

CURRICULUM VITAE

Adam John Case

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I. Research Interests

Redox signaling is vital for proper immune system function, yet this area of research is understudied. My graduate career focused on the role of mitochondrial superoxide in T-lymphocyte development. I transitioned this expertise into my postdoctoral training where I examined the role of redox signaling in T-lymphocytes during the pathogenesis of cardiovascular disease. As an independent and early-stage investigator, I have extended this work to identify the contribution of the immune system to different pathological states of psychological trauma and stress. With this, I am investigating the redox, metabolic, and epigenetic mechanisms that may affect immune cell function and potentiate psychological trauma-mediated inflammatory diseases.

II. Education

- 1996 – 2000: **High School Degree**, Ankeny High School, Ankeny, IA
- 2000 – 2004: **B.S. with Honors, Biochemistry**, The University of Iowa, Iowa City, IA; Graduated with High Distinction, Minors in Biology and Chemistry; Dr. Adrian Elcock mentor
Thesis: *Prediction of disease and resistance causing mutations via predictive computer algorithms.*
- 2004 – 2011: **Ph.D., Free Radical and Radiation Biology**, The University of Iowa Carver College of Medicine, Iowa City, IA; Dr. Frederick Domann mentor
Thesis: *The role of mitochondrial superoxide in the development of the mammalian hematopoietic system.*
- 2011 – 2012: **Postdoctoral Trainee**, The University of Iowa Carver College of Medicine, Iowa City, IA; Dr. Frederick Domann mentor
Project: *Extracellular superoxide dismutase as a target for pancreatic cancer therapy.*
- 2012 – 2015: **Postdoctoral Fellow**, University of Nebraska Medical Center, Omaha, NE; Dr. Matthew Zimmerman mentor
Project: *Redox signaling in T-lymphocytes during hypertension.*

III. Academic Appointments

- 2015 – 2016: **Instructor (non-tenure track)**, Department of Cellular and Integrative Physiology, College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2016 – 2021: **Assistant Professor (tenure track)**, Department of Cellular and Integrative Physiology, College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2021 – Present: **Associate Professor (tenure track)**, Department of Psychiatry and Behavioral Sciences, Department of Medical Physiology, College of Medicine, Texas A&M University, College Station, TX

IV. Other Academic Appointments

- 2016 – 2021: **Director, Physiological Environment Research Facility**, University of Nebraska Medical Center, Omaha, NE
- 2016 – 2022: **Graduate Faculty**, Integrative Physiology and Molecular Medicine (IPMM); Neuroscience; Immunology, Pathology, and Infectious Disease (IPID); Biomedical Informatics (BMI) Graduate Programs, University of Nebraska Medical Center, Omaha, NE
- 2018 – 2021: **Associate Member**, Molecular & Biochemical Etiology Program, Fred and Pamela Buffet Cancer Center, University of Nebraska Medical Center, Omaha, NE

V. Academic and Research Experience

- 2000 – 2001: **Internship**, Department of Biochemistry, Pioneer Hybrid International, Johnston, IA; Dr. George Singletary mentor
- 2000 – 2002: **Tutor**, The University of Iowa, Iowa City, IA; Subjects taught: Calculus, Biology, Chemistry, and Organic Chemistry
- 2002 – 2004: **Undergraduate Research Assistant**, Department of Biochemistry, The University of Iowa, Iowa City, IA; Dr. Adrian Elcock mentor

VI. Grant Support

Current

External

- NIH R01HL158521, Case (PI)** 07/01/2021 – 06/30/2026

Source: National Institutes of Health – National Heart, Lung, and Blood Institute

Title: Neuroimmune dynamics involved in the pathogenesis of hypertension after psychological trauma

Goal: Determine the role of autonomic-immune interactions after psychological trauma leading to the development of hypertension

Role: Principal Investigator

Amount: \$2,803,929 (**Score 4% – Within pay line at NHLBI**)
- NIH R01DK129311, Patel (PI)** 07/01/2021 – 06/30/2026

Source: National Institutes of Health – Institute of Diabetes, Digestive, and Kidney Diseases

Title: Novel target mechanism (renal nerves) for the beneficial actions of SGLT2 inhibition in congestive heart failure

Goal: To determine the cardiorenal contributions of SGLT2 in heart failure

Role: Paid Consultant

Amount: \$5,000/year (**Score 16% - within pay line at NIDDK**)

- NIH R01HL157269, Dickinson (PI)** 04/01/2021 – 03/31/2026

Source: National Institutes of Health – National Heart, Lung, and Blood Institute

Title: Autophagy-mediated mucin degradation is necessary for resolution of mucous metaplasia

Goal: Determine the role of autophagy in attenuating mucous metaplasia

Role: Paid Consultant

Amount: \$2,000/year
- NIH CINX3673, Case (PI)** 10/01/2019 – 09/31/2021

Source: National Institutes of Health – NHLBI Loan Repayment Program

Title: Redox Control of T-lymphocyte-Driven Hypertension in Child/Adolescent Post-Traumatic Stress Disorder

Goal: Determine how early-life stress impacts T-lymphocyte inflammation to drive cardiovascular disease later in life

Role: Principal Investigator

Amount: \$20,586

Internal

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Trainee

- NIH Predoctoral Fellowship F30HL154535, Elkhatib (PI)** 09/01/2020 – 08/31/2024

Source: National Institutes of Health – National Heart, Lung, and Blood Institute

Title: Neuroimmune contributions to hypertension sensitization in a preclinical model of PTSD

Goal: Determine the role of sympathetic modulation of splenic inflammation after psychological trauma

Role: Mentor (*Impact score 10*)

Amount: \$185,846
- Student Predoctoral Fellowship, Moshfegh (PI)** 07/01/2020 – 06/30/2022

Source: University of Nebraska Medical Center

Title: Calprotectin as a novel regulator of psychological trauma-induced inflammation

Goal: Determine the role of calprotectin in regulating peripheral inflammation during PTSD

Role: Mentor

Amount: \$62,032

Past

External

- DOD W81XWH-20-PCRP-IDA, Cook (PI)** 12/01/2021 – 11/30/2024

Source: Department of Defense

Title: Therapeutic targeting of Nox2 to target Bone Metastatic Prostate Cancer Progression and Immune Evasion

Goal: To determine the function of Nox2 in prostate cancer as it pertains to bone metastasis, and target this protein for therapeutic benefit

Role: Co-Investigator (Relinquished role due to relocation to Texas A&M)

Amount: 20% salary

- **RSG-19-127-01-CSM, Cook (PI)** 01/01/2020 – 12/31/2022
Source: American Cancer Society
Title: Reprogramming the Immune-bone Microenvironment for Improving Outcomes of Bone Metastatic Cancer
Goal: Determine the role of neutrophils in modulating the bone microenvironment of prostate cancer metastasis
Role: Co-Investigator (Relinquished early due to relocation to Texas A&M)
Amount: 8% salary
- **NIH R01HL129823, Lindsey (PI)** 05/01/2019 – 04/30/2021
Source: National Institutes of Health – National Heart, Lung, and Blood Institute
Title: Systems Biology of Fibroblast Activation Following Myocardial Infarction
Goal: To develop in silico computational models of fibroblast activation following myocardial infarction
Role: Co-Investigator
Amount: 25% salary
- **NIH R00HL123471, Case (PI)** 09/01/2016 – 08/31/2020
Source: National Institutes of Health – National Heart, Lung, and Blood Institute
Title: Redox Regulation of T-lymphocytes in Sympathoexcitation-associated Hypertension
Goal: Determine the effect of redox signaling on T-lymphocyte-mediated inflammation in neurogenic hypertension
Role: Principal Investigator (*Impact score 10*)
Amount: \$764,900
- **NIH Career Development Award K99HL123471, Case (PI)** 07/01/2015 – 08/31/2016
Source: National Institutes of Health – National Heart, Lung, and Blood Institute
Title: Redox Regulation of T-lymphocytes in Sympathoexcitation-associated Hypertension
Goal: Determine the effect of redox signaling on T-lymphocyte-mediated inflammation in neurogenic hypertension
Role: Principal Investigator (*Impact score 10*)
Amount: \$108,000
- **NIH Postdoctoral Fellowship F32HL122021, Case (PI)** 07/01/2014 – 06/30/2015
Source: National Institutes of Health – National Heart, Lung, and Blood Institute
Title: Regulation of Mitochondrial Redox Systems in T-lymphocytes During Hypertension
Goal: Determine the role of mitochondrial redox signaling in T-lymphocytes in neurogenic hypertension
Role: Principal Investigator (Relinquished early due to K99/R00 acquisition)
Amount: \$53,282
- **AHA Postdoctoral Fellowship 13POST17060015, Case (PI)** 07/01/2013 – 06/30/2014
Source: American Heart Association
Title: Regulation of Mitochondrial Redox Systems in T-lymphocytes During Hypertension
Goal: Determine the role of mitochondrial redox signaling in T-lymphocytes in neurogenic hypertension

Role: Principal Investigator (Relinquished early due to F32 acquisition)

Amount: \$46,796

- **NIH Postdoctoral Fellowship T32CA078586, Spitz (PI)** 07/01/2011 – 06/30/2012
Source: National Institutes of Health – National Cancer Institute
Title: Training Program in Free Radical and Radiation Biology
Goal: Develop new generation of basic science researchers in the field of redox biology
Role: Postdoctoral Trainee
Amount: \$45,123
- **DOD Predoctoral Fellowship PC073831, Case (PI)** 07/01/2008 – 06/30/2011
Source: Department of Defense
Title: Epigenetic Control of Prolyl and Asparaginyl Hydroxylases in Prostate Cancer
Goal: Determine the role of hypoxia control proteins in prostate cancer progression
Role: Principal Investigator
Amount: \$96,984
- **NIH Predoctoral Fellowship T32GM073610, Gardinier (PI)** 07/01/2007 – 06/30/2008
Source: National Institutes of Health – National Institute of General Medical Sciences
Title: Training Program in Molecular and Cellular Biology
Goal: Develop new generation of basic science researchers in the field of molecular biology
Role: Predoctoral Trainee
Amount: \$32,328

Internal

- **Pilot Project Grant, Case (PI)** 02/01/2021 – 01/31/2021
Source: Cognitive Neuroscience of Development and Aging Center
Title: Deciphering autonomic regulation of psychological trauma-induced inflammation
Goal: Determine the sympathetic and parasympathetic contributions to inflammation after psychological trauma
Role: Principal Investigator
Amount: \$50,000
- **Pilot Project Grant, Dickinson (PI)** 01/01/2020 – 12/31/2021
Source: Fred and Pamela Buffet Cancer Center
Title: A mouse model of cancer-related fatigue
Goal: To develop a new murine model of radiation-induced fatigue to determine mechanistic drivers of the disease
Role: Co-Investigator
Amount: \$50,000
- **Innovation and Momentum Grant, Case (PI)** 11/06/2019 – 11/09/2019
Source: University of Nebraska Medical Center
Title: Improving Scientific Communication at UNMC
Goal: Obtain additional professional training in scientific communication education
Role: Principal Investigator
Amount: \$1,500

- **Core User Program Grant A-000000340, Case (PI)** 07/01/2018 – 12/31/2018
Source: Nebraska Research Initiative
Title: Psychological Stress-induced Immune Dysfunction
Goal: Determine immune system-wide gene expression profiling utilizing single cell RNA sequencing in a preclinical model of PTSD
Role: Principal Investigator
Amount: \$7,086
- **Core Facility Voucher Program, Case (PI)** 01/01/2018 – 06/30/2018
Source: Center for Neurosensory Systems
Title: Psychological Stress-induced T-lymphocyte dysfunction
Goal: Determine T-lymphocyte-specific gene signatures after psychological trauma
Role: Principal Investigator
Amount: \$4,152
- **Medical Research Fund, Case (PI)** 07/01/2017 – 06/30/2018
Source: Mary G. and George W. White Fund for Medical Research
Title: Immunological Memory as a Driver for Post-Traumatic Stress Disorder (PTSD)
Goal: Determine the role of memory T-lymphocytes in potentiating PTSD-like behavior
Role: Principal Investigator
Amount: \$50,000
- **Equipment Award, Case (PI)** 09/27/2016
Source: Nebraska Research Initiative
Title: Establishment of an Autonomous-Environment Research Chamber and Imager for Higher Quality Culture of Tissues and Cells Under Appropriate Physiological Conditions
Goal: Establish the physiological environment research facility at UNMC
Role: Principal Investigator/Director
Amount: \$115,782

Trainee

- **NIH, Predoctoral Fellowship T32NS105594 Gendelman (PI)** 07/01/2020 – 07/01/2020
Source: National Institutes of Health
Title: Neuroimmunology of disease training program
Goal: To train new graduate students in the field of neurological and immunological research
Role: Mentor for Cassandra Moshfegh (Declined due to acquisition of UNMC fellowship)
Amount: \$62,032
- **AHA Predoctoral Fellowship 20PRE35080059, Elkhatib (PI)** 01/01/2020 – 06/30/2020
Source: American Heart Association
Title: Neuroimmune contributions to hypertension sensitization in a preclinical model of PTSD
Goal: Determine the role of sympathetic modulation of splenic inflammation after psychological trauma
Role: Mentor (Relinquished early due to F30 acquisition)
Amount: \$62,032
- **NIH, Predoctoral Fellowship T32NS105594 Gendelman (PI)** 07/01/2019 – 12/31/2020
Source: American Heart Association
Title: Neuroimmunology of disease training program

Goal: To train new graduate students in the field of neurological and immunological research

Role: Mentor for Safwan Elkhatib (Relinquished early due to AHA fellowship acquisition)

Amount: \$62,032

Pending

External

- **NIH P20GM139688 COBRE, Lindsey (PI)** 12/01/2021 – 11/30/2026
Source: National Institutes of Health – National Institute of General Medical Sciences
Title: Center for Cardiovascular Science and Education
Goal: To build the physical and intellectual resources at UNMC to propel the ability of faculty to conduct research that drives the cardiovascular field forward and helps to improve the health of Nebraskans and beyond
Role: Co-Investigator and Education Lead
Amount: 15% salary

Internal

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Trainee

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VII. Study Sections

International

2020: German Research Foundation: Research Grant Program (April 1). Role: *Ad Hoc* Member

National

2017: NIH National Heart, Lung, and Blood Institute: Mentored Transition to Independence Review Committee (2017/10 MTI(OA)1; June 8-9). Role: *Ad Hoc* Member

2019: National Science Foundation, Graduate Research Fellowship Program: Physiology, Organismal, and Developmental Biology Panel (January 28-31). Role: *Ad Hoc* Member

2019: National Aeronautics and Space Administration, Translational Research Institute for Space Health Postdoctoral Fellowship 2019 [TRISH_PD_2019; June 13-14). Role: *Ad Hoc* Member

2020: American Heart Association, Career Development Awards – Basic Cardiac Sciences 2 (February 12). Role: *Ad Hoc* Member

2020: National Aeronautics and Space Administration, Translational Research Institute for Space Health Postdoctoral Fellowship 2020 [TRISH_PD_2020; May 12). Role: *Ad Hoc* Member

Regional/Local

2017: Kentucky Science and Engineering Foundation Research and Development Excellence Program (April 8). Role: *Ad Hoc* Member

- 2017: University of Nebraska Medical Center Graduate Fellowships, Cell Biology II Study Section (May 3). Role: *Ad Hoc* Member
- 2017: The North Carolina Biotechnology Center Institutional Development Grant Program (October 20). Role: *Ad Hoc* Member
- 2018: University of Nebraska Medical Center Graduate Fellowships, Biochem/MolBio/Genetics Study Section (May 2). Role: *Ad Hoc* Member
- 2018: University of Nebraska Medical Center Graduate Fellowships, System Biology Study Section (May 11). Role: *Ad Hoc* Member
- 2019: University of Nebraska Medical Center, SPORE Career Enhancement Program Review Panel (March 13). Role: *Ad Hoc* Member
- 2019: West Virginia IDeA Network of Biomedical Research Excellence Chronic Disease Research Program (May 5). Role: *Ad Hoc* Member
- 2019: University of Nebraska Medical Center, NE-INBRE Developmental Research Project Program (November 19). Role: *Ad Hoc* Member
- 2020: University of Nebraska Medical Center Graduate Fellowships, Biochem & MolBio Study Section (May 11). Role: *Ad Hoc* Member
- 2020: Louisiana State University Health Shreveport, COVID-19 Response Program (June 28). Role: *Ad Hoc* Member

VIII. Patents/Inventions

- 2018: New Invention Notification, UNeMed, University of Nebraska Medical Center. "Administration of Chronic Medications via Dentifrice."
- 2018: New Invention Notification, UNeMed, University of Nebraska Medical Center. "Visualization-friendly Gels by Way of Contrast Agents."
- 2018: New Invention Notification, UNeMed, University of Nebraska Medical Center. "A Novel Circulating Biomarker to Assess the Impact of Psychological Trauma."
- 2019: New Invention Notification, UNeMed, University of Nebraska Medical Center. "Non-invasive diagnostics of post-traumatic stress disorder (PTSD) in urine."

IX. Consulting Positions

Editorial

- 2014 – 2016: Guest editor, special issue "Redox Signaling and Neural Control of Cardiovascular Function" in *Oxidative Medicine and Cellular Longevity*
- 2016 – Present: Editorial Board, *AJP Heart and Circulatory Physiology*
- 2018 – 2019: Guest editor, special issue "Redox Biology in Physiology and Disease" in *Redox Biology*
- 2019 – Present: Editorial Board, *Frontiers in Physiology*
- 2019 – Present: Editorial Board, *Reactive Oxygen Species (ROS)*

- Number of journals to date: **36**
- Number of reviews to date: **191**
- Average reviews/year to date: **20**
(Year: Number of Reviews)

Journal	2012 – 2016 (Pre-Faculty)	2017	2018	2019	2020	2021
Free Radical Biology and Medicine	2		5		1	
PLoS ONE	2	1				
Hypertension	1	1	3	3		
Cellular and Molecular Neurobiology	1				1	
AJP Regulatory, Integrative, and Comparative Physiology	6	2			3	2
AJP Heart and Circulatory Physiology	10	9	10	11	6	2
Circulation Research	1					
Experimental Physiology	1					
Journal of Cardiac Failure	3	1				
Oxidative Medicine and Cellular Longevity	8	2	2			
AJP Cell Physiology	1					
Journal of Neurophysiology	1					
Journal of Nutrition and Food Sciences	1					
Canadian Journal of Physiology and Pharmacology	1					
Alcohol	1	1	1	1	1	
Physiological Genomics	8		1			
Physiological Reports	1					2
Brain Research	2					
Redox Biology		8	10	12	3	1
AJP Endocrinology and Metabolism		1				
Advances in Physiology Education		2				
Clinical and Experimental Medicine		1				
Biomedicine and Pharmacotherapy		1				
Antioxidants and Redox Signaling			1		3	1
British Journal of Pharmacology			2			
Biology of Sex Differences			1		2	
Neurotoxicity Research				1		
Frontiers in Physiology				2	3	3

Molecular and Cellular Endocrinology				1		
Alternatives to Animal Experimentation				1		
Reactive Oxygen Species				1	1	
Mitochondrion					2	
Cognitive and Behavioral Neurology					2	
Nature Scientific Reports					1	
Clinical Psychopharmacology and Neuroscience					2	
Journal of Applied Physiology						1
Totals	51	29	36	33	30	12

X. Honors and Awards

Self

1998	Eagle Scout with Bronze Palm, Boy Scouts of America
2000	Air Force National Science and Math Award
2000	The University of Iowa Undergraduate Tuition Scholarship
2003	Dignitas National Deans List
2003	Golden Key National Honor Society
2003	Phi Sigma Pi National Honor Fraternity
2003	National Residence Hall Honorary
2003	Phi Beta Kappa National Honor Fraternity
2003	The University of Iowa Homecoming King
2004	Graduate with High Distinction and Honors
2004	Presentation Award, The University of Iowa Undergraduate Research Conference
2008	The University of Iowa Carver College of Medicine Award for Outstanding Individual Community Service
2008	Graduate Incentive Fellowship for External Funding Recipients
2008	First place (of >50 participants), The University of Iowa Molecular and Cellular Biology Annual Meeting
2008	Young Investigator Award (1 of 10 from >400 participants), Society for Free Radical Biology and Medicine
2010	Clinical and Translational Medicine Award (Single award from >200 participants), The University of Iowa Carver College of Medicine Research Week
2010	Travel Award (1 of 10 from >400 abstracts), Society for Free Radical Biology and Medicine
2011	Second place (of >500 participants), 13th Annual James F. Jakobsen Graduate Conference
2012	Young Investigator Award (1 of 10 from >400 participants), Society for Free Radical Biology and Medicine
2013	Research Recognition Award (Single award based on abstract and oral competition), American Physiological Society: Cell and Molecular Physiology Section
2013	Travel Award (1 of 5 from >50 participants), FASEB Summer Research Conference on Neural Mechanisms in Cardiovascular Regulation

- 2013 Larry Oberley Young Investigator Award (Single award from >400 participants), Society for Free Radical Biology and Medicine
- 2013 Travel Award (Based on abstract submission to conference), University of Nebraska Redox Biology Center
- 2014 Research Presentation Award (1 of 10 from >200 participants), American Heart Association Council for Hypertension Research
- 2014 Travel Award (Based on abstract submission to conference), University of Nebraska Redox Biology Center
- 2014 Postdoctoral to Pathway Independence Award (Most outstanding postdoctoral fellow based on overall academic achievement), University of Nebraska Medical Center
- 2015 Travel Award (1 of 10 from >400 abstracts), Society for Redox Biology and Medicine
- 2016 Michael J. Brody Young Investigator Award (Single award based on overall academic achievement), American Physiology Society: Neural Control and Autonomic Regulation Section
- 2016 Travel Award (1 of 5 from >50 participants), FASEB Summer Research Conference on Neural Mechanisms in Cardiovascular Regulation
- 2017 Star Reviewer (1 of 3 of >175 editorial board members), American Journal of Physiology - Heart and Circulatory Physiology
- 2018 Research Recognition Award (Early Career Investigator; Single award based on overall academic achievement), American Physiology Society: Neural Control and Autonomic Regulation Section
- 2019 Alan Alda Center for Communicating Science Graduate
- 2019 Academic Variable Compensation Recipient for Teaching Excellence, College of Medicine, University of Nebraska Medical Center
- 2019 Star Reviewer (1 of 3 of >175 editorial board members), American Journal of Physiology - Heart and Circulatory Physiology
- 2020 Distinguished Graduate Student Mentor Award (1 awarded per year), University of Nebraska Medical Center

Press/Publicity

- 2010: Featured article in New Scientist magazine (Case *et al.* 2011. *Free Radic Biol Med.* 50(3):448-58)
- 2013: Featured article and interview for American Journal of Physiology Heart and Circulatory Physiology podcast (Case *et al.* 2013. *Am J Physiol Heart Circ Physiol.* 305(1):H19-28)
- 2014: UNMC Today Feature on most outstanding postdoctoral fellow award. "Adam Case, Ph.D., wins UNMC Pathway to Independence Award."
- 2015: UNMC Today Feature on acquisition of K99/R00 grant. "Dr. Case lands Pathway to Independence grant."
- 2017: UNMC Today Feature on the development of the Physiological Environment Research Facility (PERF). "New facility boosts accuracy of cellular experiments."
- 2018: Select Science Feature Editorial Article on Case Laboratory Research. "The Immune System Reacts to Neurological Stress: Catching Killer T cells Live in Action."
- Winner: Best in Digital Marketing Award at 2018 Society for Neuroscience

- 2018: American Journal of Physiology: Heart and Circulatory Physiology Podcast. Invited as expert in field to discuss recent paper entitled “Sex Differences in Depression-Like Behavior and Neuroinflammation in Rats Post MI: Role of Estrogens.”
- 2019: Featured article in MedPage Today (Maloley *et al.* 2019. *Semin Arthritis Rheum.* S0049-0172(18)30612-7)
- 2019: UNMC Today Feature on improving scientific communication at UNMC. “Aiming to improve scientific communication.”
- 2020: American Journal of Physiology: Heart and Circulatory Physiology Podcast. Invited as expert in field to discuss recent paper entitled “Abnormal sympathetic neural recruitment patterns and hemodynamic responses to cold pressor test in women with post-traumatic stress disorder.”

XI. Memberships and Service in Professional Societies (Leadership Positions Bolded)

2006 – Present: Member, Society for Redox Biology and Medicine (SfRBM)

- Committee Member, Student/Trainee Council (2013-2015)
- **Chair**, Student/Trainee Council (2015-2017)
- Committee Member, Professional Development Committee (2016-Present)
- Committee Member, Programming Committee (2017-Present)
- **Organizing Committee Member**, Regional Meeting and Oberley Symposium, Omaha, NE. (2018)
- Abstract Reviewer and Poster Judge, Annual Meeting, Chicago, IL. (2018)
- Session Chair, Annual Meeting, Chicago, IL. “*Inflammation and Immunity.*” (2018)
- Council Member, Society Council (2020 – Present)
- **Co-Chair**, Free Radical School Committee (2020 – Present)

2012 – Present: Member, American Physiological Society (APS)

- Volunteer, Physiology Understanding (PhUn) Week, Omaha, NE. (2012-2017)
- Award Reviewer, Neural Control and Autonomic Regulation Section Awards (2016, 2020)
- **Session Chair and Organizer**, Inaugural APS-SfRBM Joint Session, Experimental Biology Meeting, San Diego, CA. “*Redox Biology: A Unifying Theme in the Etiology of Human Diseases.*” (2018)
- Session Chair, Neural Control and Autonomic Regulation Section, Experimental Biology Meeting, San Diego, CA. “*Neuro-Immune Interactions in Inflammatory Homeostasis.*” (2018)
- Inaugural Figure Reviewer, The Figure Reviewer Project, American Journal of Physiology Heart and Circulatory Physiology. (2019)
- **Session Chair and Organizer**, APS-SfRBM Joint Session, Experimental Biology Meeting, San Diego, CA. “*Small Molecule Redox Targets: Regulation of Physiological Responses.*” (2020; Canceled due to COVID-19)
- Committee Member, CV Section Nominating Committee (2020-2023)

2012 – Present: Member, American Heart Association (AHA)

- Committee Member, AHA Excellence Award for Hypertension Research Selection Committee (2013-2018)
- Poster Judge, Council on Hypertension Annual Meeting (2017-2019)
- Committee Member, Hypertension Scientific and Clinical Education Lifelong Learning Committee (2019-2023)

2013 – 2021: Member, Nebraska Physiological Society (NPS)/Midlands Society of Physiological Sciences (MSPS)

- Councilor (2014-2017)
- Poster Judge, Annual Meeting (2015-2018)

2014 – 2017: Postdoctoral member, American Association for the Advancement of Science

2019 – Present: Member, Society of Biological Psychiatry (SOBP)

2020 – Present: Member, Psychoneuroimmunology Research Society (PNIRS)

XII. Institutional Service and Committee Assignments (*Leadership Positions Bolded*)

Departmental

- 2016 – 2018: Recruiter, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine (IPMM) Doctoral Program, APS Undergraduate Poster Session at Experimental Biology
- 2018 – 2021: **Chair**, Recruitment Committee, Department of Cellular and Integrative Physiology, University of Nebraska Medical Center, Omaha, NE
- 2019 – 2021: Member, Executive Committee, Department of Cellular and Integrative Physiology, University of Nebraska Medical Center, Omaha, NE
- 2020: **Chair**, Expenditure Account Guidelines Task Force, Department of Cellular and Integrative Physiology, University of Nebraska Medical Center, Omaha, NE
- 2020 – 2021: Member, A. Ross McIntyre Award Committee, Department of Cellular and Integrative Physiology, University of Nebraska Medical Center, Omaha, NE

College

- 2017 – 2021: Member, Medical Student Evaluation Committee, College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2019 – 2021: Basic Science Assistant Professor Member, Faculty Council of the College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2019 – 2021: Member, Self-Study Task Force Subcommittee for the Liaison Committee on Medical Education, College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2020 – 2021: Member, Postdoctoral Committee, Center for Patient, Family, and Community Engagement in Chronic Care Management (CENTRIC), College of Nursing, University of Nebraska Medical Center, Omaha, NE
- 2020: Member, Supplemental Compensation Policy Taskforce, College of Medicine, University of Nebraska Medical Center, Omaha, NE
- 2021: Member, Living Anatomy Evaluation Taskforce, College of Medicine, University of Nebraska Medical Center, Omaha, NE

University

- 2016 – 2020: Facilitator, Interprofessional Education (IPE) Days (Years 1 and 2), University of Nebraska Medical Center, Omaha, NE
- 2019 – 2021: Member, Next Generation Sequencing Core Oversight Committee, University of Nebraska Medical Center, Omaha, NE
- 2019 – 2020: Member, Rodent Behavior Assessment Facility Director Search Committee, University of Nebraska Medical Center, Omaha, NE

- 2019 – 2021: Ambassador, University of Nebraska Medical Center NIH Loan Repayment Program Ambassador Program
- 2020 – 2021: **Chair**, Three-Minute Thesis Committee, University of Nebraska Medical Center, Omaha, NE
- 2020 – 2021: Member, Rodent Behavior Assessment Facility Oversight Committee, University of Nebraska Medical Center, Omaha, NE
- 2020: Coach, Focused Accelerated Success in Teaching, University of Nebraska Medical Center, Omaha, NE

Outside Home University

- 2020: Promotion and Tenure Review, Department of Physiology and Pharmacology, Des Moines University, Des Moines, IA

XIII. Oral Presentations

International Meeting: Research Abstract-Based

- 2009 Society for Free Radical Biology and Medicine Annual Meeting, San Francisco, CA. "Heightened susceptibility to influenza mortality in immunodeficient mice caused by a T-cell specific defect in SOD2."
- 2010 Society for Free Radical Biology and Medicine Annual Meeting, Orlando, FL. "A novel role for mitochondrial superoxide in the development of erythropoietic protoporphyria."
- 2014 Society for Free Radical Biology and Medicine Annual Meeting, Seattle, WA. "Redox-regulated suppression of resting splenic T-lymphocyte activation in a model of sympathoexcitation."
- 2015 International Academy of Cardiovascular Sciences North America Section, Washington, DC. "Increased mitochondrial superoxide in the brain, but not periphery, sensitizes mice to angiotensin II-mediated hypertension."
- 2015 Society for Free Radical Biology and Medicine Annual Meeting, Seattle, WA. "Inverse regulatory effects of mitochondrial superoxide in resting and activated T-lymphocytes."
- 2016 Experimental Biology Annual Meeting, San Diego, CA. "Norepinephrine-mediated suppression of T-lymphocyte activation is regulated by mitochondrial redox mechanisms."
- 2018 Experimental Biology Annual Meeting, San Diego, CA. "Redox-Driven Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension."

International Meeting: Formally Invited Speaker for Professional Development

- 2015 Society for Free Radical Biology and Medicine Annual Meeting, Seattle, WA. "The Do's and Don'ts of the Interview Chalk Talk."
- 2017 Society for Free Radical Biology and Medicine Annual Meeting, Baltimore, MD. "Visual arts to enhance your manuscript figures and online presence."
- 2018 Society for Free Radical Biology and Medicine Annual Meeting, Chicago, IL. "Not enough hours in the day – How to say no."
- 2019 Experimental Biology Annual Meeting, Chicago, IL. "The elusive informal skills: Things I wish I had known earlier."
- 2020 Society for Free Radical Biology and Medicine Annual Meeting, Virtual due to COVID-19. "The art of the interview chalk talk."

Society for Free Radical Biology and Medicine Annual Meeting, Virtual due to COVID-19. "Post-training career opportunities."

National Meeting: Research Abstract-Based

- 2013 FASEB Scientific Research Conference: Neural Mechanisms in Cardiovascular Regulation, Gleneden Beach, OR. "Nitration of the tyrosine in angiotensin II attenuates its biological activity."
- 2015 American Heart Association Council on Hypertension Scientific Sessions, Washington, DC. "Increased mitochondrial superoxide in the brain, but not periphery, sensitizes mice to angiotensin II-mediated hypertension."
- 2016 FASEB Scientific Research Conference: Neural Mechanisms in Cardiovascular Regulation, Saxtons River, VT. "Norepinephrine-mediated modulation of T-lymphocyte activation is regulated by mitochondrial redox mechanisms."
- 2018 American Heart Association Council on Hypertension Scientific Sessions, Chicago, IL. "Redox-Driven T-Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension."

Local/Regional Meeting: Formally Invited Speaker for Research

- 2014 University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. "Norepinephrine suppresses T-lymphocyte growth and cytokine production via superoxide during hypertension."
- 2017 Nebraska Physiological Society Annual Meeting, Omaha, NE. "The use of animals is necessary for the future of biomedical research and development of new therapeutics/cures." Opposition Team Captain – *Debate Winner*
- 2018 Society for Redox Biology and Medicine Regional Meeting and Oberley Symposium, Omaha, NE. "Redox-Driven Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension."

Institutional: Formally Invited Speaker for Research (Bold = Outside home institution)

- 2009 The University of Iowa, Department of Radiation Oncology, Iowa City, IA. "Heightened susceptibility to influenza mortality in immunodeficient mice caused by a T-cell specific defect in SOD2."
- 2010 The University of Iowa, Department of Radiation Oncology, Iowa City, IA. "A novel role for mitochondrial superoxide in the development of erythropoietic protoporphyria."
- 2011 The University of Iowa, Department of Radiation Oncology, Iowa City, IA. "The role of mitochondrial superoxide in mammalian hematopoietic system development."
- 2012 University of Nebraska Medical Center, Department of Cellular and Integrative Physiology, Omaha, NE. "The role of mitochondrial superoxide in mammalian hematopoietic system development."
- 2013 University of Nebraska Medical Center, Department of Surgery, Omaha, NE. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."
- 2014 **University of Chicago**, Institute for Integrative Physiology, Chicago, IL. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."
- 2015 University of Nebraska Medical Center, Department of Cellular and Integrative Physiology, Omaha, NE. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."

- 2015 University of Nebraska Medical Center, Immunology Interest Group, Omaha, NE. "Redox regulation of T-lymphocytes in Hypertension."
- 2015 **University of Nebraska Omaha**, School of Health, Physical Education and Recreation, Omaha, NE. "Revisiting 'oxidative stress' in health and disease."
- 2015 **Kansas State University**, Department of Anatomy and Physiology, Manhattan, KS. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."
- 2015 **University of Pittsburgh**, Vascular Medicine Institute, Pittsburgh, PA. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."
- 2015 **Augusta University**, Department of Physiology, Augusta, GA. "Redox regulation of T-lymphocytes in sympathoexcitation-associated hypertension."
- 2016 University of Nebraska Medical Center, Office of Comparative Medicine Tech Talk, Omaha, NE. "Psychological stress and oxidative stress: Consequences for the immune system."
- 2016 **Des Moines University**, Department of Physiology and Pharmacology, Des Moines, IA. "Revisiting 'oxidative stress' in health and disease."
- 2017 **Veteran's Affairs (VA)** Seminar Series, Omaha VA Medical Center, Omaha, NE. "Sympathetic control of T-lymphocytes via redox and metabolic pathways."
- 2018 University of Nebraska Medical Center, Pulmonary, Critical Care, Sleep & Allergy Research Conference, Omaha, NE. "Redox and Transcriptional Control of Immune Cells during Psychological Stress."
- 2018 University of Nebraska Medical Center, Immunology Interest Group, Omaha, NE. "Redox and Transcriptional Control of Immune Cells during Psychological Stress."
- 2018 University of Nebraska Medical Center, Genomics Core Facility, Omaha, NE. "Immune cell transcriptome profiling during psychological trauma."
- 2018 **University of Nebraska Omaha**, Department of Biology, Omaha, NE. "Revisiting 'oxidative stress' in health and disease."
- 2019 **University of Texas at Arlington**, Department of Kinesiology, Arlington, TX. "Identification of a Novel Redox-Regulated T-lymphocyte Inflammatory Protein in Psychological Stress-Induced Hypertension."
- 2019 **Texas A&M**, Department of Medical Physiology, Bryan, TX. "T-lymphocyte Inflammatory Mechanisms of Psychological Trauma."
- 2020 **Veteran's Affairs (VA)** Seminar Series, Omaha VA Medical Center, Omaha, NE. "T-lymphocyte Inflammatory Mechanisms of Psychological Trauma."
- 2020 **Texas A&M Health Science Center**, Department of Psychiatry and Behavioral Sciences, Bryan, TX. "A redox biology perspective of behavior and inflammation." – *virtual due to COVID-19*
- 2020 **University of Arizona Health Sciences**, Department of Physiology, Tucson, AZ. "T-lymphocyte Inflammatory Mechanisms of Psychological Trauma." – *virtual due to COVID-19*
- 2021 **Vanderbilt University**, Department of Clinical Pharmacology Grand Rounds, Nashville, TN. "Mechanisms of Psychological Trauma-induced T-lymphocyte Inflammation." – *virtual due to COVID-19*

Institutional: Professional Development Formally Invited Speaker (Bold = Outside home institution)

- 2016 University of Nebraska Medical Center, Office of Postdoctoral Education, Omaha, NE. "Keys to submitting a successful K award application."

- 2017 University of Nebraska Medical Center, Research and Innovation Week, Omaha, NE. "The honest truth about navigating academia as a graduate student or postdoc."
- 2017 University of Nebraska Medical Center, Office of Postdoctoral Education, Omaha, NE. "The academic faculty job search."
- 2018, 2019 University of Nebraska Medical Center, Office of Postdoctoral Education, Omaha, NE. "The Interview Chalk Talk: Do's and Don'ts."
- 2018 University of Nebraska Medical Center, Office of Postdoctoral Education, Omaha, NE. "Keys to submitting a successful K award application."
- 2020 University of Nebraska Medical Center, Graduate Studies Professional Development Lunch and Learn, Omaha, NE. "Communicating science to a lay audience."
- 2020 University of Nebraska Medical Center, College of Pharmacy, Omaha, NE. "Keys to submitting a successful K99 award application."
- 2020 **Texas A&M Health Science Center**, Office of Postdoctoral Affairs, Bryan, TX. "How to equip yourself for the next step in your career."
- 2020 University of Nebraska Medical Center, Department of Academic Affairs, Omaha, NE. "What comes after my postdoc? Tips for successful transition into the workforce."
- 2020 University of Nebraska Medical Center, Department of Academic Affairs, Omaha, NE. "Job interview communication: From one-on-one meetings to the chalk talk."
- 2020 Keynote Speaker, University of Nebraska Medical Center Matriculation Ceremony, Omaha, NE. "Ten things I wish someone had told me about graduate school."
- 2020 University of Nebraska Medical Center, College of Nursing, Omaha, NE. "Communicating science to a general audience and patients."

XIV. Community Service/Outreach

- 2000 – 2006: Volunteer, University of Iowa Hospitals and Clinics Children's Oncology Ward, Iowa City, IA
- 2000 – 2001: Dancer/Volunteer, University of Iowa Dance Marathon, Iowa City, IA
- 2002 – 2004: Family Relations Committee, University of Iowa Dance Marathon, Iowa City, IA
- 2002 – 2004: Volunteer, Mercy Hospital Emergency Room, Iowa City, IA
- 2002 – 2004: Alpha Phi Omega Community Service Fraternity
- 2002 – 2004: Tour guide, University of Iowa, Iowa City, IA
- 2003: Teacher, Boy Scouts of America Merit Badge University, Iowa City, IA
- 2003 – 2008: Councilor, Heart Connection Children's Cancer Camp, Boone, IA
- 2004 – 2006: Ambassador, University of Iowa Medical Student Ambassador Program, Iowa City, IA
- 2005 – 2006: Recruitment Committee, University of Iowa Dance Marathon, Iowa City, IA
- 2006 – 2008: Soccer coach, Iowa City Kickers Little League Soccer, Iowa City, IA
- 2006 – 2012: Examiner/Volunteer, Iowa City Free Medical Clinic, Iowa City, IA
- 2006: Participant/Volunteer, Healing Tour with Dr. Patch Adams, Moscow/St. Petersburg, Russia
- 2007 – 2008: Volunteer, Susan G. Komen Race for the Cure, Des Moines, IA
- 2008: Organizer, Patch Adams public lecture, University of Iowa Carver College of Medicine, Iowa City, IA
- 2009 – 2010: Judge, Eastern Iowa Science Fair, Cedar Rapids, IA
- 2009 – 2011: Councilor, Camp Hertko Hollow Children's Diabetes Camp, Boone, IA

2010 – 2011:	Board member, Iowa City Free Medical Clinic Board of Directors, Iowa City, IA
2011 – 2012:	President, Iowa City Free Medical Clinic Board of Directors, Iowa City, IA
2013 – 2016:	Participant, American Heart Association Heart Walk, Omaha, NE
2013 – 2020:	Judge, Annual Student Research and Creative Activity Fair, University of Nebraska Omaha, Omaha, NE
2014:	Volunteer, Nebraska Science Festival, Omaha, NE
2015 – Present:	Volunteer and Donor, Corgi Connection of Kansas Annual Fundraiser, Topeka, KS
2015 – 2019:	Judge, Nebraska Junior Academy of Sciences State Science Fair, Lincoln, NE
2016:	Abstract Reviewer and Poster Judge, American Physician Scientists Association Midwest Regional Meeting, University of Nebraska Medical Center, Omaha, NE
2017:	Judge, Metropolitan Science and Engineering Fair (MSEF), Omaha, NE
2017 – 2018:	Judge and Abstract Reviewer, Midwest Student Biomedical Research Forum, University of Nebraska Medical Center and Creighton University, Omaha, NE
2017 – 2021:	Public Member, Board of Respiratory Care, State Board of Health, Nebraska Department of Health and Human Services
2020 – 2021:	Vice Chair, Board of Respiratory Care, State Board of Health, Nebraska Department of Health and Human Services

XV. Publications (2019 Impact factor ≥ 3.0 and citations ≥ 10 shown below)

Quantitative Metrics

h-index = **15**

i10-index = **23**

NIH iCite RCR = **38.52**

RG score = **113.0** (greater than 97.5% of all ResearchGate members)

Complete PubMed Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/adam.case.1/bibliography/public/>

Google Scholar:

<https://scholar.google.com/citations?user=r2HliigAAAAJ&hl=en>

ResearchGate:

https://www.researchgate.net/profile/Adam_Case

Scopus:

<https://www.scopus.com/authid/detail.uri?authorId=36859368400>

ORCID:

<https://orcid.org/0000-0003-3404-1428>

Peer-Reviewed Primary Research Articles (*Corresponding Author)

- 1) Ferguson, KJ., Iverson, W., and Pizzimenti, M. Excerpt by **Case, AJ**. Constructing stories of past lives: Cadaver as first patient: "Clinical summary of dissection." (2008) *Permanente Journal*. 12(2): 89-92. PMID: PMC3042299.
- 2) Nam, C., **Case, AJ**., Hostager, B., and O'Dorisio, S. The role of vasoactive intestinal peptide in megakaryocyte proliferation. (2009) *J Mol Neurosci*. 37(2):160-7. PMID: 18663606.
- 3) Place, TL., Fitzgerald, MP., Venkataraman, S., Vorrink, SU., **Case, AJ**., Teoh, MLT., and Domann, FE. Aberrant promoter CpG methylation is a mechanism for impaired PHD3

- expression in a diverse set of malignant cells. (2011) *PLoS One*. 6(1):e14617. PMID: PMC3030558. (**Cited 38 times**).
- 4) **Case, AJ.**, McGill, JL., Tygrett, LT., Shirasawa, T., Spitz, DR., Waldschmidt, TJ., Legge, KL., and Domann, FE. Elevated mitochondrial superoxide disrupts normal T-cell development, impairing adaptive immune responses to an influenza challenge. (2011) *Free Radic Biol Med*. 50(3):448-58. PMID: PMC3026081. (**Impact Factor 6.170, Cited 71 times**).
 - 5) Fitzgerald, MP., Guorronc, F., Teoh, MLT., Provenzano, MJ., **Case, AJ.**, Martin, J., and Domann, FE. Human chondrosarcoma cells display a mesenchymal to epithelial transition associated with an epigenetic switch. (2011) *Sarcoma*. 598218. PMID: PMC3087947. (**Cited 41 times**)
 - 6) **Case, AJ.**, and Domann, FE. Manganese superoxide dismutase is dispensable for post-natal development and lactation in the murine mammary gland. (2012) *Free Radic Res*. 46(11):1361-8. PMID: PMC3569059.
 - 7) **Case, AJ.**, O'Leary, BR., Hrabe, JE., Mezhir, JJ., and Domann, FE. Rational design of an enzymatic inactive mutant to study the non-catalytic effects of extracellular superoxide dismutase. (2012) *Redox Rep*. 17(6):239-245(7). PMID: PMC3569055.
 - 8) **Case, AJ.**, Madsen, JM., Motto, DG., Meyerholz, DK., and Domann, FE. Manganese superoxide dismutase depletion perturbs iron homeostasis and contributes to epigenetic disruption in murine hematopoietic stem cells. (2012) *Free Radic Biol Med*. 56C:17-27. PMID: PMC3578015. (**Impact Factor 6.170, Cited 26 times**).
 - 9) Cyr, AR., Brown, KE., McCormick, ML., Coleman, MC., **Case, AJ.**, Watts, GS., Futscher, BW., Spitz, DR., and Domann, FE. Maintenance of mitochondrial genomic integrity in the absence of manganese superoxide dismutase in mouse liver hepatocytes. (2013) *Redox Biol*. 1:172-177. PMID: PMC3757676. (**Impact Factor 9.986, Cited 13 times**).
 - 10) **Case, AJ.**, Li, S., Basu, U., Tian, J. and Zimmerman, MC. Mitochondrial-localized NADPH oxidase 4 is a source of superoxide in angiotensin II-stimulated neurons. (2013) *Am J Physiol Heart Circ Physiol*. 305(1):H19-28. PMID: PMC3727106. (**Impact Factor 3.864, Cited 79 times**).
 - 11) Sobhakumari, A., Schickling, BM., Love-Homan, L., Raeburn, A., Fletcher, EVM., **Case, AJ.**, Domann, FE., Miller, FJ., Simons, AL. NOX4 mediates cytoprotective autophagy induced by the EGFR inhibitor erlotinib in head and neck cancer cells. (2013) *Toxicol Appl Pharmacol*. 272(3):736-45. PMID: PMC3808873. (**Impact Factor 3.347, Cited 45 times**).
 - 12) Li, S⁺, **Case, AJ**⁺, Yang, RF., Schultz, HD., and Zimmerman, MC. Over-expressed copper/zinc superoxide dismutase localizes to mitochondria in neurons inhibiting the angiotensin II-mediated increase in mitochondrial superoxide. (2013) *Redox Biol*. 2:8-14. PMID: PMC3863132. (⁺*Co-first authors*) (**Impact Factor 9.986, Cited 16 times**).
 - 13) **Case, AJ.** and Domann, FE. Absence of manganese superoxide dismutase delays p53-induced tumor formation. (2014) *Redox Biol*. 2:220-224. PMID: PMC3909777. (**Impact Factor 9.986, Cited 10 times**).
 - 14) O'Leary, BR., Fath, MA., Bellizzi, AM., Hrabe, JE., Button, AM., Allen, BG., **Case, AJ.**, Altekruze, SF., Wagner, BA., Buettner, GR., Lynch, CF., Hernandez, BY., Cozen, W., Beardsley, RA., Keene, J., Henry, MD., Domann, FE., Spitz, DR., and Mezhir, JJ. Loss of SOD3 (EcSOD) expression promotes an aggressive phenotype in human pancreatic ductal adenocarcinoma. (2015) *Clin Cancer Res*. 21(7):1741-51. PMID: PMC4383686. (**Impact Factor 10.107, Cited 44 times**).
 - 15) Basu U., Seravalli J., Madayiputhiya N., Adamec, J., **Case AJ.**, and Zimmerman MC. Rapid metabolism of exogenous angiotensin II by catecholaminergic neuronal cells in culture media. (2015) *Physiol Rep*. 3(2):e12287. PMID: PMC4393196.

- 16) **Case, AJ.** and Zimmerman, MC. Redox-regulated suppression of splenic T-lymphocyte activation in a model of sympathoexcitation. (2015) *Hypertension*. 65(4):916-23. PMID: PMC4359089. (**Impact Factor 7.713, Cited 14 times**).
- 17) **Case, AJ.**, Agraz D., Ahmad, IM., and Zimmerman, MC. Low-dose *Aronia melanocarpa* concentrate attenuates paraquat-induced neurotoxicity. (2016) *Oxid Med Cell Longev*. 2016:5296271. PMID: PMC4684878. (**Impact Factor 5.076**).
- 18) Collister, JP., Hartnett, C., Mayerhofer, T., Nahey, D., Stauthammer, C., Kruger, M., Tobias, A., O'Sullivan, GO., Parker, J., Tian, J., **Case, AJ.**, and Zimmerman, MC. Overexpression of copper/zinc superoxide dismutase in the median preoptic nucleus improves cardiac function after myocardial infarction in the rat. (2016) *Clin Exp Pharmacol Physiol*. 43(10):960-6. PMID: PMC5008989.
- 19) **Case, AJ.***, Roessner, CT., Tian, J., and Zimmerman, MC. Mitochondrial superoxide signaling contributes to norepinephrine-mediated T-lymphocyte cytokine profiles. (2016) *PLoS ONE*. 11(10): e0164609. PMID: PMC5058488. (**Cited 14 times**).
- 20) **Case, AJ.**, Tian, J., and Zimmerman, MC. Increased mitochondrial superoxide in the brain, but not periphery, sensitizes mice to angiotensin II-mediated hypertension. (2017) *Redox Biology*. 11:82-90. PMID: PMC5124355. (**Impact Factor 9.986, Cited 10 times**).
- 21) Price, ME., **Case, AJ.**, Pavlik J., Devasure J., Wyatt, T., Zimmerman, MC., and Sisson J. S-nitrosation of protein phosphatase 1 mediates alcohol-induced ciliary dysfunction. (2018) *Sci Rep*. 8(1):9701. PMID: PMC6018795. (**Impact Factor 4.576**).
- 22) Ahmad, IM., Abdalla, MY., Moore, TA., Bartenhagen, L., **Case, AJ.**, and Zimmerman, MC. Healthcare workers occupationally exposed to ionizing radiation exhibit altered levels of inflammatory cytokines and redox parameters. (2019) *Antioxidants*. 8(1):E12. PMID: PMC6356728. (**Impact Factor 5.014**).
- 23) Moore, TA., **Case, AJ.**, Matthews, TL., and Zimmerman, MC. Interleukin 17A and chronic stress in pregnant women at 24-28 weeks gestation. (2019) *Nurs Res*. 68(2):167-173. PMID: PMC6415538.
- 24) Adam, R.J., Xia, Z., Pravoverov, K., Hong, J., **Case, AJ.**, Schultz, HD., Lisco, S.J., Zucker, I.H., and Wang, H.J. Sympathoexcitation in response to cardiac and pulmonary stimulation of TRPA1 channels is attenuated in rats with heart failure. (2019) *Am J Physiol Heart Circ Physiol*. 316(4):H862-H872. PMID: PMC6483016. (**Impact Factor 3.864**).
- 25) Maloley, PM., England, BR., Sayles, H., Thiele, GM., Michaud, K., Sokolove, J., Cannon, G.W., Reimold, AM., Kerr, GS., Baker, J.F., Caplan, L., **Case, AJ.**, and Mikuls, TR. Post-traumatic stress disorder and serum cytokine and chemokine concentrations in patients with rheumatoid arthritis. (2019) *Semin Arthritis Rheum*. S0049-0172(18)30612-7. PMID: PMC6687567. (**Impact Factor 5.020**).
- 26) Moshfegh, CM., Collins, CW., Gunda, V., Vasanthakumar, A., Cao, JZ., Singh, PK., Godley, LA., and **Case, AJ.*** Mitochondrial superoxide disrupts the metabolic and epigenetic landscape of CD4 and CD8 T-lymphocytes. (2019) *Redox Biol*. 21:101141. PMID: PMC6859572. (**Impact Factor 9.986**).
- 27) Moshfegh, CM., Elkhatib, S., Collins, CW., Kohl, A.J., and **Case, AJ.*** Autonomic and Redox Imbalance Correlates with T-lymphocyte Inflammation in a Model of Chronic Social Defeat Stress. (2019) *Front Behav Neurosci*. 13:103. PMID: PMC6527882. (**Impact Factor 3.104**).
- 28) Basu, U., **Case, AJ.**, Liu, J., Li, YL., and Zimmerman, MC. Redox-sensitive calcium/calmodulin-dependent protein kinase II α in angiotensin II intra-neuronal signaling and hypertension. (2019) *Redox Biol*. 27:101230. PMID: PMC6859571. (**Impact Factor 9.986**).
- 29) Moore, TA., Samson, K., Ahmad, IM., **Case AJ.**, and Zimmerman, MC. Oxidative Stress in Pregnant Women Between 12-20 Weeks Gestation and Preterm Birth. (2020) *Nurs Res*. 69(3)244-248. PMID: 31917737.

- 30) Costanzo-Garvey, D., Keely, T., **Case, AJ.**, Watson, GF., Alsamraae, M., Yang, Y., Su, K., Heim, CE., Kielian, T., Morrissey, C., Frieling, JJ., and Cook, LM. Neutrophils are mediators of metastatic prostate cancer progression in bone. (2020) *Cancer Immunol Immunother.* 69(6): 1113-1130. PMID: PMC7230043. (**Impact Factor 5.442**).
- 31) Dickinson, K., **Case, AJ.**, Kupzyk, K., and Saligan, LN. Exploring Biologic Correlates of Cancer-Related Fatigue in Men with Prostate Cancer: Cell Damage Pathways and Oxidative Stress. (2020) *Biol Res Nurs.* 22(4):514-519. PMID: PMC7708729.
- 32) Elkhatib, SK., Moshfegh, CM., Watson, GF., and **Case, AJ.*** Peripheral inflammation is strongly linked to elevated zero maze behavior in repeated social defeat stress. (2020) *Brain Behav Immun.* 90:279-285. PMID: PMC7568442. (**Impact Factor 6.633**). [Original preprint at *bioRxiv.* <https://doi.org/10.1101/2020.05.18.102129>]
- 33) Elkhatib, SK., Moshfegh, CM., Watson, GF., Schwab, AD., Katurada, K., Patel, KP., and **Case, AJ.*** Splenic denervation attenuates repeated social defeat stress-induced T-lymphocyte inflammation. (2021) *bioRxiv.* <https://doi.org/10.1101/2021.01.16.426952>. (In revisions at *Biol Psychiatry Open Global Science*).
- 34) Moore, TA and **Case, AJ.** Cytokine levels throughout the perinatal period. (2021) *J Matern Fetal Neonatal Med.* 28:1-15. PMID: 33645396.

Peer-Reviewed Review Articles (*Corresponding Author)

- 1) **Case, AJ.** and Zimmerman, MC. Sympathetic-mediated activation versus suppression of the immune system: consequences for hypertension. (2016) *J Physiol.* 594(3):527-36. PMID: PMC4930069. (**Impact Factor 4.547, Cited 18 times**).
- 2) Place, TL., Domann, FE., and **Case, AJ.*** Limitations of oxygen delivery to cells in culture: An underappreciated problem in basic and translational research. (2017) *Free Radic Biol Med.* 113:311-322. PMID: PMC5699948. (**Impact Factor 6.170, Cited 50 times**).
- 3) **Case, AJ.*** On the origin of superoxide dismutase: An evolutionary perspective of superoxide-mediated redox signaling. (2017) *Antioxidants.* 6(4):E82. PMID: PMC5745492. (**Impact Factor 5.014, Cited 43 times**).
- 4) Djalilova, DM., Schulz, P., Berger, AM., **Case, AJ.**, Kupzyk, KA., and Ross, A. Impact of Yoga on Inflammatory Biomarkers: A Systematic Review. (2018) *Biol Res Nurs.* 21(2):198-209. PMID: PMC6700894. (**Cited 11 times**).
- 5) Elkhatib, SK. and **Case, AJ.*** Autonomic Regulation of T-lymphocytes: Implications in Cardiovascular Disease. (2019) *Pharmacol Res.* 146:104293. PMID: PMC6679768. (**Impact Factor 5.893**).
- 6) Moshfegh, CM., and **Case, AJ.*** The Redox-Metabolic Couple of T-lymphocytes: Potential Consequences for Hypertension. (2020) *Antioxid and Redox Signal.* PMID: PMC8035925. (**Impact Factor 6.323**).
- 7) Daseke, MJ., Chalise, U., Agic, MB., Cook, L., **Case, AJ.**, and Lindsey, ML. Neutrophil signaling during myocardial infarction wound repair. (2020) *Cell Signal.* 77:109816. PMID: PMC7718402 (**Impact Factor 3.968**).
- 8) Elkhatib, SK., Ross, DA., and **Case, AJ.** A forgotten rose: Embracing the complexity of neuroimmune function. (2020) *Biol Psychiatry.* 89(5):e21-e23. PMID: 33541527. (**Impact Factor 12.095**).

Editorials (*Corresponding Author)

- 1) Wang, H., **Case, AJ.**, Wang, W., Mueller, PJ., Smith, SA. Redox Signaling and Neural Control of Cardiovascular Function. (2016) *Oxid Med Cell Longev.* 2016:7086018. PMID: PMC4829727. (**Impact Factor 5.076**).

- 2) Zimmerman, MC. and **Case, AJ.*** Redox Biology in Physiology and Disease. (2019) *Redox Biol.* 27:101267. PMID: PMC6859570. (**Impact Factor 9.986**).

Book Chapters

- 1) **Case, AJ.** and Domann, FE. Hypoxia-induced gene regulation: HIF1 α . *Redox Signaling and Regulation in Biology and Medicine*. (2008) Wiley-CH Verlag GmbH & Co. pp 207-229.

Articles in Prep/Submitted for Publication in Scholarly Journals (*Corresponding Author)

- 1) Spooner, RK., Taylor, BK., Moshfegh, CM., Ahmad, I., Schlichte, SL., Schantell, M., May, PE., O'Neill, JO., Swindells, S., Fox, HS., Stauch, KL., Wilson, TW., **Case, AJ.***, and Zimmerman MC. Neuroinflammatory Profiles Regulated by the Redox Environment Predict Cognitive Dysfunction in Persons Living with HIV. (2020) In review at *Brain*.

Abstracts (*Corresponding Author)

- 1) **Case, AJ.** and Domann, FE. The use of lactoperoxidase as a potential target for breast cancer therapy.
- 2007: University of Iowa Carver College of Medicine Research Week. (Poster)
- 2) Venkataramen, S., Fitzgerald, M., Jettawatana, S., **Case, AJ.**, Oberley, LW., and Domann, FE. Epigenetics, a key factor in hormone-independent prostate and breast cancers: New concepts for developing tailored therapies.
- 2008: *Free Radic Biol Med.* 45(Supplement):S57. (Poster)
- 3) **Case, AJ.**, Johns, AG., Takahashi, T., Waldschmidt, TJ., and Domann, FE. Aberrant thymic development in a T-lymphocyte specific SOD2 knock-out mouse.
- 2008: *Free Radic Biol Med.* 45(Supplement):S133. (Poster)
 - 2008: 10th Annual James F. Jakobsen Graduate Conference, Iowa City, IA. (Poster)
 - 2009: University of Iowa Carver College of Medicine Research Week, Iowa City, IA. (Poster)
 - 2009: Larry W. Oberley Memorial Symposium, Iowa City, IA. (Poster)
- 4) **Case, AJ.**, McGill, JL., Sangster, SC., Madsen, JM., Tygrett, LT., Johns, AG., Takahashi, T., Shirasawa, T., Spitz, DR., Meyerholz, DK., Waldschmidt, TJ., Legge, KL., Domann, FE. Heightened susceptibility to influenza mortality in immunodeficient mice caused by a T-cell specific defect in SOD2.
- 2009: *Blood.* 114(22):1655. (Poster)
 - 2009: *Free Radic Biol Med.* 47(Supplement 1):S42. (Oral)
- 5) **Case, AJ.**, Wagner, BA., Buettner, GR., and Domann, FE. Deficiency of MnSOD in hematopoietic stem cells causes a sideroblastic anemia-like phenotype.
- 2009: *Blood.* 114(22):1991. (Poster)
- 6) **Case, AJ.** and Domann, FE. Hematopoietic stem cell deletion of SOD2 causes aberrant iron homeostasis and a complex phenotype resembling erythropoietic protoporphyria.
- 2010: University of Iowa Carver College of Medicine Research Week, Iowa City, IA. (Poster)
- 7) Cyr, A., **Case, AJ.** Mao, G., and Domann, FE. Conditional knockout of Sod2 in murine hepatocytes disrupts epigenetic control of gene expression.
- 2010: *Free Radic Biol Med.* 49(Supplement):S128. (Poster)
- 8) Mao, G., Jacobus, JA., Martin, SM., **Case AJ.**, Aykin-Burns, N., Mapuskar, K., Coleman, MC., Guis, D., Domann, FE., and Spitz, DR. Low dose (10-100 cGy) whole body irradiation increases steady-state levels of superoxide in C57BL/6 thymocytes.
- 2010: *Free Radic Biol Med.* 49(Supplement):S66. (Poster)

- 9) Place, TL., Fitzgerald, MP., Venkataraman, S., Vorrink, SU., **Case, AJ.**, Teoh, MLT., and Domann, FE. Aberrant promoter CpG methylation is a mechanism for lack of hypoxic induction of PHD3 in a diverse set of malignant cells.
 - 2010: *Free Radic Biol Med.* 49(Supplement):S68. (Poster)
- 10) **Case, AJ.** and Domann, FE. A novel role for mitochondrial superoxide in the development of erythropoietic protoporphyria.
 - 2010: *Free Radic Biol Med.* 49(Supplement):S92. (Oral)
- 11) **Case, AJ.**, Madsen, JM., and Domann, FE. A novel role for mitochondrial superoxide in the development of erythropoietic protoporphyria.
 - 2011: Keystone Symposia on Molecular and Cellular Biology, Big Sky, MT. (Poster)
- 12) **Case, AJ.**, and Domann, FE. Perturbation of mitochondrial superoxide flux inhibits ferrochelatase in hematopoietic stem cells to cause an erythropoietic protoporphyria-like phenotype.
 - 2011: 13th Annual James F. Jakobsen Graduate Conference, Iowa City, IA. (Oral)
- 13) Fletcher, E., Sobhakumari, A., Brown, CO., **Case, AJ.**, Spitz, DR., Domann, FE., Goel, A., and Simons, AL. EGFR inhibition induces IL6 expression via NOX4 in head and neck cancer cells.
 - 2011: *Free Radic Biol Med.* 51(Supplement 1):S133-134. (Poster)
- 14) Mao, G., Jacobus, JA., Martin, SM., **Case, AJ.**, Aykin-Burns, N., Mapuskar, K., Coleman, MC., Knudson, CM., Guis, D., Domann, FE., and Spitz, DR. Sirtuin 3^{-/-} thymocytes demonstrate increased levels of superoxide, a diminished radiation-induced adaptive response, and accelerated Bax-induced thymic lymphoma in C57BL/6 mice.
 - 2011: *Free Radic Biol Med.* 51(Supplement 1):S125-S126. (Poster)
- 15) Hrabe, JE., **Case, AJ.**, O'Leary, BR., Place, TL., Olivier, AK., Henry, MD., Domann, FE., and Mezhir, JJ. Extracellular superoxide dismutase promotes pancreatic cancer liver metastasis.
 - 2012: *J. Am. Coll. Surg.* 215(3):S131. (Poster)
- 16) **Case, AJ.**, O'Leary, BR., Hrabe, JE., Mezhir, JJ., and Domann, FE. The Creation of an Enzymatic inactive mutant to study the non-catalytic effects of extracellular superoxide dismutase.
 - 2012: Larry W. Oberley Memorial Symposium, Iowa City, IA. (Poster)
 - 2012: Holden Comprehensive Cancer Center Research Retreat, Iowa City, IA. (Poster)
- 17) O'Leary, BR. **Case, AJ.**, Hrabe, JE., Olivier, AK., Henry, MD., Domann, FE., and Mezhir, JJ. An evaluation of the role of extracellular superoxide dismutase in pancreatic cancer liver metastasis.
 - 2012: Larry W. Oberley Memorial Symposium, Iowa City, IA. (Poster)
- 18) **Case, AJ.** Madsen, JM., Motto, DG., Meyerholz, DK., and Domann, FE. Disruption of mitochondrial superoxide flux causes abnormal heme synthesis and hemoglobin gene regulation in erythroid precursor cells.
 - 2012: *Free Radic Biol Med.* 53(Supplement 2):S17. (Poster)
- 19) **Case, AJ.**, Cruz, RF., and Zimmerman, MC. Hydrogen peroxide (H₂O₂) is not increased in angiotensin II (AngII)-stimulated neurons overexpressing superoxide dismutase (SOD).
 - 2013: *FASEB J.* 27:1143.15. (Poster)
 - 2013: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 20) Basu, U., **Case, AJ.**, Madayiputhiya, N., and Zimmerman, MC. Development of a chronic angiotensin II (AngII)-stimulated neuronal cell culture model.
 - 2013: *Hypertension.* 62:A152. (Poster)
- 21) **Case, AJ.**, Liu, M., Ding, SJ., and Zimmerman, MC. Nitration of the tyrosine in angiotensin II attenuates its biological activity.

- 2013: *Free Radic Biol Med*. 65(Supplement 2):S69. (Poster)
 - 2013: FASEB Scientific Research Conference: Neural Mechanisms in Cardiovascular Regulation, Glendon Beach, OR. (Oral)
 - 2013: Nebraska Physiological Society Annual Meeting, Ashland, NE. (Poster)
- 22) **Case, AJ**, O'Leary, BR., Stipp, CS., Domann, FE., and Mezhir, JJ. Catalytically inactive extracellular superoxide dismutase reduces pancreatic tumor cell invasion.
- 2013: *Free Radic Biol Med*. 65(Supplement 2):S16. (Poster)
- 23) Basu, U., **Case, AJ**, Lui, J., Nandakumar, R., Adamec, J., Li, YL., and Zimmerman, MC. Overexpression of calcium/calmodulin-dependent protein kinase II potentiates angiotensin II-mediated signaling in neurons.
- 2014: *Hypertension*. 64:A201. (Poster)
 - 2014: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 24) Tian, J., **Case, AJ**, and Zimmerman, MC. MnSOD gene deletion in the brain exacerbates angiotensin II-dependent hypertension.
- 2014: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE.
- 25) **Case, AJ** and Zimmerman, MC. Norepinephrine suppresses T-lymphocyte growth and cytokine production via superoxide during hypertension.
- 2014: *Hypertension*. 64:A253. (Poster)
 - 2014: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 26) **Case, AJ** and Zimmerman, MC. Redox-Regulated Suppression of Resting Splenic T-lymphocyte Activation in a Model of Sympathoexcitation.
- 2014: International Society of Hypertension New Investigator Symposium, Washington, DC. (Poster)
- 27) Moore, TA., Ahmad, IM., Jones J., **Case AJ**, and Zimmerman, MC. Superoxide and superoxide dismutase levels in high-risk pregnant women: A pilot feasibility study.
- 2014: *Free Radic Biol Med*. 76(Supplement 1):S51. (Poster)
- 28) Basu, U., **Case, AJ**, Liu, J., Li, YL., and Zimmerman, MC. Overexpression of redox-sensitive calcium/calmodulin-dependent protein kinase II (CamkII) in central neurons augments angiotensin II (AngII)-induced hypertension.
- 2014: *Free Radic Biol Med*. 76(Supplement 1):S41. (Poster)
- 29) **Case, AJ** and Zimmerman, MC. Redox-regulated suppression of resting splenic T-lymphocyte activation in a model of sympathoexcitation.
- 2014: *Free Radic Biol Med*. 76(Supplement 1):S42-43. (Oral)
 - 2015: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 30) Basu, U., **Case, AJ**, Liu, J., Li, YL., and Zimmerman, MC. Overexpression of redox-sensitive calcium/calmodulin-dependent protein kinase II (CamkII) in central neurons augments angiotensin II (AngII)-induced hypertension.
- 2015: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 31) Moore, TA., Ahmad, IM., Jones J., **Case AJ**, and Zimmerman, MC. Superoxide and superoxide dismutase levels in high-risk pregnant women: preliminary results.
- 2015: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
- 32) Tian, J., **Case, AJ**, and Zimmerman, MC. Overexpression of MnSOD in the brain subfornical organ attenuates angiotensin II-mediated hypertension.

- 2015: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
 - 2015: Larry W. and Terry D. Oberley Symposium, Iowa City, IA. (Poster)
- 33) **Case, AJ.**, Tian, J., and Zimmerman, MC. Increased mitochondrial superoxide in the brain, but not periphery, sensitizes mice to angiotensin II-mediated hypertension.
- 2015: *Hypertension*. 66:A120. (Oral)
 - 2015: Larry W. and Terry D. Oberley Symposium, Iowa City, IA. (Poster)
 - 2015: International Academy of Cardiovascular Sciences, Omaha, NE. (Oral)
- 34) **Case, AJ** and Zimmerman, MC. Inverse regulatory effects of mitochondrial superoxide in resting and activated T-lymphocytes.
- 2015: *Free Radic Biol Med*. 87(Supplement 1):S39. (Oral)
- 35) **Case, AJ** and Zimmerman, MC. Norepinephrine-mediated suppression of T-lymphocyte activation is regulated by mitochondrial redox mechanisms.
- 2016: *FASEB J*. 30:757.1. (Oral)
- 36) **Case, AJ.**, Roessner, CT., Tian, J., and Zimmerman, MC. Norepinephrine-mediated modulation of T-lymphocyte activation is regulated by mitochondrial redox mechanisms.
- 2016: University of Nebraska Redox Biology Center Annual Retreat, Ashland, NE. (Poster)
 - 2016: FASEB Scientific Research Conference: Neural Mechanisms in Cardiovascular Regulation, Saxtons River, VT. (Oral)
- 37) Price, ME., **Case, AJ.**, Zimmerman, MC., and Sisson, JH. Oxidation of airway cilia-localized protein phosphatase 1 drives alcohol-induced ciliary dysfunction.
- 2016: Nebraska Physiological Society Annual Meeting, Omaha, NE. (Poster)
 - 2016: American Physician Scientists Association Midwest Regional Meeting, Omaha, NE. (Poster)
 - 2016: Alcohol and Immunology Research Interest Group Meeting, Loyola University, Chicago, IL. (Poster)
 - 2017: *Alcohol*. 59:74. (Poster)
- 38) **Case, AJ.***, Collins, CW., Roessner, CT., Tian, J., and Zimmerman, MC. Disruption of mitochondrial redox and metabolic states in norepinephrine-exposed T-lymphocytes
- 2017: *FASEB J*. 31:697.8. (Poster)
- 39) Kohl, AJ., Collins, CW., Elkhatib, S., and **Case, AJ***. Evaluation of inflammatory parameters in mouse stress models.
- 2017: Nebraska Physiological Society Annual Meeting, Omaha, NE. (Poster)
- 40) Djalilova, DM., Schulz, P., Berger, AM., **Case, AJ.**, Dupzyk, KA., and Ross, A. Yoga and inflammation: A systematic review.
- 2017: Midwest Nursing Research Society Annual Research Conference, Minneapolis, MN. (Poster)
- 41) Price, ME., Pavlik, JA., **Case, AJ.**, Zimmerman, MC., and Sisson, JH. Alcohol drives redox imbalance and mitochondrial dysfunction in ciliated airway epithelial cells.
- 2017: Nebraska Physiological Society Annual Meeting, Omaha, NE. (Poster)
- 42) **Case, AJ.***, Collins, CW., Kohl, AJ., Moshfegh, CM., and Elkhatib, S. Redox-Driven Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension.
- 2018: *FASEB J*. 32:737.1. (Oral)
- 43) Moore, TA., **Case, AJ.**, Matthews, TL, and Zimmerman, MC. IL-17A and Chronic Stress in Pregnant Women at 24-48 Weeks Gestation.
- 2018: Council for the Advancement of Nursing Science Annual Meeting, Washington, DC. (Poster)

- 44) Moshfegh, CM., Collins, CW., Kohl, AJ., Elkhatib, S., and **Case, AJ.*** Redox-Driven Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension.
- 2018: SfRBM Regional Meeting and Oberley Symposium, Omaha, NE. (Oral)
 - 2018: AHA Council on Hypertension Annual Meeting, Chicago, IL. (Oral)
- 45) Ahmad, IM., Abdalla, MY., Moore, TA., Bartenhagen, L., **Case, AJ.**, and Zimmerman, MC. Elevated Pro-Inflammatory Cytokines in Healthcare Workers Occupationally Exposed to Ionizing Radiation.
- 2018: *Free Radic Biol Med.* 128(Supplement 1):S100. (Poster)
- 46) Moshfegh, CM., Elkhatib, S., Collins, CW., Kohl, AJ., and **Case, AJ.*** Psychological Stress-Mediated Hypertension is Regulated via Redox-Signaling in T-lymphocytes.
- 2018: *Free Radic Biol Med.* 128(Supplement 1):S33. (Oral)
 - 2018: Nebraska Physiological Society Annual Meeting, Omaha, NE. (Poster)
- 47) **Case, AJ.***, Moshfegh, CM., and Elkhatib, S. Identification of a Novel T-lymphocyte Inflammatory Protein in Psychological Stress-Induced Hypertension.
- 2019: *FASEB J.* 33:836.2. (Poster)
 - 2019: *Biol Psych.* 85:10. S304. (Poster)
- 48) Elkhatib, S., Moshfegh, CM., Collins, CW., and **Case, AJ.*** Inflammatory T-lymphocytes Express a Pro-Sympathetic Neurotransmission Signature during Psychological Trauma.
- 2019: Midwest Student Biomedical Research Forum, Omaha, NE. (Oral)
 - 2019: International Student Research Forum, Odense, Denmark. (Oral)
- 49) Elkhatib, SK., Moshfegh, CM., Watson, GF., and **Case, AJ.*** Neuroimmune Contributions to Hypertension Sensitization in a Preclinical Model of PTSD.
- 2019: UNMC Pharmacology and Experimental Neuroscience Retreat, Omaha, NE. (Poster)
 - 2019: UNMC MD/PhD Scholars Program Annual Retreat, Omaha, NE. (Poster)
- 50) Moshfegh, CM., Elkhatib, SK., Watson, GF., and **Case, AJ.*** Redox-Regulated Calprotectin as a Possible Novel Regulator of Pro-Inflammatory T-lymphocytes after Psychological Trauma.
- 2019: *Free Radic Biol Med.* 145(Supplement 1):S147. (Oral)
- 51) Sass, D., Fitzgerald, W., Margolis, L., Schulz, P., Berger, A., Kupzyk, K., **Case, AJ.**, Dickinson, K., and Saligan, L. Characterization of Extracellular Vesicles in Patients with Cancer-Related Fatigue.
- 2019: National Institute on Nursing Research Council Meeting, Baltimore, MD. (Poster)
- 52) Elkhatib SK, Moshfegh CM, Watson GF, **Case AJ.*** Neuroimmune Contributions to T-lymphocyte-Driven Inflammation in a Preclinical Model of Post-traumatic Stress Disorder (PTSD).
- 2020: *FASEB J.* 34(S1):1-1. (Oral)
 - 2020: *Biol Psych.* 87:9. S315. (Poster)
- 53) Moshfegh CM, Elkhatib SK, Watson GF, **Case AJ.*** Psychological Trauma-Induced Calprotectin Potentiates Pro-Inflammatory T-lymphocyte Differentiation and Memory Formation.
- 2020: *Biol Psych.* 87:9. S327. (Poster)
 - 2020: International Student Research Forum, Vancouver, British Columbia. (Oral)
- 54) Lally, RM., Schmidt, R., Wengel, SP., Sebastian, JG., Kupzyk, KA., Cordts, KM., **Case, AJ.** Promoting Psychological Wellness Among the Healthcare Workforce During COVID-19.
- 2020: Academy of Nursing Policy Conference. (Poster)
- 55) Elkhatib SK, Moshfegh CM, Watson GF, Katsurada, K., Patel, KP., and **Case AJ.*** Sympathetic splenic denervation ameliorates social defeat stress-induced inflammatory and redox profiles in T-lymphocytes

- 2020: 35th Annual MD/PhD National Student Conference, Aurora, CO (Poster)
 - 2020: Midlands Physiological Society annual conference, Omaha, NE (Poster)
- 56) Moshfegh CM, Elkhatib SK, Watson GF, and **Case AJ**.* Redox-Regulated Calprotectin Potentiates Psychological Trauma Induced Pro-Inflammatory T-Lymphocyte Differentiation
- 2020: *Free Radic Biol Med*. 159(Supplement 1):S45-46. (Oral)
 - 2020: Midlands Physiological Society annual conference, Omaha, NE (Poster)
- 57) Elkhatib SK, Moshfegh CM, Watson GF, Katsurada K, Patel KP, and **Case AJ**.* Sympathetic nerves control splenic T-lymphocyte inflammation and mitochondrial redox environment during repeated social defeat stress
- 2021: Society for Biological Psychiatry Annual Meeting, Virtual (Oral)
 - 2021: Midwest Student Biomedical Research Forum, Omaha, NE (Poster)
- 58) Moshfegh CM, Elkhatib SK, Watson GF, and **Case AJ**.* Repeated social defeat stress leads to pro-inflammatory T-lymphocytes via dendritic cell priming
- 2021: Society for Biological Psychiatry Annual Meeting, Virtual (Poster)
- 59) Elkhatib SK, Moshfegh CM, Watson GF, and **Case AJ**.* T-lymphocyte tyrosine hydroxylase controls T_H17 polarization during repeated social defeat stress
- 2021: Psychoneuroimmunology Research Society Annual Meeting, Virtual

XVI. Teaching Activities**Lectures in Team-Taught Courses****The University of Iowa****2007 – 2008: Radiation Safety and Radiobiology (RSP:3130)**

- No Student Evaluations Available
- 4 lectures/semester (4 annually) @ 1 hour each
 - *What exactly is radiation?*
 - *High and low LET radiation*
 - *Pathological effects of radiation*
 - *Treatment of radiation toxicity*

The University of Nebraska Omaha**2013 – 2017: Physiology and Anatomy I and II (BMCH 2400-2500)**

- 4.60/5 Cumulative Average for Student Evaluations
- 3 lectures/semester (6 annually) @ 2 hours each
 - *Lymphatics*
 - *Innate Immunity*
 - *Adaptive Immunity*

2016: Health Aspects of Stress Management (HED 2850)

- No Student Evaluations Available
- 1 lecture/semester (1 annually) @ 2 hours each
 - *Psychological stress: Consequences for the immune system*

The University of Nebraska Lincoln**2016: Redox Biology Center Summer Course**

- 4.0/5 for Student Evaluations
- 1 lecture/semester (1 annually) @ 1 hour each
 - *Mitochondrial redox signaling*

University of Nebraska Medical Center**College of Medicine****2014 – 2020: Redox Biology in Human Disease (CIP/IPMM 922)**

- 4.86/5 Cumulative Average for Student Evaluations
- 3 lectures/semester (3 annually) @ 2 hours each
 - *Sources of reactive oxygen species*
 - *Redox signaling*
 - *Redox biology and the immune system*

2018 – 2020: Scientific Writing (CIP/IPMM 814)

- No Student Evaluations Available
- 2 lectures/semester (4 annually) @ 2 hours each
 - *Methods and figure legends*
 - *References*

2019 – 2021: Neuroimmunology (PAMM 930)

- 4.59/5 Cumulative Average for Student Evaluations

- 2 lectures/semester (2 annually) @ 1.5 hours each
 - *Lymphocytes and the nervous system*
 - *Psychological disorders and the immune system*

College of Allied Health Professions

- 2015 – 2018: **Radiation Technology Physiology (RSTE/MITS 352R)**
- 4.61/5 Cumulative Average for Student Evaluations
 - 14 lectures/semester (14 annually) @ 1 hour each
 - *Introduction to cell physiology*
 - *Chemical composition of the body*
 - *Cellular composition of the body*
 - *Osmosis, diffusion, and transport*
 - *Membrane potentials and excitable cells*
 - *Nervous system*
 - *Muscles*
 - *Overview of metabolism*
 - *Blood 1*
 - *Blood 2*
 - *Blood vessels*
 - *Lymphatics*
 - *Innate immunity*
 - *Adaptive immunity*

- 2018 – 2020: **Radiation Technology Anatomy and Physiology I and II (CAHP 462-463)**
Online course
- No Student Evaluations Available
 - *Administration and grading of 3 group projects/semester (6 annually)*

Lectures in Individually-Taught Courses

University of Nebraska Medical Center

College of Medicine

- 2018 – 2021: **Physiology Seminar Series and Journal Club (IPMM 970/CIP 970)**
- No Student Evaluations Available
 - 15 lectures/semester (30 annually) @ 1 hour each
 - *Selected manuscript discussions*
 - *Student presentation evaluation*
- 2018 – 2020: **Scientific Communication (IPMM 815)**
- 4.88/5.0 Cumulative Average for Student Evaluations
 - 15 lectures/semester (15 annually) @ 2 hours each
 - *Listening and connection*
 - *Emotion and connection*
 - *Finding your story*
 - *Building your story*
 - *Practicing your story*
 - *The scientific presentation for scientists*
 - *The scientific poster*
 - *Networking and elevator pitches*
 - *The chalk talk*

- 7 classes devoted to student presentation evaluations

UNMC contact hours (as reported on ADIS) since first faculty appointment
(197.5 to date; 39.5/academic year average – entire academic years shown below)

Course	2016	2017	2018	2019	2020
CIP/IPMM 922	5	5	5		6
RSTE 352R	7	16			
CIP/IPMM 814		2	4	6	4
CIP/IPMM 970			29	31	32
NSC 930			1.5	3	3
CAHP 462			5	5	
CAHP 463			5	5	
IPMM 815				28	
Totals	12	23	39.5	78	45

Course Development and Directorship

The University of Iowa

2007 – 2008: Radiation Safety and Radiobiology (RSP:3130)
Course Co-Director

University of Nebraska Medical Center

College of Medicine

2018 – 2021: Physiology Seminar Series and Journal Club (CIP 970)
Course Director

2018 – 2020: Scientific Communication (IPMM 815)
Course Developer (recorded 76 hours of time spent in development)
Course Director

College of Allied Health Professions

2018 – 2020: Radiation Technology Anatomy and Physiology I and II (CAHP 462-463), online course
Course Co-Developer (recorded 68 hours of time spent in development)
Course Co-Director

Mentoring

Undergraduate Students

2008: Anna Johns, University of Iowa summer undergraduate research, Secondary undergraduate mentor

2009: Stephen Sangster, University of Iowa/Lincoln University summer undergraduate research, Secondary undergraduate mentor, (Currently: PhD Graduate Student, University of Florida)

2015: Colton Roessner, University of Nebraska Medical Center summer undergraduate research, **Primary undergraduate mentor**, (Currently: Medical Student, University of Nebraska Medical Center)

2017: Sarah Schlichte, Buena Vista University J-term undergraduate research, **Primary undergraduate mentor**, (Currently: Assistant Professor, Buena Vista University)

- 2017 – 2018: Allison Kohl, University of Nebraska Medical Center summer undergraduate research, **Primary undergraduate mentor**
- 2019: Logan Duryee, University of Nebraska Omaha Undergraduate Research Internship, **Primary mentor**
- 2019: Miranda Jangula, University of Nebraska Omaha Undergraduate Research Internship, **Primary mentor**, (Currently: Medical Student, University of Nebraska Medical Center)
- 2020: Joanna Zagrean, Texas A&M University BICH/GENE 491 Research, **Primary mentor**

Graduate Students

- 2012 – 2015: Urmi Basu, University of Nebraska Medical Center PhD graduate student research, Secondary graduate mentor
- 2017: Cleofus Sarmiento, University of Nebraska Medical Center PhD student rotation, Rotation mentor
- 2017: Tyler Jones, University of Nebraska Medical Center PhD student rotation, Rotation mentor
- 2017 – 2018: Sabrina Schatzman, Johns Hopkins University PhD Student, SfRBM Mentorship program, **Primary mentor**
- 2017 – 2020: Dilorom Djalilova, University of Nebraska Center, College of Nursing PhD student, Research mentor
- 2017 – Present: Safwan Elkhatib, University of Nebraska Medical Center MD/PhD student, **Primary graduate mentor**
- 2017 – Present: Cassandra Moshfegh, University of Nebraska Medical Center IPMM PhD graduate student, **Primary graduate mentor**
- 2020: Aaron Schwab, University of Nebraska Medical Center MD/PhD student rotation, Rotation mentor
- 2020: Roneldine Mesidor, University of Nebraska Medical Center PhD student rotation, Rotation mentor

Medical Students

- 2013 – 2014: Daniel Agraz, University of Nebraska Medical Center summer medical student research, Secondary medical student mentor, (Currently: Ophthalmology Resident, University of Nebraska Medical Center)

Medical Residents

- 2010 – 2011: Jennifer Hrabe, MD, University of Iowa surgical research resident, Secondary resident mentor, (Currently: Colorectal Surgeon, University of Iowa)

Postdoctoral Fellows

- 2018 – 2019: Eman Gohar, PhD, University of Alabama at Birmingham, AHA Council on Hypertension Advisory and Mentoring Program (K99/R00 recipient), **Primary mentor**

Junior Faculty

- 2017 – 2020: Tiffany Moore, PhD, Assistant Professor, University of Nebraska Medical Center, College of Nursing, Peer mentor
- 2018 – 2021: Kristin Dickinson, PhD, Assistant Professor, University of Nebraska Medical Center, College of Nursing, Peer Mentor

- 2018 – 2021: Leah Cook, PhD, Assistant Professor, University of Nebraska Medical Center, College of Medicine, Peer Mentor
- 2019 – 2021: Windy Alonso, PhD, Assistant Professor, University of Nebraska Medical Center, College of Nursing, Peer Mentor

Awards and Honors to Trainees

1) Cassandra Moshfegh (PhD student)

- 2018: Selected oral presentation from abstract: “*Redox-Driven Lymphocyte Inflammation Sensitizes Mice to Psychological Stress-Mediated Hypertension*,” Society for Redox Biology and Medicine Regional Meeting, Omaha, NE.
- 2018: Travel award and selected oral presentation from abstract: “*Psychological Stress-Mediated Hypertension is Regulated via Redox-Signaling in T-lymphocytes*,” Society for Redox Biology and Medicine Annual National/International Meeting, Chicago, IL
- 2018: First place poster presentation: “*Psychological Stress-Mediated Hypertension is Regulated via Redox-Signaling in T-lymphocytes*,” Nebraska Physiological Society Annual Meeting, Omaha, NE
- 2019: Selected oral presentation from abstract: “*Redox-Regulated Calprotectin as a Possible Novel Regulator of Pro-Inflammatory T-lymphocytes after Psychological Trauma*,” Society for Redox Biology and Medicine Annual National/International Meeting, Las Vegas, NV
- 2020: Selected as UNMC Representative from abstract and oral competition: “*Psychological Trauma-Induced Calprotectin Potentiates Pro-Inflammatory and Memory T-lymphocyte Formation*.” International Student Research Forum, Vancouver, British Columbia
- 2020: Fuji Films Visual Sonics Outstanding Graduate Poster Award: “*Redox-Regulated Calprotectin Potentiates Psychological Trauma Induced Pro-Inflammatory T-Lymphocyte Differentiation*.” Midlands Physiological Society annual conference, Omaha, NE
- 2020: Invited oral presentation and Young Investigator Award: “*Redox-Regulated Calprotectin Potentiates Psychological Trauma Induced Pro-Inflammatory T-Lymphocyte Differentiation*.” Society for Redox Biology and Medicine Annual National/International Meeting, Virtual due to COVID-19

2) Safwan Elkhatib (MD/PhD student)

- 2019: Selected oral presentation from abstract and 4th place overall: “*Inflammatory T-lymphocytes express a pro-sympathetic neurotransmission signature during psychological trauma*.” Midwest Student Biomedical Research Forum, Omaha, NE
- 2019: Selected as UNMC Representative from abstract and oral competition: “*Inflammatory T-lymphocytes express a pro-sympathetic neurotransmission signature during psychological trauma*.” International Student Research Forum, Odense, Denmark
- 2019: 1st Place – Outstanding Poster Award: “*Neuroimmune Contributions to Hypertension Sensitization in a Preclinical Model of PTSD*.” UNMC Pharmacology and Experimental Neuroscience Retreat, Omaha, NE
- 2020: Travel Fellowship Award selected from abstract and CV: “*Neuroimmune Contributions to T-lymphocyte-Driven Inflammation in a Preclinical Model of Post-traumatic Stress Disorder (PTSD)*.” Society of Biological Psychiatry Annual Meeting, New York, NY

- 2020: Selected oral presentation from abstract: “*Neuroimmune Contributions to T-lymphocyte-Driven Inflammation in a Preclinical Model of Post-traumatic Stress Disorder (PTSD)*.” Experimental Biology Annual National/International Meeting, Virtual due to COVID-19
- 2020: Lasker Essay Contest Winner: “*Salk, Sabin, and the Crown of Health*.” Albert and Mary Lasker Foundation
- 2020: Poster Presentation Award, 2nd place: “*Sympathetic splenic denervation ameliorates social defeat stress-induced inflammatory and redox profiles in T-lymphocytes*.” UNMC Campus Research Retreat, Omaha, NE
- 2021: Selected oral presentation from abstract: “*Sympathetic nerves control splenic T-lymphocyte inflammation and mitochondrial redox environment during repeated social defeat stress*.” Society of Biological Psychiatry Annual Meeting, Virtual due to COVID-19
- 2021: Michael Irwin Equity, Diversity and Inclusion (EDI) Award, Psychoneuroimmunology Research Society annual meeting, Virtual due to COVID-19

Service on Graduate Student Advisory/Supervisory Committee:

- **Thesis Committee Chair**
 - Cassandra Moshfegh, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine PhD student (2018 – Present)
 - Safwan Elkhatib, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine MD/PhD student (2018 – Present)
- **Comprehensive Examination Committee Chair**
 - Upendra Chalise, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine PhD student (2021)
- Thesis Committee Member (Internal)
 - Michael Price, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine MD/PhD student (2016 – 2018)
 - Upendra Chalise, University of Nebraska Medical Center Integrative Physiology and Molecular Medicine PhD student (2019 – Present)
- Thesis Committee Member (External)
 - Roksana Zak, University of Nebraska Omaha Exercise Physiology MS student (2016 – 2017)
 - Dilorom Djalilova, University of Nebraska Medical Center Nursing PhD student (2017 – 2020)
 - Danielle Frodyma, University of Nebraska Medical Center Cancer Research PhD student (2018 – 2020)
 - Sydney Greer, University of Nebraska Medical Center Molecular Genetics and Cell Biology PhD student (2018 – Present)
 - Ronald Headid, University of Nebraska Omaha Exercise Physiology MS student (2019 – 2020)
 - Joshua McDowell, University of Nebraska Medical Center Biochemistry and Molecular Biology PhD student (2020 – Present)