

Julia A. Moffitt, Ph.D.
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EDUCATION:

<u>Degree</u>	<u>Year</u>	<u>University</u>	<u>Department</u>	<u>Area of Study</u>
Ph.D.	1999	University of Missouri	Veterinary Biomedical Sciences	Physiology
M.A.	1993	University of Northern Iowa	Health Physical Education and Leisure Studies	Cardiac Rehabilitation
B.S.	1989	University of Louisiana Monroe	Kinesiology	Exercise Science
A.A.	1987	Three Rivers Community College	Physical Education	Physical Education

Additional non-degree education:

Certificate	2022	Massachusetts Institute of Technology	Data, Systems & Society	Applied Data Science
Certificate	2011	New England Biolabs / Smith College	Molecular Biology Bootcamp	Cellular & Molecular Biology
Postdoctoral Fellowship	2001	University of Iowa	Cardiovascular Center & Department of Psychology	Physiology, Pharmacology & Behavior

PROFESSIONAL EXPERIENCE:

2019-Present Dean, School of Health Sciences, Stephens College

- Chief academic and administrative officer, School of Health Sciences
- Teach Cardiovascular & Gastrointestinal Physiology; Master of Physician Assistant Studies
- Tenured Full-Professor (on-hold for administrative appointment)
- Maintain undergraduate research program in human cardiovascular research and data science projects related to human endurance performance

2017-2019 Professor & Chair, Department of Physiology Pharmacology & Pathology, Arkansas College of Osteopathic Medicine

- Lead and Managed Department of Physiology, Pharmacology and Pathology
- Recruited and hired all current faculty within the department
- Biomedical Sciences teaching: Cardiovascular Physiology, Exercise Physiology, Gastrointestinal Physiology, Neurophysiology 1st and 2nd year Osteopathic Medical Students
- Course Director: Biomedical Essentials of Comprehensive Osteopathic Medicine II (Fully integrative biomedical science course including physiology, pharmacology, microbiology and immunology)
- Committees & Task Force Membership
 - Student Professionalism Committee, Chair
 - Student Accommodations & Grievances Committee, Chair
 - Admissions Committee, Member
 - Sports Medicine Club, Faculty Advisor
 - Curriculum Committee, Member

- Evaluation Task Force Committee Member
- Master's in Biomedical Science Task Force Member
- Team Based Learning Task Force Sub-committee of Curriculum Committee
- Faculty Development Leadership/Presentations & Workshops:
 - Sept 2017: Using Pre-Recorded Lectures and Self-Assessment for Flipped Content
 - May 2018: Team Based Learning 101; 3-hour workshop
- 2015-2017 Professor & Chair, Department of Kinesiology, St. Ambrose University**
- 2016 Award of Tenure, St. Ambrose University**
- 2013-2015 Associate Professor & Chair, Department of Kinesiology, St. Ambrose University**
 - Lead and manage Kinesiology Department which houses 10 Full-time faculty, 1 part-time faculty, 1 administrative assistant, numerous adjunct faculty and serves approximately 400 undergraduate students majoring in Exercise Science, Human Performance and Fitness, Sport Management and Physical Education.
 - Courses Taught: Exercise Physiology, Exercise Physiology Laboratory, Exercise Pharmacology, Kinesiology, Core Conditioning
 - Developed and Taught the Advanced Physiology in the inaugural Master of Physician Assistant Studies Program, SAU
 - Developed all course materials and served as the course coordinator
 - Responsible for content and delivery of 64/75 lectures within the course including electrocardiography labs
 - Met with ARC-PA site visitors during provisional accreditation visits
 - Service:
 - Chair, Committee to Develop Master's in Exercise Physiology Program Proposal
 - Goal: Develop proposal for establishment of M.S. in Exercise Physiology, students entering Summer, 2017
 - Member, Wellness & Recreation Center Building Committee.
 - Goal: Screen and select design architect, guide decision making regarding construction of an 80,000 sq ft. \$18.5 million dollar wellness and recreation building to house campus recreation, Kinesiology and Athletics.
 - Member Departmental Wellness Passport Committee
 - Goal: Develop 2-year pilot to replace Wellness Concepts course with experience-based Wellness passport program.
 - Member of HLC Criterion 4 Subcommittee
 - Responsible for gathering evidence for sub-criterion 4a: The Institution demonstrates responsibility for the quality of its educational programs.
 - Faculty Finance Committee: Elected position College of Health and Human Services.
 - Review faculty salary recommendations and policies regarding compensation and benefits for the University faculty.
 - Ad-hoc committee to develop Safe Zone at SAU
 - Helped develop materials for Safe Zone trainings.
 - Helped administer Safe Zone training sessions as panel member, scenario facilitator & Ally training.
 - Attended Safe Zone Summit development training, University of Iowa, March 2015.
 - Chair, Departmental Faculty Search Committee
 - Successfully recruited and hired 3 full-time faculty over the 2013-2014 AY
 - Search Committee Member, Internal Search, Associate Dean CHHS
 - Ad-hoc committee member of the freshman advising working group

- Developed new initiative to advise freshmen KIN majors during first semester
- 2012-2013** **Tenured Associate Professor, Physiology and Pharmacology, Des Moines University**
- 2012** **Award of Tenure, Des Moines University**
- 2011-2012** **Associate Professor, Physiology and Pharmacology, Des Moines University**
- 2008-2011** **Assistant Professor, Physiology and Pharmacology, Des Moines University**
- Des Moines University teaching assignments 2008-2013:
 - 2010-2013 Medical Pharmacology (2nd Year, DO, DPM, PA)
 - 3 lectures (Antidepressants, Drugs of Abuse I&II)
 - 2010-2013 Pharmacology (Post-professional DPT Program)
 - Antidepressants
 - 2009-2013 Cardiovascular System (Cardiology, 2nd Year DO)
 - Chief Coordinator
 - 7 lectures (mechanisms of dysrhythmia, electrophysiology, shock, hypertension)
 - 2009-2013 Cardiorespiratory System (2nd Year, Podiatry)
 - 13 lectures (exercise physiology, electrocardiography, electrophysiology, cardiac mechanics, pathophysiology)
 - 2009-2013 Introduction to Physiology (1st Year, DO, DPM)
 - 14 lectures in introductory cardiovascular physiology for medicine
 - Electrocardiography laboratory coordinator
 - 2009 Special Topics in Physiology & Pharmacology (MBS, 1st Year)
 - 5 lectures (Arterial Baroreceptors)
 - 2008-2013 Respiratory System (Pulmonology, 2nd Year DO)
 - 1 lecture (Exercise Physiology)
 - 2008-2013 Cell Biology (MBS, 1st Year)
 - 5 lectures (Membranes and Ion Transport)
 - 2009-2013 Scientific Communication (MBS, 2nd Year)
 - Course coordinator
 - Weekly meetings, writing assignments
- University Service:
 - 2012-2013 Chair, Institutional Animal Care and Use Committee (IACUC)
 - 2012-2013 Physiology & Pharmacology Faculty Search Committee Member
 - 2012-2013 Physical Therapy Faculty Search Committee Member
 - 2012-2013 Strategic Planning Subcommittee: Educational Visioning
 - 2011-2013 Graduate Council Committee
 - 2010-2013 Chair, Biomedical Sciences Coordinating Committee
 - 2009-2013 Proxy for Student Professionalism and Education Committee (SPEC)
 - 2008-2013 College Osteopathic Medicine Admissions Interviewer
 - 2008-2013 College of Podiatric Medicine and Surgery Admissions Interviewer
 - 2011-2012 Chair, Physiology & Pharmacology Faculty Search Committee
 - 2009-2012 Institutional Animal Care and Use Committee (IACUC) Member
 - 2010-2011 Research Review Ad-Hoc Advisory Committee
 - 2009-2010 Financial Aid Committee
 - 2009 (Spring) Friday Research Seminar Series Coordinator
 - 2009-2010 Physiology & Pharmacology Faculty Search Committee Member
 - 2009 Co-Chair, Departmental Strategic Planning Committee
- University Student Services:
 - 2012- Present Sports Medicine Club Faculty Advisor
 - 2011-2012 Safe Zone Panel Member

2005-2009 Adjunct Assistant Professor, Department of Psychology, University of Iowa

- Maintained small integrative physiology lab within the larger laboratory of Dr. Alan Kim Johnson
- Managed all aspects of study implementation
- Provided consultation, guidance and support to undergraduate and graduate students
- Wrote manuscripts and prepared data for publication in scientific journals
- Wrote grants and applied for extramural funding

2007-2008 Visiting Assistant Professor, Department of Biology, Drake University

- Taught physiology courses within the Department of Biology and College of Pharmacy
 - Physiology (College of Pharmacy)/Mammalian Physiology Lecture (enrollment 205 Fall 2007; 100% responsible for design and delivery of all lecture content and course management).
 - Mammalian Physiology Laboratory (2-sections; 25 students each section; 100% responsible for design and delivery of all laboratory content and course management)
 - Research Seminar; Co-taught
 - Introductory Pre-Professional Biology: Physiology section (second 8 weeks); responsible for design and delivery of lecture content and laboratory content.
- Conducted independent research in the area of neural control and autonomic function
- Wrote manuscripts and prepared data for publication in scientific journals
- Wrote grants and applied for extramural funding

2004-2007 (2007-2008 On Leave) Assistant Professor, Department of Kinesiology, Cornell College

- Courses taught (Responsible for 100% content & delivery):
 - Human Anatomy with cadaver dissection
 - Systems Physiology, with laboratory
 - Anatomical Kinesiology with cadaver observation
 - Exercise Physiology
 - Nutrition
 - Exercise Testing and Prescription
 - Wellness Seminar
 - Biopsychology (50%; Team taught w/ Psychology Faculty)
- Led departmental and curricular reorganization toward establishment of Kinesiology Department including majors in Exercise Science and Physical Education Pedagogy
- Member of Dimensions Pre-Health Professions Committee 2004-Present
- Faculty Athletic Representative, IIAC, 2005-Present
- Member of Parking Appeals Committee 2005-Present
- Member of Instructional Technology Subcommittee 2005-2006
- Conducted independent research in the area of human exercise physiology
- Wrote manuscripts and prepared data for publication in scientific journals
- Wrote grants and applied for extramural funding

2003-2004, Senior Research Scientist, Guidant Corporation, Neural Stimulation Therapies

- Designed & conducted pre-clinical anatomical and physiological studies in sheep and swine
- Wrote protocols for implementation of studies
- Managed all aspects of study implementation

- Identification of and interaction with Key Opinion Leaders (KOLs) – academic physicians and scientists
- Statistically analyzed and interpreted data produced from scientific studies
- Generated novel intellectual property
- Created and presented oral and written medical and scientific communications – external and internal
- Attended scientific conferences and symposia related to content areas
- Generated written reports and publications summarizing results of scientific studies

2002-2007 Contract Scientific & Medical Writer, NAI, Inc.

- Edited scientific and medical manuscripts written by Japanese Scientists and Physicians for publication submission in peer-reviewed journals
- Reviewed for content, citation style, clarity of syntax, English usage
- Provided feedback and consultation regarding data visualization, figure/table generation

2001-2003 Assistant Professor, Department of Biology, Wartburg College

- Courses Taught:
 - Mammalian Anatomy & Physiology I, II Lecture & Laboratory
 - Research Methods
 - Student Research
- Mentored the design and implementation of research projects by undergraduate students
- Wrote, published and presented abstracts and manuscripts at national meetings
- Served as pre-medicine academic advisor
- Conceived, designed, and implemented pre-medicine academic advising website
<http://www.wartburg.edu/biology/premedsite/>
- Chaired Instructional Resources Subcommittee 2002-2003
- Member Instructional Resources Subcommittee 2001-2002

Summer 2002 Visiting Research Scientist, Department of Psychology, University of Iowa

- Designed scientific research studies and wrote protocols for implementation of studies
- Managed all aspects of study implementation
- Statistically analyzed and interpreted data produced from scientific studies
- Provided consultation, guidance and support to graduate students
- Wrote manuscripts and prepared data for publication in scientific journals

2000-2001 Adjunct Professor, Anatomy & Physiology, Kirkwood Community College

- Taught Human Anatomy & Physiology II Lecture – Emphasis on systems physiology
- Taught Human Anatomy & Physiology II Laboratory – Emphasis on human cadaver dissection

1999-2001 Postdoctoral Fellow, Department of Psychology/The Cardiovascular Center, University of Iowa

- Conducted integrative physiological experiments within the laboratory of Dr. Alan Kim Johnson
- Designed scientific research studies and wrote protocols for implementation of studies
- Statistically analyzed and interpreted data produced from scientific studies
- Provided consultation, guidance and support to undergraduate and graduate students
- Wrote manuscripts and prepared data for publication in scientific journals

1996-1999 Graduate Teaching and Research Assistant – Department of Veterinary Biomedical Sciences, University of Missouri

- Conducted integrative physiological experiments with the laboratory of Dr. Eileen M. Hasser
- Served as teaching assistant to selected Veterinary Physiology laboratory sessions
- Completed Doctoral Dissertation: *“Effects of Hindlimb Unloading on Baroreflex Function”*

1993-1996 Graduate Teaching and Research Assistant – Department of Health & Exercise Sciences, University of Missouri

- Served as graduate research assistant to Dr. Ben R. Londeree
- Served as physical assessment laboratory manager
- Taught Personal Fitness, Exercise Physiology Laboratory & Selected Exercise Physiology lectures

1992-1993 Graduate Teaching and Research Assistant – Department of Health, Physical Education and Leisure Studies, University of Northern Iowa

- Served as graduate assistant in Phase III Cardiac Rehabilitation program, UNI
- Taught Personal Fitness, Weight Training

1990-1992 Head Volleyball, Assistant Women’s Basketball Coach, Upper Iowa University

- Adjunct Instructor, Physical Education Department: Taught Theory of Coaching Volleyball
- Directed all aspects of the Women’s Volleyball program including budgeting, scheduling, recruiting and assisted with all aspects of the Women’s Basketball program

CERTIFICATIONS

CPR & First Aid	American Red Cross
Exercise Physiologist	American College of Sports Medicine Certification# 1044696
RRCA Coaching Certification	Road Runners Coaches Association
TBL Fundamentals	Team Based Learning Collaborative
TBL Consultant/Trainer	Certified Team Based Learning Trainer-Consultant

HONORS & AWARDS:

2018	Faculty of the Month, January 2018, ARCOM Student Government Association
2017	Keynote Speaker, Oklahoma Society of Physiologists, August, 2017
2014	Keynote Speaker, Iowa Physiological Society, Joint IPS/MPS meeting, Kansas City, MO
2012	Star Reviewer Recognition, American Journal of Physiology – Regulatory, Integrative and Comparative Physiology.
2012	College of Osteopathic Medicine: Dean’s Award for Teaching Excellence
2012	College of Podiatric Medicine and Surgery: Basic Sciences Teacher of the Year Award
2011	Research Career Enhancement Award: American Physiological Society
2007	Young Investigator Award, Iowa and Nebraska Physiological Society
2006	Dimensions Faculty Travel Award
2004	Patent Application of the Year, Guidant Corporation, Co-Inventor
2003	Finalist - John O. Chellevold Student Award for Teaching Excellence and Professional Service, Wartburg College
2000	Winter Neuropeptide Conference Postdoctoral Travel Award

1999	Iowa Cardiovascular Center Institutional Postdoctoral Fellowship
1999	Proctor & Gamble Professional Opportunity Award
1997	ACSM regional graduate student research award

PROFESSIONAL ORGANIZATIONS:

1995-Present	American Physiological Society
2006-Present	American College of Sports Medicine (ACSM)
2007-2015	Iowa Physiological Society
2009-2012	Iowa Academy of Sciences
2009-2012	International Autonomic Society
2003-2004	American Medical Writers Association
2001-2002	Society of Experimental Biology and Medicine
2000-2002	International Shock Society
1995-1999	American College of Sports Medicine (ACSM)

PROFESSIONAL ACTIVITIES:

2012	Ad-hoc reviewer, Neuroscience
2012	Ad-hoc reviewer, Neurochemistry International
2011-2015	Editorial Board, Frontiers in Integrative Physiology
2010-2013	Editorial Board, American Journal of Physiology – Reg. Int. Physiology
2011	Ad-hoc reviewer, Stress
2010-2012	Chapter Advisory Committee, American Physiological Society
2012-2016	Advisory Board, Iowa Physiologic Society
2010-2012	President, Iowa Physiologic Society
2009-2010	President-elect, Iowa Physiological Society
2009	Ad-hoc reviewer, Physiology & Behavior
2009	Ad-hoc reviewer, Journal of Behavioral Medicine
2008	Ad-hoc reviewer, Journal of Applied Physiology
2007	Ad-hoc reviewer, American Journal of Physiology – Reg. Int. Comp. Physiology
2007	Ad-hoc reviewer, British Journal of Nutrition
2005-2007	Scientific Advisory Board, Guidant Corporation/Boston Scientific
1999-Present	Ad-hoc reviewer, American Journal of Physiology – Heart Circ. Physiology

CONTINUING EDUCATION, TRAINING & FACULTY DEVELOPMENT:

2018	Team Based Learning Collaborative Consultant-Trainer Development Program
2017	Team Based Learning Collaborative Annual Meeting, Orlando FL
2012	Making a Difference in Student Learning: Assessment as a Core Strategy, St. Charles, IL
2012	Academy for Academic Leadership, Emory University, Atlanta, GA
2011	IACUC 101, Des Moines, IA
2011	Iowa Network for Women in Higher Education: The Way Up XXV Annual Conference, West Des Moines, IA
2011	New England Biolabs Molecular Biology Bootcamp, Northampton, MA
2007	IRB 250 At Your Doorstep, PRIM&R, Des Moines, IA
2006	ADInstruments-PowerLab Instructional Technology Workshop, Chicago, IL
2005	Radiotelemetry Course, Data Sciences International, Minneapolis, MN

PUBLIC SERVICE

2020	Missouri Health Occupations Society of America – Board Member
2020	Missouri Health Occupations Society of America – Judge, Annual Meeting
2019	Missouri Health Occupations Society of America – Judge, Annual Meeting
2018	Zonta Career Fair – Darby Middle School, Ft. Smith AR; STEM careers for girls
2017	Zonta Career Fair – Darby Middle School, Ft. Smith AR; STEM careers for girls
2016	Girls On The Run – Executive Board Member, 5K Committee Member
2015	Girls On The Run – Executive Board Member, 5K Committee Member
2014	Girls On The Run – 5K Committee Member
2013	Team RWB – Helping veterans connect to the community through physical activity
2014	Girls On The Run – Volunteer Head Coach, Mark Twain Elementary
2013	Girls On The Run – Volunteer Assistant Coach, Mark Twain Elementary
2012	Girls On The Run – Running Buddy, Mark Twain Elementary
2010-2013	YESMed Summer Research Program for HS Students – Des Moines University
2010	George Washington Carver Science Program – Des Moines University
2001-Present	ECG Demonstration talks to elementary & high school students

INVITED TALKS/LECTURES:

2020	Stephens College 1 st Annual School of Health Sciences Research Conference. Keynote Speaker: <i>“Adventures in autonomies: Over 20 years of engaging students in research using ground-based models of microgravity deconditioning and exercise training.”</i>
2018	Iowa State University, Department of Veterinary Biomedical Sciences: <i>“The Neurocardiac Axis in Health and Disease”</i> .
2017	Oklahoma Society of Physiologists, Tulsa Chapter of the Society for Neuroscience and Tulsa Area Bioscience Education & Research Consortium joint regional meeting: Keynote Speaker: <i>“The Neurocardiac Axis in Health and Disease”</i> .
2017	P.E.O. Women empowering Women Group Speaker: <i>Chart Your Course: 4 Tips for Navigating a Successful Career in Academics (or just about anything....)</i>
2014	Iowa/Missouri Physiological Society Joint Meeting: IPS Keynote Speaker: <i>“Changes in the arrhythmic vulnerability of the heart with exercise training status: The cardiac connexin connection?”</i>
2013	St. Ambrose University CHHS Scholarship Colloquium: <i>“Cardiovascular deconditioning, depression and cardiac arrhythmias: Mechanisms and targets.”</i>
2013	Des Moines University Research Seminar: <i>“Does Utilizing Pre-recorded ECG Camtasia Material and Formative Assessments Improve Summative Exam Performance”</i> (IRB ID: 03-12-03)
2013	DMU Sports Medicine Conference – Healthcare Perspective’s for Today’s Runner: <i>“Hydration Strategies for Health & Performance”</i>
2013	Grandview University: <i>“Cardiovascular deconditioning, depression and cardiac arrhythmias: Mechanisms and targets.”</i>
2012	Drake University Undergraduate Science Collaborative Institute (DUSCI): <i>“Cardiovascular deconditioning, depression and cardiac arrhythmias: Mechanisms and targets.”</i>
2012	DMU Podiatric Sports Medicine Club Presentation: <i>“Running Hot and Cold: Thermoregulation and Peak Endurance Performance.”</i>
2012	Northern Illinois University, <i>“Cardiovascular deconditioning, depression and cardiac arrhythmias: Mechanisms and targets.”</i>

- 2011 DMU Research Symposium: *"Hindlimb unloading results in an increased predisposition to cardiac arrhythmias and changes in left ventricular connexin43 expression."*
- 2011 Science Center of Iowa, Body Worlds exhibit lecture to young professionals: *"It takes heart: The cardiovascular system of athletes."*
- 2011 Science Center of Iowa, Body Worlds exhibit lecture to medical professionals: *"Exe(Rx)cise: Your best antihypertensive drug."*
- 2011 Symposium: The Autonomic Nervous System in Health and Disease", National Experimental Biology Conference, Washington D.C. *"Cardiovascular deconditioning in rats results in anhedonia, sympathovagal imbalance and increased predisposition to cardiac arrhythmias."* 30 minute oral session
- 2011 Research Seminar, Des Moines University Friday Seminar Series. *"Cardiovascular deconditioning in rats results in anhedonia, sympathovagal imbalance and increased predisposition to cardiac arrhythmias."*
- 2011 DMU Preventative Medicine Club Presentation: *"Exe(Rx)cise: Your best antihypertensive drug."*
- 2010 *"The effects of hindlimb unloading on sympathovagal balance and hedonic behaviors"*. FASEB Summer Research Conference, Neural Mechanisms in Cardiovascular Regulation, Saxtons River, VT.
- 2010 Special Topic *"Brain and Behavior in Health and Disease"*, National Experimental Biology Conference, Anaheim, CA. *"Anhedonia and autonomic imbalance in an animal model of deconditioning."* 30 minute oral session.
- 2009 Research Seminar, The University of Iowa, Dept. of Integrative Physiology. *"The neurocardiac axis in health and disease."*
- 2009 Research Seminar, A.T. Still University, -Kirksville College of Osteopathic Medicine. *"The neurocardiac axis in health and disease."*
- 2009 Parent's Day / Orientation, Des Moines University
"The Athletic Heart."
- 2009 Guest lecturer, Dept. of Biology, Simpson College
"Cardiovascular disease in women."
- 2009 Research Seminar, Dept. of Veterinary Biomedical Sciences, University of Missouri
"The neurocardiac axis in health and disease."
- 2009 Research Seminar, Dept. of Kinesiology, Iowa State University
"The neurocardiac axis in health and disease."
- 2009 Mini-Medical School, Des Moines University
"The Athletic Heart."
- 2008 Research Seminar Series, Drake University
"The neurocardiac axis in health and disease."
- 2007 Invited lecturer, Exercise Psychology, Cornell College
"Neural mechanisms in exercise."
- 2006 Science Interest Group (SIG) Lecture, Cornell College
"The neurocardiac axis in health and disease."

CONSULTING

- 2012-2013 Ethicon Endo-Surgery, Johnson & Johnson: Neurostimulation
- 2011-2013 Boston Scientific CRM: Neurostimulation
- 2006-2007 Guidant Corporation: Neurostimulation
- 2003 Guidant Corporation: Neurostimulation

POSTER/STUDENT PRESENTATIONS & ABSTRACTS

Moffitt, JA and Call, G.L. (2021) Women pace better than men in a 100-mile distance running race. MSSE, Vol. 53, Iss. 8S – p 33, August, 2021. Presented at the American College of Sports Medicine Annual Meeting. https://journals.lww.com/acsm-msse/Fulltext/2021/08001/Women_Pace_Better_Than_Men_In_A_100_mile_Distance.108.aspx

Stevens, R; Pham, MG; Le, AV; and **Moffitt, JA** (2019) "CHANGES IN HEART RATE VARIABILITY PARAMETERS DURING EXERCISE DO NOT RELIABLY PREDICT CHANGES IN CARDIAC AUTONOMIC TONE DURING EXERCISE," *International Journal of Exercise Science: Conference Proceedings*: Vol. 11 : Iss. 7 , Article 36. Available at: <https://digitalcommons.wku.edu/ijesab/vol11/iss7/36>

Moffitt JA and Gustafson JM. Method for administering and facilitating a gallery walk using Team Based Learning methods in a large-group format within a first-year medical school course. Team Based Learning Collaborative Annual Meeting, Orlando FL, March, 2019. Nominated for research award.

Thomas E, Baumgarten D and **Moffitt JA**. Effects of a novel wellness curriculum on self-assessed wellness of first-year college students of the course of an academic year. Midwest ACSM, Nov 2018.

Blackwell JA, Peters AN, Tecklenburg-Lund, S and **Moffitt JA**. The accuracy of maximal oxygen consumption prediction from Garmin GPS watch technology. Midwest ACSM, Nov 2018.

Pham M, Fotopoulos T, **Moffitt JA**. The effects of osteopathic manipulative treatment on cardiac autonomic tone. Arkansas College of Osteopathic Medicine, Student Research Symposium, July 2018.

Blackwell JA, Lund ST and **Moffitt JA**. An Environmental Comparison of Maximal Oxygen Consumption Validity in the Garmin Forerunner 630. St. Ambrose University Student Research, May 2017

Masterson CM, Finnerty EP and **Moffitt JA**. Does Utilizing Pre-recorded ECG Camtasia Material and Formative Assessments Improve Summative Exam Performance? Des Moines University, 2013.

Thomas, EG, Firkins, RM, Henry MK, and **Moffitt JA**. Increased arrhythmogenesis and expression of left ventricular pS369-Connexin43 following acute myocardial ischemia in female ovariectomized rats. DMU Research Symposium, December 2012.

Kadow ZA, Jepson AJ, Firkins RM, Davenport AN, Henry, MK, and **Moffitt JA**. Moderate intensity exercise training reduces the incidence of supraventricular arrhythmias and increases atrial Connexin40 expression in young and aged rats. DMU Research Symposium, December 2012.

Note: Zach Kadow was awarded an American Physiological Society Summer Undergraduate Research Fellowship for his work in my laboratory and was co-mentored by myself and Dr. Matthew Henry. Zach was one of only 6 nationally recognized winners of this award.

Jepson, AJ, Garnett ER, Davenport AN, Firkins RM, Kadow ZA, Henry MK and **Moffitt JA**. The effects of exercise training on cardiac arrhythmias and left ventricular connexin43 expression in aged and young rats. DMU Research Symposium, December 2012.

Firkins RM, Dotson A, McNeal N, Schultz R, Scotti ML, Wardewell J, Henry MK, **Moffitt JA** and Grippo AJ. Effects of social isolation on connexin43 expression in the left ventricle of female prairie voles. DMU Research Symposium, December 2012.

Mulvey J, Firkins RM, **Moffitt JA**, and Henry MK. Daily spontaneous running decreases phosphorylation of left ventricular connexin43 at pathological sites in female Sprague-Dawley rats. DMU Research Symposium, December 2012.

Jepson, AJ, Davenport A, Kadow, Z, Firkins, RM, Henry MK and **Moffitt JA**. Exercise Training Reduces the occurrence of cardiac arrhythmias and changes the pattern of left ventricular connexin 43 expression in aged rats. Poster Presentation, Iowa Physiologic Society, September 2012. *1st Place Graduate Student Poster Competition Winner

Senkler, J, Firkins RM, **Moffitt JA**, and Henry MK. Cx43 mRNA Extraction and RT-PCR from Rat Left Ventricle. Poster Presentation, Iowa Physiologic Society, September 2012.

Mulvey, J, Firkins, RM, Ehlers K, **Moffitt JA** and Henry MK. Cardiovascular conditioning status impacts the phosphorylation pattern of connexin 43. Poster Presentation, Iowa Physiologic Society, September 2012.

Jarrett, E, Firkins, RM, Henry MK and **Moffitt JA**. Ovariectomy induces increased arrhythmogenesis and expression of pS368-connexin 43 in response to acute myocardial ischemia. Poster Presentation, Iowa Physiologic Society, September 2012.

Jepson, AJ, Davenport A, Kadow, Z, Firkins, RM, Henry MK and **Moffitt JA**. Exercise Training Reduces the occurrence of cardiac arrhythmias and changes the pattern of left ventricular connexin 43 expression in aged rats. Poster Presentation, DMU Summer Research Symposium, July 2012.

Senkler, J, Firkins RM, **Moffitt JA**, and Henry MK. Cx43 mRNA Extraction and RT-PCR from Rat Left Ventricle. Poster Presentation, DMU Summer Research Symposium, July 2012.

Jepson AJ, Garnett ER and **Moffitt JA**. Exercise training decreases the occurrence of cardiac arrhythmias in young and aged rats. Poster Presentation, DMU Research Day, December 2011.

Patel PN, **Moffitt JA**, Firkins RM, Welliver KC. Effects of vagus nerve stimulation on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Poster Presentation, Iowa State University Neuroscience Research Day, October, 2011.

Jepson AJ, Garnett ER and **Moffitt JA**. Exercise training decreases the occurrence of cardiac arrhythmias in young and aged rats. Poster Presentation, Iowa-Nebraska Physiologic Society, October 2011.

Jepson AJ, Garnett ER and **Moffitt JA**. Exercise training decreases the occurrence of cardiac arrhythmias in young and aged rats. Oral Presentation, Iowa Academy of Sciences, April 2011.

Garnett ER, Welliver, KC, Jepson AJ and **Moffitt JA**. Analysis of an exercise countermeasure to hindlimb unloading in rats. Poster presentation. Drake University Conference on Undergraduate Research in the Sciences, Des Moines IA, April, 2011.

Welliver KC, Jepson AJ, Nawrocki LD, Garnett ER, Henry, MH and **Moffitt JA**. Hindlimb unloading results in increased predisposition to cardiac arrhythmias and changes in left ventricular connexin43 expression. Iowa Physiological Society Annual Meeting, Des Moines, IA October, 2010. *2nd Place Graduate Student Poster Competition

Moffitt JA, Firkins RM, Welliver KC, Patel PN. Effects of vagus nerve stimulation on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Poster Presentation, International Society of Autonomic Neuroscience Annual Meeting, Sydney Australia, September, 2009.

Stromberg K, Hansen R, Jepson AJ, **Moffitt JA**. The effects of vagus nerve stimulation on the threshold for electrically induced ventricular arrhythmias in the rat. Oral Presentation, DMU Summer Student Research Closing Program, July 2009.

Firkins RM, Patel PN, Welliver KC, **Moffitt JA**. Effects of vagus nerve stimulation (VNS) on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Poster Presentation, Iowa Physiologic Society Annual Meeting, Des Moines IA, May, 2009. *Undergraduate Trainee Award

Welliver KC, Davis CG, Beltz TG, Xue B, Johnson, AK, **Moffitt JA**. The effects of acute myocardial infarction on heart rate variability parameters recorded in freely moving conscious rats. Poster Presentation, Iowa Physiologic Society Annual Meeting, Des Moines IA, May 2009

Firkins RM, Patel PN, Welliver KC, **Moffitt JA**. Effects of vagus nerve stimulation (VNS) on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Poster Presentation, Iowa Academy of Sciences Annual Meeting, Des Moines IA, April, 2009.

Firkins RM, Patel PN, Welliver KC, **Moffitt JA**. Effects of vagus nerve stimulation (VNS) on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Oral Presentation, Drake University Conference on Undergraduate Research in the Sciences, Des Moines IA, April, 2009.

Firkins RM, Patel PN, Welliver K, **Moffitt JA**. Effects of vagus nerve stimulation (VNS) on the threshold and incidence of aconitine-induced cardiac arrhythmias in the anesthetized rat. Poster Presentation, Des Moines University Research Symposium, April, 2009.

Firkins R, Christian S, Patel P, Peterson J, Gray J, Dutta A, Johnson AK, **Moffitt JA**. Acute, intact right vagus nerve stimulation (VNS) elicits reductions in heart rate (HR) and afferent mediated inhibition of sympathetic nervous system activity (SNA) in anesthetized rats. Poster Presentation, Drake University Conference on Undergraduate Research in the Sciences, Des Moines IA, April, 2008.

Jepson AJ, Decker E, **Moffitt JA**. Acute moderate sleep deprivation attenuates physiological and psychological function at rest and during exercise. Oral Presentation, Cornell College Student Symposium, April, 2008.

Decker E, Jepson AJ, **Moffitt JA**. Effects of acute moderate sleep deprivation on exercise performance. Cornell Student Symposium, April, 2007.

FUNDING:

2008-2013 Iowa Osteopathic Education and Research Fund. Start Up funding, Des Moines University \$98,289

2005-2006 Guidant Corporation via The University of Iowa. Effects of autonomic nervous system stimulation on cardiovascular function. \$137,174. Co-Principal Investigator

2002-2003 Wartburg College Academic Partners Grant

Mechanisms Responsible for Hypertonic Saline Resuscitation Following Hemorrhage.
\$1958.90 Faculty Sponsor

2002-2003 McElroy Student/Faculty Research Grant
Relationship between Serotonin and L-Dopa in the Hypothermic Response and Anxiety Behaviors. \$1663.00 Faculty Sponsor

2000-2002 US Navy/Department of Defense
Receptors, Afferent Signaling and Central Integration in Compensated and Uncompensated Hemorrhagic Shock. \$321,428 Co-Principal Investigator

1999-2001 Cardiovascular Interdisciplinary Research Fellowship, University of Iowa
Brain Serotonin Systems and Cardiovascular Deconditioning.
A. Kim Johnson, Ph.D., Sponsor

1998-1999 American Heart Association - Missouri Affiliate Pre-doctoral Fellowship
Central Neurotransmitter Mechanisms in Cardiovascular Deconditioning
Eileen M. Hasser, Ph.D., Sponsor

Unfunded:

2011-2014 National Institutes of Health, Academic Research Enhancement Award (R15).
Autonomic Mechanisms Underlying Cardiovascular Disease and Depression in Rats.
Priority Score: 30, funding line 25. \$445,497. Principal Investigator.

2009-2011 American Heart Association – Midwest Affiliate, Grant-In-Aid. Using the Hindlimb Unloaded Rat Model to Investigate the Autonomic Link Between Cardiovascular Disease and Depression. \$142,052. Principal Investigator.

2009-2010 The University of Iowa. Thiamine Deficiency Mediated Neurotoxicity of the Heart and Brain: Implications for Understanding the Pathophysiology of Anorexia Nervosa”
\$9,270.00. Sub-contractor.

2004-2005 National Science Foundation, Course, Curriculum and Laboratory Improvement (CCLI) Grant. Exploring interdisciplinarity through inquiry-based experiences in biopsychology.
\$146,500. Co-Principal Investigator.

2002-2007 National Science Foundation, CAREER- Award. Establishing an Inquiry-Based Learning Program in Cardiovascular Neurobiology for Undergraduates. \$605,652. Principal Investigator.

2000-2003 National Aeronautics and Space Administration. Brain 5-HT Mechanisms and Impaired Sympathetic Function in Hypovolemic States. \$350,000. Co-Investigator.

PUBLICATIONS:

Peer reviewed journal articles and book chapters:

J.A. Moffitt and G. Call. Retrospective analysis of pacing in a 100-mile ultramarathon endurance run: influence of sex, age and performance. *In Revision*

J.A. Moffitt, A.J. Jepson and E.S. Decker. Acute moderate sleep deprivation results in reduced heart rate variability, disordered mood, and increased heart rate response to submaximal exercise. *In Revision*

A.J. Grippo, **J.A. Moffitt**, M.K. Henry, R.M. Firkins, A. Dotson, N. McNeal, R. Schultz, M.L. Scott, J. Wardwell. Altered Connexin 43 and Connexin 45 protein expression in the heart as a function of social and environmental stress in the prairie vole. *Stress* 18(1): 107-114, 2015.

J.A. Moffitt, M.K. Henry, K.C. Welliver A.J. Jepson and E.R. Garnett. Hindlimb unloading results in increased predisposition to cardiac arrhythmias and alters left ventricular connexin43 expression. *Am. J. Physiol. Reg. Int. Comp. Physiol.* 304(5): R362-73, 2013.

A.J. Grippo, **J.A. Moffitt**, A. Sgifofo, A.J. Jepson, S.L. Bates, D.L. Chandler, N. McNeal, and K. Preihs. The integration of depressive behaviors and cardiac dysfunction during an operational measure of depression: investigating the role of negative social experiences using an animal model. *Psychosom. Med.* 74: 612-619, 2012.

J.A. Moffitt. Editorial Focus: Role for neural growth factor in autonomically driven arrhythmogenesis? Focus on: "Structural neuroplasticity following T5 spinal cord transection: increased cardiac sympathetic innervation density and SPN arborization". *Am. J. Physiol.: Reg. Int. Comp. Physiol.* 299(4): R983-4, 2010.

J.A. Moffitt, A.J. Grippo, T.G. Beltz and A.K. Johnson: Hindlimb unloading elicits anhedonia and sympathovagal imbalance. *J. Appl. Physiol.* 105(4): 1049-1059, 2008.

A.J. Grippo, **J.A. Moffitt** and A.K. Johnson: Evaluation of baroreceptor reflex function in the chronic mild stress rodent model of depression. *Psychosom. Med.* 70(4): 435-443, 2008.

A.J. Grippo, **J.A. Moffitt**, T.G. Beltz and A.K. Johnson: Reduced hedonic behavior and altered cardiovascular function induced by mild sodium depletion in rats. *Behavioral Neurosci.* 120(5): 1133-43, 2006.

H.M. Stauss, **J.A. Moffitt**, M.W. Chapleau, F.M. Abboud and A.K. Johnson: Baroreceptor reflex sensitivity estimated by the sequence technique is reliable in rats. *Am J Physiol Heart Circ Physiol.* Jul; 291(1): H482-3, 2006.

J.A. Moffitt, A.J. Grippo, and A.K. Johnson: Baroreceptor reflex control of heart rate in rats studied by induced and autogenic changes in arterial pressure. *Am J Physiol Heart Circ Physiol.* 2005 May;288(5):H2422-30. Epub 2005 Jan 6

M.J. Sullivan, E.M. Hasser, **J.A. Moffitt**, and S.B. Bruno, J.T. Cunningham: Rats exhibit aldosterone-dependent sodium appetite during 24 h hindlimb unloading. *J. Physiol.* Jun 1;557(Pt 2):661-70, 2004.

J.A. Moffitt and A.K. Johnson: Short-term fluoxetine treatment enhances baroreflex control of sympathetic nervous system activity. *Am. J. Physiol: Heart Circ. Physiol.* 286(3): R584-590, 2004.

J.A. Moffitt, A.J. Grippo, P.V. Holmes, and A.K. Johnson: Olfactory bulbectomy attenuates cardiovascular sympathoexcitatory reflexes in rats. *Am. J. Physiol: Heart Circ. Physiol.* 283: H2575-H2583, 2002.

J.A. Moffitt, C.M. Heesch, and E.M. Hasser: Increased GABAA inhibition of the RVLM following hindlimb unloading in rats. *Am. J. Physiol.: Reg. Int. Comp. Physiol.* 283: R604-614, 2002.

A.J. Grippo, **J.A. Moffitt**, and A. K. Johnson: Cardiovascular alterations and autonomic imbalance in an experimental model of depression. *Am. J. Physiol.: Regulatory Integrative Physiol.* 282: R1333-R1341, 2002.

E.M. Hasser and **J.A. Moffitt**: Regulation of sympathetic nervous system function after cardiovascular deconditioning. In: *Neuro-cardiovascular regulation: From molecules to man*. Eds. M.W. Chapleau, F.W. Abboud. *Annals of the New York Academy of Sciences*. Volume 940, 454-468, 2001

J.A. Moffitt, J.C. Schadt, and E.M. Hasser: Altered central nervous processing of baroreceptor input following hindlimb unloading in rats. *Am. J. Physiol.* 277 (Heart Circ. Physiol. 46) H2272-H2279, 1999.

C. M. Foley, **J.A. Moffitt**, M. Hay, and E. M. Hasser: Glutamate in the nucleus of the solitary tract activates both ionotropic and metabotropic glutamate receptors. *Am. J. Physiol.* 275 (Regulatory Int. Comp. Physiol 44): R1858-R1866, 1998.

J. A. Moffitt, C.M. Foley, J.C. Schadt, M.H. Laughlin, and E.M. Hasser: Attenuated baroreflex control of sympathetic nerve activity after cardiovascular deconditioning in rats. *Am. J. Physiol.* 274 (Regulatory Int. Comp. Physiol. 43): R1397-R1405, 1998.

B.R. Londeree, **J. Moffitt**-Gerstenberger, J.A. Padfield, and D. Lottmann: Oxygen consumption of cycle ergometry is nonlinearly related to work rate and pedal rate. *MSSE* 29(6): 775-780,1997.

Published abstracts:

J.A. Moffitt and G.L. Call. Women pace better than men in a 100-mile distance running race. *MSSE* 53(8S):33, August 2021. Presented at the annual ACSM meeting, virtual, June, 2021.

J.A. Moffitt, E.G. Thomas, R.M. Firkins, J.G. Senkler, and M.K. Henry. Exercise training results in reduced arrhythmic burden and a decrease in the expression of connexin43 phosphorylation at serine 368 in response to acute myocardia ischemia. (2457), *MSSE* S512 46(5), 2014. Presented at the annual ACSM meeting, Orlando, FL May, 2014.

Z. Kadow, A. Jepson, R. Firkins, A. Davenport, M. Henry and **J. Moffitt** The effects of moderate intensity exercise training on the incidence of supraventricular arrhythmias and atrial connexin40 and connexin43 expression in young and aged rats (881.3) *FASEB J.* April, 2014 28:881.3. Presented at the FASEB annual meeting, San Diego, CA, April 2014.

A.J. Jepson, E.R. Garnett, A.N. Davenport, R.M. Firkins, Z.A. Kadow, M.K. Henry and **J.A. Moffitt** The Effects of Exercise Training (ET) on Cardiac Arrhythmias and Left Ventricular (LV) Connexin 43 (Cx43) Expression in Aged and Young Rats. *FASEB J* April 9, 2013 27:711.12. Presented at the FASEB annual meeting, Boston, MA, April, 2013.

E Jarrett, R.M. Firkins, M.K. Henry and **J.A. Moffitt**. Increased arrhythmogenesis and expression of left ventricular pS368-Connexin43 following acute myocardial ischemia (AMI) in female ovariectomized rats *FASEB J* April 9, 2013 27:928.13 Presented at the FASEB annual meeting, Boston, MA, April, 2013.

J. Mulvey, R.M. Firkins, **J.A. Moffitt** and M.K. Henry. Daily spontaneous running (DSR) decreases phosphorylation of left ventricular (LV) connexin-43 (Cx43) at pathological sites in female Sprague-

Dawley rats. *FASEB J* April 9, 2013 27:711.13. Presented at the FASEB annual meeting, Boston, MA, April, 2013.

R.M. Firkins, A. Dotson, N. McNeal, R. Schultz, M.L. Scott, J. Wardwell, M.K. Henry, **J.A. Moffitt**, and A.J. Grippo. Effects of Social Isolation on Connexin 43 Expression in the Left Ventricle of Female Prairie Voles *FASEB J* April 9, 2013 27:928.12. Presented at the FASEB annual meeting, Boston, MA, April, 2013.

J.A. Moffitt, K.C. Welliver, A.J. Jepson, and M.H. Henry. Hindlimb unloading (HU) results in an increased predisposition to cardiac arrhythmias and changes in left ventricular (LV) connexin43 (Cx43) expression. *FASEB J.* 2011 25:646.8 Presented at the FASEB annual meeting, Washington, D.C., 2011.

K.C. Welliver, A.J. Jepson, and **J.A. Moffitt**. Hindlimb unloading results in loss of circadian control of heart rate and increased incidence of spontaneous ventricular arrhythmias. *FASEB J.* 2010 24:625.12. Presented at the FASEB annual meeting, Anaheim, CA, 2010.

J.A. Moffitt, A.J. Jepson, and E.S. Decker. Acute moderate sleep deprivation (AMSD) attenuates physiological and psychological function at rest and during exercise. MSSE 40(5) Suppl.: 1726, Presented at the ACSM 55th Annual Meeting, Indianapolis, IN, 2008.

J.A. Moffitt, T.G. Beltz, A.K. Johnson. Intermittent postural recovery during 14 days of hindlimb unloading is not sufficient to restore cardiac autonomic imbalance in rats. Experimental Biology meeting abstracts [on CD-ROM], Abstract #739.14. Presented at the FASEB annual meeting, San Diego, CA, 2008.

J.A. Moffitt, A.J. Grippo, T.G. Beltz, J. Axen, and A.K. Johnson. Hindlimb unloading (HU) elicits anhedonia, reduced heart rate variability (HRV), and autonomic imbalance. *FASEB Journal*, 2006 20: A1424 Presented at the FASEB annual meeting, San Francisco, CA, 2006.

J.A. Moffitt, A.J. Grippo, and A.K. Johnson: 5-HT_{1A} activation elicits resetting of arterial baroreflex control of HR and LSNA in conscious, unrestrained rats. *FASEB Journal*, 2003, http://files.abstractsonline.com/CTRL/61/A/DD4/543/579/49A/3AE/DFC/6DC/269/B77/C2/a5344_1.pdf Presented at the FASB annual meeting, San Diego, CA, 2003.

J.J. Barclay, J.D. Wenger and **J.A. Moffitt**: Hypertonic saline administration restores mean arterial pressure (MAP) via the sympathetic nervous system in hemorrhaged, anesthetized rats. *FASEB Journal*, 2003, http://files.abstractsonline.com/CTRL/D3/5/E59/7B4/A03/4DF/28E/FB4/12A/B38/36B/B4/a5383_1.pdf Presented at the FASEB annual meeting, San Diego, CA, 2003.

J.A. Moffitt, K.N. Nieman, A.J. Grippo, and A.K. Johnson: Sodium depletion elicits a reduction in heart rate variability in conscious rats. Program No.858.14. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2002, Online. Presented at the Society for Neuroscience annual meeting, Washington, DC, 2002.

J.A. Moffitt, A.J. Grippo, P.V. Holmes, and A.K. Johnson: Olfactory bulbectomy attenuates cardiovascular sympathoexcitatory reflexes in rats. *FASEB J.*15(5): A807, 2001 Presented at the FASEB annual meeting, New Orleans, LA, 2001.

A.J. Grippo, **J.A. Moffitt**, and A.K. Johnson: A comparison of baroreflex control of heart rate in normotensive rats using pharmacologically manipulated or spontaneous changes in blood pressure.

FASEB J. 15(5): A1144, 2001. Presented at the FASEB annual meeting, New Orleans, LA, 2001.

J.A. Moffitt: Brain 5-HT mechanisms in arterial baroreflex function. *Regulatory Peptides*. 97(1), 57, 2001. Presented at the 2001 Winter Neuropeptide research conference, Breckenridge, CO.

J.A. Moffitt, S.R. Robinson, and A.K. Johnson: Short-term fluoxetine treatment enhances baroreflex control of sympathetic nerve activity in rats. *SFN* 26(1), 2000. Presented at the 2000 annual Society for Neuroscience annual meeting, New Orleans, LA.

J.A. Moffitt and A.K. Johnson: Short-term fluoxetine treatment enhances baroreflex function following hindlimb unloading. *Physiologist*. 43(4), 288, 2000. Presented at the American Physiological Society Baroreceptor Reflex conference, Iowa City, IA 2000.

J. Francis, T.G. Beltz, R.M. Weiss, **J.A. Moffitt**, A.K. Johnson, and R.B. Felder: Effects of anterior third ventricle lesioning on heart failure. *Physiologist* 43(4), 286, 2000. Presented at the American Physiological Society Baroreceptor Reflex conference, Iowa City, IA 2000.

EM. Hasser, **J.A. Moffitt**, J.A. Smith, C.M. Foley, and J.C. Schadt: Response to hemorrhage in hindlimb unloaded rats. *FASEB J.* 12(5): A693, 1998.

J.A. Moffitt, E.M. Hasser, K.S. Curtis, J.A. Smith, M.J. Sullivan, and J.T. Cunningham: Attenuated cFos expression in the rostral ventrolateral medulla (RVLM) of hindlimb unloaded rats after hydralazine treatment. *FASEB J.* 12(4): A63, 1998.

M.J. Sullivan, J.W. Baker, **J.A. Moffitt**, and E.M. Hasser: Sodium intake is enhanced during 24 hour hindlimb unweighting. *SFN* 23(1): 427, 1997.

PATENTS

Published, Issued U.S. Patents:

United States Patent #9,409,025. Cardiac rhythm management device with neural sensor. Libbus, I., Kramer, A.P., **Moffitt, J.** August 9, 2016. Assignee: Cardiac Pacemakers, Inc.

United States Patent# 9,339,652. Neural stimulation system for cardiac fat pads. **Moffitt J.**, Libbus, I. May 17, 2016. Assignee: Cardiac Pacemakers, Inc.

United States Patent #9,089,691. Stimulator for auricular branch of vagus nerve. Libbus, I., **Moffitt, J.** July 28, 2015. Assignee: Cardiac Pacemakers Inc.

United States Patent #8,929,990. Transvascular neural stimulation device and method for treatment of hypertension. **Moffitt J.**, Libbus, I. January 6, 2015. Assignee: Cardiac Pacemakers, Inc.

United States Patent #8,909,337. System to treat AV-conducted ventricular tachyarrhythmia. Moffitt, J. Kramer, A.P., Libbus, I. December 9, 2014. Assignee: Cardiac Pacemakers, Inc.

United States Patent #8,483,828. Combined remodeling control therapy and anti-remodeling therapy by implantable **cardiac** device. Libbus, I., KenKnight, B., Moffitt, J., Manicka, Y., July 9, 2013. Assignee: Cardiac Pacemakers, Inc.

United States Patent # 8,483,823. Integrated lead for applying cardiac resynchronization therapy and neural stimulation therapy. Libbus, I., Spinelli, J., Westlund, R, **Moffitt, JA**, Wang, S. July 9, 2013. Assignee: Cardiac Pacemakers, Inc.

United States Patent# 8,396,560. System and method for closed-loop neural stimulation. Libbus, I. Kramer, A.P., **Moffitt, J.** March 12, 2013. Assignee: Cardiac Pacemakers, Inc.

United States Patent # 8,131,362. Combined neural stimulation and cardiac resynchronization therapy. **Moffitt, JA**, Wang, S. KenKnight, B., and Libbus I. March, 2012. Assignee: Cardiac Pacemakers, Inc.

United States Patent# 7,979,141. Transvascular reshaping lead system. Caparso, A., **Moffitt, J.**, and Scheiner, A. July, 2011. Assignee: Cardiac Pacemakers, Inc

United States Patent# 7,769,450. Cardiac rhythm management device with neural sensor. Libbus, I., Kramer A.P., **Moffitt J.** August, 2010. Assignee: Cardiac Pacemakers, Inc.

United States Patent# 7,617,003. System for selective activation of a nerve trunk using a transvascular reshaping lead. Caparso, A., **Moffitt, J.**, and Scheiner, A. November 2009. Assignee: Cardiac Pacemakers, Inc.

United States Patent # 7,587,238. Combined neural stimulation and cardiac resynchronization therapy. **Moffitt, JA**, Wang, S. KenKnight, B., and Libbus I. September 2009. Assignee: Cardiac Pacemakers, Inc.

United States Patent #7,555,341. System to treat AV-conducted ventricular tachyarrhythmia. **Moffitt, J**, Kramer, A.P., and Libbus I. June 2009. Assignee: Cardiac Pacemakers, Inc.

United States Patent# 7,499,748. Transvascular Neural Stimulation Device. **Moffitt, J.** and Libbus I. March 2009. Assignee: Cardiac Pacemakers, Inc.

United States Patent # 7,260,431: Combined remodeling control therapy and anti-remodeling therapy by implantable cardiac device. Libbus, I, KenKnight, BH, **Moffitt, JA**, and Manicka, YD., August, 2007. Assignee: Cardiac Pacemakers, Inc.

Published, Issued European Patents:

EP 2213331: Cardiac rhythm management device with neural sensor. Libbus, I., Kramer A.P., and **Moffitt J.** August, 2010. Assignee: Cardiac Pacemakers, Inc.

EP 1871469: Neural stimulation system for cardiac fat pads. Libbus, I and **Moffitt J.**, August, 2008. Assignee: Cardiac Pacemakers, Inc.

EP 1761305: Combined remodeling control therapy and anti-remodeling therapy by implantable cardiac device. Libbus, I, KenKnight, BH, Manicka, YD and **Moffitt, JA**, and., March, 2007. Assignee: Cardiac Pacemakers, Inc.

TEACHING MATERIALS:

Using pre-recorded cardiovascular experiments in rats to learn cardiovascular physiology.
Rat Cardiovascular Analysis

<http://www.adinstruments.com/support/downloads/windows/animal-physiology-collection>

LAY PRESS COMMUNICATION & QUOTES:

American Association of Retired Persons (AARP) Online Bulletin. "Exercise, it'll do your heart good!" February 2009.

Runner's World. "Mind + Body: Get Over It!" by Beth Dreher, March 2010.

<http://www.runnersworld.com/running-tips/get-over-it>

Runner's World. "Head Advisory" by Beth Dreher, August 2010.

<http://www.runnersworld.com/running-tips/heat-advisory>

Des Moines Register: Metromix Des Moines. "IMT Des Moines Marathon by the Numbers" by Brianne Sanchez, Oct. 13 2010 <http://desmoines.metromix.com/events/article/imt-des-moines-marathon/2242055/content>

Des Moines Register. "Housemates fight over perfect temperature" by Brianne Sanchez, Oct. 25, 2010.

<http://www.desmoinesregister.com/article/20101027/LIFE/10270325/1039/LIFE/>

"All in the timing." The Runner's World Big Book of Marathons and Half-Marathons, Rodale Press, June, 2012.

http://www.amazon.com/Runners-World-Marathon-Half-Marathon-Training/dp/1609616847/ref=sr_1_1?s=books&ie=UTF8&qid=1410199946&sr=1-1&keywords=runner%27s+world+big+book+of+marathon+and+half-marathon+training

"Community Matters: Summer running requires extra care". Fort Smith Times Record. June, 2017, <http://www.swtimes.com/opinion/20170611/community-matters-summer-running-requires-extra-care>