduko SA, Peczkowski KK, Huang AW, Fazlollahi F, Hare A, **Campbell CM**, Mohler PJ, Kilic A, Whitson B, and Janssen PML. Etiology-dependent changes of force and kinetics in left ventricular end-stage failing human myocardium. Biophysics, San Diego, CA, February 2020.

Campbell CM, Mbeng CA, Rodgers B, Bumma N, Efebera Y, Sharma N, Parikh S, Almaani S, Prosek J, Bittengle J, Pfund K, LoRusso S, Freimer M, Redder E, Kahwash R, and Vallakati A. Delays in Diagnosis of Transthyretin Cardiac Amyloidosis after Establishing Cardiac Care. Advancing the Cardiovascular Care of the Oncology Patient, American College of Cardiology (ACC), Washington DC, February 2020. **Winner: Top Abstract in Clinical Science in Cardio-Oncology*

Campbell CM, Bumma N, Sharma N, LoRusso S, Redder E, Almaani S, Prosek J, Freimer M, Pfund K, Speiser M, Bittengle J, Dempsey J, Stino A, Kahwash R, Efebera Y, Parikh S, and Vallakati A. Untangling a Complex Web: Implementation of a Multidisciplinary Comprehensive Amyloidosis Clinic. Advancing the Cardiovascular Care of the Oncology Patient, American College of Cardiology (ACC), Washington DC, February 2020.

*Winner: Top Abstract in Feature Your Cardio-Oncology Program

Ozga M, Zhao Q, Benson D, Elder P, Williams N, Bumma N, Rosko A, Chaudhry M, Khan A, Devarakonda S, Kahwash R, Vallkati A, **Campbell CM**, Parikh S, Almaani S, Prosek J, Redder E, Efebera Y, and Sharma N. AL Amyloidosis: The Effects of Maintenance Therapy on Autologous Stem Cell Transplantation Outcomes. Annual Meeting, American Society of Hematology (ASH), Orlando, FL, December 2019.

Ozga M, Zhao Q, Benson D, Elder P, Williams N, Bumma N, Rosko A, Chaudhry M, Khan A, Devarakonda S, Kahwash R, Vallkati A, **Campbell CM**, Parikh S, Almaani S, Prosek J, Redder E, Efebera Y, and Sharma N. The Effect of Cytogenetic Abnormalities on Organ Involvement and Survival in Patients with AL Amyloidosis. Annual Meeting, American Society of Hematology (ASH), Orlando, FL, December 2019.

*Winner: ASH HONORS Resident Research Award

Campbell CM, Cassol C, Cataland ST, and Kahwash R. Atypical Hemolytic Uremic Syndrome: A Case Report of a Rare Cause of Reversible Cardiomyopathy. Presented at ACC-Ohio October 2019. **Winner: Best Case Report Presentation*

Vallakati A, **Campbell CM**, Tong M, Bumma N, Kahwash R, and Efebera Y. Targeted Therapeutics for Transthyretin amyloid cardiomyopathy: Time to Move Forward. Presented at Heart Failure Society of America Scientific Meeting 2019.

Campbell CM and Patel, V. Mobile pedunculated ventricular thrombi in young male with non-ischemic cardiomyopathy. Presented at ACC-Ohio October 2018.

Campbell CM, Afzal A, Amata, NP; Matre N, Dunham K, Blacke P, Patel D, Badin A, Godara H, Okabe T, Tyler J, Houmsse M, Kalbfleisch S, Weiss R, Hummel J, Daoud E, Augostini R. Venogram guided venous access reduces the risk of pneumothorax during implantation of cardiac implantable electronic devices. Presented at HRS May 2017.

Campbell C.M., Thompson C.H., Welch R.C., Vanoye C.G., and George A.L. Selective Block of a Gainof-Function KCNQ1 Mutation Associated with Familial Atrial Fibrillation. Gordon Conference on Cardiac Arrhythmia Mechanisms; Ventura, CA. Feb 2013. Yang Z., Chopra N., Knollmann B.C., George A.L., **Campbell C.M.**, Roden D.M., and Murray K.T. Electrophysiologic Effects of Azithromycin in Cardiomyocytes. Biophysical Society, Philadelphia, PA; Feb 2013.

Campbell C.M. and George A.L. Selective Block of a Gain-of-function KCNQ1 Mutation Associated with Familial Atrial Fibrillation. National MD, PhD Student Conference, Keystone, CO; July 2012.

Campbell C.M. and George A.L. Familial Atrial Fibrillation Mutation KCNQ1-S140G Exhibits Enhanced Sensitivity to Block by the I_{Ks} Selective Inhibitor HMR-1556. Cardiac Electrophysiological Society, Orlando, FL; Nov 2011.

Campbell C.M., Darbar D., Roden D.M., and George A.L. Electrophysiology of KCNE3 mutation linked to lone atrial fibrillation. Gordon Conference on Cardiac Arrhythmia Mechanisms; Galveston, TX. Feb 2011.

Campbell C.M., Kearney J.A., and George A.L. Electrophysiological Characterization of Kv8.2, a Candidate Genetic Modifier of Seizure Severity in the Scn2aQ54 Epilepsy Model. Vanderbilt Emphasis Forum, Nashville, TN; May 2009.

Keramari M., Fletcher J., **Campbell CM**, Gardner J., and De Sousa P. Expression of variant exons for CD44, the predominant receptor for hyaluronan in human embryonic stem cells. Scottish Stem Cell Network, Edinburgh, Scotland, UK; May 2005 and International Society for Stem Cell Research, San Francisco, CA; June 2005.