Charles R. O’Malley Charitable Trust
Endowed Professorships
Report of Research Activity & Expenditures
July 1, 2017 - December 31, 2018
On behalf of the College of Allied Health Professions (CAHP), I am pleased to present the 2018 Charles R. O’Malley Charitable Trust Endowed Professorships Report. The report reflects our commitment to the core values of UNMC and Nebraska Medicine – innovation, teamwork, excellence, accountability, courage and healing.

The pages that follow detail the past year’s outstanding contributions of those faculty holding endowed professorships. These contributions exemplify innovation, excellence, and healing. Perhaps most importantly, the report reflects the multiplying impact of teamwork. The very development of the CAHP professorships was based on the teamwork between the O’Malley Trust and our community benefactors. As you will see in the pages that follow, our talented faculty continue to multiply these gifts to advance interprofessional education and scholarship, improve the educational experience of students, advance knowledge to improve care outcomes, develop international partnerships, and mentor others.

I thank our benefactors for their partnership, generosity, and for the trust they have placed in the CAHP and UNMC. And I thank our faculty for not only their unique individual contributions, but for the significant role they play in advancing the mission of UNMC to “lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care.”

Kyle P. Meyer, PhD, MS, PT, FASAHP

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University of Nebraska Foundation Fund Management & Investments

Private gifts to the UNMC College of Allied Health Professions’ endowed faculty positions have been invested in the University of Nebraska Foundation Fund A. Fund A, the foundation’s main endowment fund, is divided among dozens of professional managers, is broadly diversified, and is governed by the policy set by the foundation’s investment committee. Fund A works like a mutual fund, with each endowed fund owning units of Fund A. As of October 1, 2015, the foundation’s spending policy stipulated that the income distribution for each unit of Fund A will be 4.25 percent of a 20-quarter moving average of the market value-per-unit.

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Financial Summary Definitions

Available for Spending: The amount available to be spent during July 1, 2017-December 31, 2018.
Book Value: The original value of the gift(s) plus any additional deposits.
Cash to Invest: Cash to be invested.
Gifts to the Fund: Includes all gifts received from July 1, 2017 through December 31, 2018.
Income: Income credited to the fund between July 1, 2017 and December 31, 2018.
Market Value: An endowed fund’s value as of December 31, 2018.

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O’Malley gifts generated during 2009-2014 were part of the CAHP Capital Campaign Committee:

Dennis F. Strauss, M.D., Co-Chair
Chris Strauss, Co-Chair
Jay Burr
Mary Haven
Rick Kolkman
Karen Linder

Kyle Meyer, Ph.D.
Carol A. McGlade
Patty Sherman
Connie Spellman
CQuence Distinguished Professorship for Innovation in Health Care
The purpose of this fund is to advance the development, implementation and assessment of interprofessional curricula, including new models of primary care and transitional care.

Ryan Splittgerber, PhD served as the CQuence Distinguished Professor, Assistant Professor, Assistant Dean for the Health Science Education Complex (HSEC), and Director of the HSEC Gross Anatomy Lab. As a member of the UNMC faculty between 2012 and 2018, Dr. Splittgerber was actively involved with curricular innovation and development in the classroom, laboratory, and through enhanced (e-learning) modalities. Dr. Splittgerber returned to Vanderbilt University in 2018. His accomplishments while holding the position of CQuence Distinguished Professor are included below. The professorship will be reappointed.

Match Donor: CQuence Health Group (headed by Michael Cassling)
Appointed March 2017

Completed Activities
- Published Snell’s Clinical Neuroanatomy textbook in November 2018.
- Developed a lightly embalmed advanced anatomy laboratory at the Health Science Education Complex to be used for interprofessional anatomical and procedural training of local students and area clinicians.
- Implemented comprehensive anatomy and physiology eModules with radiography students. Four modules are still in progress.
- Developed and deployed an interprofessional human anatomy continuing education series, exploring musculoskeletal, thorax/abdomen, and neuroanatomy, for health care providers. This was offered in summer 2018 and will be offered again in summer 2019.

Activities in Progress:
- Establishment of a human tissue plastination laboratory to be used for development of new teaching applications to enhance the delivery of anatomy education in the CAHP.
- Evaluation of student satisfaction with simulation-based education at the HSEC with the collaboration of UNK Sociology faculty.
- Development of an interprofessional telehealth education curriculum at the HSEC, in collaboration with UNMC College of Nursing. Teresa Cochran, PT, DPT, MA, GCS, FNAP, College of Allied Health Professions Assistant Dean at the HSEC, is in the initial planning steps with Cathrin Carithers, DNP, RN, APRN, FNP-C, College of Nursing Assistant Dean at the HSEC, to plan an interprofessional curriculum for telehealth. They are completing an institutional “self” assessment for interprofessional learning experiences at HSEC, and this project will be prioritized for development in 2019.

Financial Summary as of December 31, 2018
- Book Value - $250,053
- Market Value - $235,457
- Income - $14,855
- Available for Spending - $29,003

Together in Health™
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Clarence and Nelle Gilg Professorship for Teaching Excellence and Innovation in Allied Health

The purpose of this fund is to support teaching excellence and educational scholarship

Karen J. Honeycutt, MEd, MLS(ASCP)CMSMCM is the Gilg Professor and the Director of the Medical Laboratory Science program in the College of Allied Health Professions. She received a Bachelor of Science Degree in Medical Technology from UNMC and a Master of Education Degree from the University of Nebraska at Lincoln (UNL). She is currently a UNL PhD Candidate in Educational Studies with an Instructional Technology specialization. Karen has been involved in clinical laboratory education since 1984 and has served as program director since 2013. She served on the American Society for Clinical Pathology (ASCP) Board of Certification examination committees from 2005-2012. She was granted ASCP Mastership professional designation in 2014.

Match Donor: Mary Haven | Appointed April 2016

Completed Activities

Presentations & Publications

• Bishop S, Honeycutt K. Medical Laboratory Science Graduate Management Curriculum Development Using Managerial Survey Responses. Journal of Clinical Laboratory Science (accepted for publication Jan 2018).

• American Society for Clinical Pathology, 2018. BOC Study Guide Clinical Laboratory Certification Examinations, 6th ed., contributed to microbiology section.


• Hulquist T, Honeycutt K, McBrien S, Schmid K. Getting the Most Out of Your Multiple-Choice Questions, UNMC Faculty Development Session, Oct. 25, 2018

• Donner L, Imhoff M, Honeycutt K. What is the Future of the Microbiology Practitioner? We need YOUR Input, 2018 Nebraska Spring Meeting CLMA & ASCLS-NE, April 4, 2018.

Committee Service

• Member, Microbiology Core Competency Committee, American Society for Clinical Pathology Board of Certification

• Member, American Society for Clinical Pathology Board of Certification Program Director Advisory Group

• Chair, UNMC Physician Assistant Program Director Search Committee

• Chair, UNMC Faculty Senate Library Advisory Committee

• Faculty, UNMC PITS: Performance Improvement in Teaching Series

• Co-chair, UNMC Interprofessional Academy of Educators Curricular Design, Instructional Methods, Assessment, and Evaluation Interest Group

• Member, UNMC Interprofessional Academy of Educators

• Member, UNMC CAHP Leadership Council

Financial Summary as of December 31, 2018

• Book Value - $289,826

• Market Value - $271,731

• Income - $14,013

• Available for Spending - $33,078

Planned Activities

• Incorporation of virtual microscopy in the UNMC MLS curriculum – ongoing

• Reinforcing Medical Laboratory Science Student Technical Skill Performance with Video-based Peer-evaluation Cognitive Procedural Practice – a research project, (data collection 2018, data analysis 2019)

• UNMC High School Alliance Program Outcome Assessment: Learners Understanding of the Healthcare Team: ongoing data analysis (2017-19 academic year)

• Incorporation of Clinical Practicum Student Reflection – Developing Professional Reflection Skills: data collection (2018-19 academic year) – a research project (data analysis phase)

• Approval of Masters-level Medical Laboratory Science Degree [in collaboration with UNK College of Business and Technology (ongoing)]

• ASCP BOC Microbiology Core Competency Committee – developing MLS and MLT Program BOC Examination Compendium

Awards

2017 UNMC Varner Educator Laureate (awarded in 2018)

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Kimberly (Kim) K. Michael, MA, RT(R), RDMS, RVT, FDMS, is the Anderson Professor and the Director of the Diagnostic Medical Sonography Education program in the CAHP at UNMC. She received a Bachelor of Science Degree from UNMC and a Master of Arts degree from the University of Nebraska at Omaha. Kim has been involved in sonography education at UNMC since 1991 and has served as the program director since 1998. She serves on the Board of Directors for the Society of Diagnostic Medical Sonography and its Foundation. She has authored over 40 publications, many in the Journal of Diagnostic Medical Sonography.

Match Donors: Dr. Joseph C. & Mrs. Darlene Anderson  |  Appointed March 2014

Completed Activities
- Research Study: The Use of Vidyo in CAHP Courses, A Survey to Assess Student and Faculty Perceptions and Feedback. Data published in the Internet Journal of Allied Health Sciences and Practices October, 2018
- Multi-Institutional Research Study funded through the ASRT: The Impact of Case-Based e-Learning Modules on Student Knowledge and Critical Thinking in Imaging Science Curricula. Manuscript submitted for publication to Radiologic Technology.
- IPE Research Study: Near-Peer Teaching of Abdominal Point-of-Care Ultrasound to Internal Medicine Residents. Study funded with a grant from the Interprofessional Academy of Educators. Data published in BMC Medical Education, December 2018.

Research Studies
- Introducing Mindful Pause Practice in Sonography Education: A strategy to improve classroom presence, Study funded through the Society of Diagnostic Medical Sonography

New Appointments
- Additional 3-year term as Associate Director for the Interprofessional Academy of Educators

Awards/Honors
- Impact in Education Award for Innovative Practice in Education, Office of the Vice Chancellor for Academic Affairs, University of Nebraska Medical Center, January 2018

Presentations & Publications
- Becker B, Rutt K, Huntley A, Sayles H, Michael K. Student and Faculty Perceptions of Live Synchronous Distance Education for Allied Students Following Program Expansion to a Rural Campus. Internet Journal of Allied Health Sciences and Practices October 2018, Vol 16 No. 4, pp 1-10.
- 6th World Conference Ultrasound in Medical Education, Wake Forest School of Medicine, Winston-Salem, NC, September 2018. Sponsor: The Society of Ultrasound in Medical Education. Topic: It’s a white fuzzy mess and they’re able to hone-in and get a great image. A mixed-methods evaluation of how interprofessional point-of-care ultrasound education impacts participants’ perceptions of interprofessional learning and stereotypes. Presenters: Christopher Smith, Kimberly Michael, Kathryn Wampler, Tabatha Matthias, Elizabeth Beam, Lea Pounds, Devin Nickol, Kathryn Wampler, Kimberly Michael.
Presenters:

- **Kim Michael**, Tanya Custer.


Abstracts at National Meetings

- Smith C, Matthias T, Beam E, Pounds L, Nickol D, Wampler K, **Michael K**. All together now! A mixed-methods evaluation of an interprofessional, peer-led point-of-care ultrasound workshop, 6th World Conference Ultrasound in Medical Education, Wake Forest School of Medicine, Winston-Salem, NC, Sept, 2018.
• Smith C, Michael K, Wampler K, Nickol D, Pounds L, Beam E, Matthias T. It’s a white fuzzy mess and they’re able to hone-in and get a great image. A mixed-methods evaluation of how interprofessional point-of-care ultrasound education impacts participants’ perceptions of interprofessional learning and stereotypes. 6th World Conference Ultrasound in Medical Education, Wake Forest School of Medicine, Winston-Salem, NC, Sept, 2018.

Committee Service
• At-Large Director for the Society of Diagnostic Medical Sonography
• Board of Directors for the Society of Diagnostic Medical Sonography Foundation
• Ethics Committee Chair, Society of Diagnostic Medical Sonography
• Editorial Board Liaison, Journal of Diagnostic Medical Sonography
• Educational Development Institute, UNMC
• Wellbeing Coordinating Council, UNMC
• Assessment Committee, UNMC
• College of Allied Health Professions, UNMC
  • Chair of Wellness and Recognition Committee
  • Promotion and Tenure Committee
  • Research Development and Management Committee

Financial Summary as of December 31, 2018
• Book Value - $252,515
• Market Value - $233,928
• Income - $14,766
• Available for Spending - $4,615

Planned Activities
• Spring 2019 Educating Medical Imaging Students About the Transgender Patient: A Survey of Program Directors
• Spring 2019: Assessing Spatial Ability in Imaging Science Students

Grants
• Title: Introducing Mindful Pause Practice in Sonography Education: A strategy to improve classroom presence
  Funding Agency: Society of Diagnostic Medical Sonography
  Start and End Dates: March 2018 – February 2019

Total Dollars: $2,500
Role: Principal Investigator, Co-I: Tanya Custer

• Title: The Impact of Case-Based E-learning on Student Knowledge and Critical Thinking in the Imaging Sciences Curriculum
  Funding Agency: American Society of Radiologic Technologists
  Start and End Dates: December 2017-December 2019
  Total Dollars: $9,980
  Role: Co-Investigator, PT: Tanya Custer

• Title: Diagnostic Medical Sonography Student-led Teaching of Abdominal Point-of-Care Ultrasound to Internal Medicine Residents: An Interprofessional Educational Intervention and Assessment
  Funding Agency: Interprofessional Academy of Educators, UNMC
  Start and End Date October 2017- October 2018
  Role: Co-Investigator, PI: Christopher Smith, MD; other Co-Is: Devin Nickol, MD, Elizabeth Beam, PhD, RN, Tabatha Matthias, DO

Total Dollars: $2,500
Role: Principal Investigator, Co-I: Tanya Custer
M. Patricia and James W. Leuschen Professorship for Advancing Research in the Allied Health Sciences

The purpose of this Fund is to advance research in the allied health sciences.

Corrine (Corri) K. Hanson, PhD, RD, LMNT, is Associate Professor and Leuschen Professor. She received her Bachelor of Science in Human Nutrition from UNL in 1989, Master of Science in Human Nutrition from UNL in 1993, and her Doctor of Philosophy from UNMC in 2010. With over 30 years of combined clinical and academic experience, Dr. Hanson currently serves as the Associate Director of the Medical Nutrition Education program and is a Fellow in the Academy of Nutrition and Dietetics. She has extensive regional, national and international research collaborations, and multiple organizations fund her work, including the National Institute of Health, the Department of Veteran's Affairs, and the Nebraska Department of Health and Human Services. Her research focuses primarily on fatty acids and fat-soluble compounds during pregnancy and the early newborn period, and the role of nutrition in the prevention and development of respiratory diseases.

Match Donor: M. Patricia Leuschen | Appointed July 2013 | Reappointed July 2016

Completed Activities

- **Priority Research Center on Lifecourse Nutrition.** In collaboration with the University of Agder, Kristiansand, Norway, our team has secured funding of approximately $1 million (U.S.) to establish a Priority Research Center on Lifecourse Nutrition (with Dr. Nina Overby, University of Agder, PI). The Priority Research Center aims to co-create high quality nutrition research in a lifecourse perspective relevant for policymakers and stakeholders regionally, nationally and internationally. Our vision of the Center is that children and adolescents grow up eating a healthy diet, learning the skills to maintain this throughout their lives, while in parallel securing the health potential for future children. Our mission is to conduct high quality research to stimulate, promote and advocate a healthy food environment and improve the individual's diet throughout the lifecourse.

- **A Randomized Trial of Two Doses of Vitamin D Supplementation in Very Low Birth Weight Infants: Dose Impact on Achieving Desired Serum Concentrations in a Hospitalized Population.** Our research team completed a study which showed that standardizing increased doses of vitamin D in premature infants significantly decreased the odds of developing low bone density. This manuscript was published in the prestigious journal PLoS One, and was the subject of a press release that received high-level national and international media attention, such as U.S. News Today and the Society of Critical Care Smartbrief.

- **Fiber Intake and the Microbiome in Asthma: the Breathe Easy Trial.** Funded by a grant from the Center for Patient, Family, and Community Engagement in Chronic Disease Management and conducted in collaboration with Johns Hopkins University, our team completed a feeding study investigating the effects of dietary change on inflammatory mediators in a group of individuals carrying a disproportionate burden of adult asthma: obese women. We enrolled adult, obese women with asthma in a crossover study of low fiber and high fiber diets and are analyzing changes in inflammation, the microbiome and asthma symptoms in relation to diet type.

- **Advances in our understanding of the impact of nutrition in maternal-infant health.** Since the last report, our research team has published 8 papers that significantly contribute to the body of literature describing fat soluble compounds and maternal-infant health in populations of pregnant women and their infants from Nebraska to Nigeria. Through a Health Equity grant from the UNMC Vice Chancellor of Research, we conducted a study to identify the socioeconomic risk factors for poor diet in Midwestern maternal-infant pairs, and the impact on clinical outcomes. This resulted in multiple publications that demonstrated deficiencies in key nutrients during pregnancy, disparities in these deficiencies, and a significant impact on clinical outcomes in both the mother and the infant. Dr. Hanson presented these findings at the prestigious American Society for Nutrition meeting in June of 2018. We are among the first to demonstrate that maternal intake of carotenoids has beneficial impacts on newborn outcomes, independent of pre-vitamin A activity. A collaborative effort with researchers in Nigeria has identified risk factors for newborn sepsis and death in Nigeria, and has uncovered significant nutritional deficiencies contributing to the high infant mortality rates. Through funding from the Edna Ittner Foundation, we have defined the role of omega-3 fatty acids during pregnancy in the regulation of inflammation through the production of pro-resolving mediators, novel findings that have helped us understand the mechanism for the beneficial effects of omega-3 fatty acids seen during pregnancy.

- **Advances in our understanding of the role of nutrition in lung diseases.** Our body of work since the last report has significantly advanced our understanding and appreciation of diet as a modifiable risk factor in the development and progression of lung disease.
We recently published the results of a study showing that saturated fat intake might benefit people with poor lung function, depending on the chain length of the fatty acid. We have also completed work describing the role of omega-3 and omega-6 fatty acids in modifying the response to indoor air pollution in children with asthma. This work will be published in a top-ranked respiratory journal, the American Journal of Critical Care and Respiratory Medicine.

**Educational and Mentoring Activities**

- Mentor on 2 NIH funded K-type training awards, titled “Relationship Between Indoor Ultrafine Particle Exposure and Respiratory Morbidity, Inflammation, and Oxidative Stress in Children with Asthma (Emily Brigham, PI, Johns Hopkins University); and “The Role of Omega-3 Fatty Acids and Bioactive lipid Signaling in Airway Inflammation and Resolution Following Organic Dust Exposures” (Tara Nordgren, PI, University of California-Riverside)

- Selected as the 2018 “UNMC Outstanding Faculty Mentor of Junior Faculty”

- Students/mentees have been involved in nine publications and 11 abstracts presented at national meetings since the last report.

**Awards/Honors**

- UNMC 2018 Distinguished Scientist Award
- UNMC 2018 Outstanding Faculty Mentor of Junior Faculty Award

**Publications**


- **Hanson C**, Lyden E, Furtado J, VanOrmer M, White K, Overby N, Anderson-Berry A. Serum Lycopene Concentrations and Associations with Clinical Outcomes in Maternal-Infant Dyads. Nutrients 2018;10(2) DOI: 10.3390/nu10020204


- Kvien Jensen S, Yates B, Lyden E, Stanek Krogstrand K, **Hanson C**. Dietary Micronutrient Intake of Participants in a “Partners Together in Health” Cardiac Rehab Intervention. Journal of Cardiopulmonary Rehabilitation and Prevention 2018;00:1-6


Accepted Manuscripts

- Knoell D, Smith D, Sapkota M, Heires A, **Hanson C**, Poole J, Wyatt T, Romberger D. Insufficient zinc exposure enhances airway inflammation in response to agricultural organic dust exposure. *Nutritional Biochemistry* accepted February 2018

Abstracts at National and International Meetings

- Jordon R, Paseka J, Woscyna G, **Hanson C**. An Exploration of the Effects of PEG Tube Placement on Weight Loss in Patients with ALS. *Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo*, Chicago, Illinois, October 2017
- Jensen S, Yates B, Lyden E, **Hanson C**. Micronutrient Intake of Participants in a Partners Together in Health” Cardiac Rehab Intervention. *Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo*, Chicago, Illinois, October 2017
- McLarney M, Timmerman M, Woscyna G, **Hanson C**. Registered Dietitians Facilitate Diabetes Training and Care within a Patient Centered Medical Home Care Delivery Model. *Academy of Nutrition and Dietetics Food and Nutrition Conference and Expo*, Chicago, Illinois, October 2017
- Pralle D, Bice B, **Hanson C**. Comparison of growth in pediatric patients with Cystic Fibrosis before and after implementation of a nutrition-based follow-up protocol. *North American Cystic Fibrosis Conference*, Indianapolis, IN. November 2017
- Anderson-Berry A, Su D, VanOrmer M, Schumacher M, Lyden E, **Hanson C**. Maternal and Neonatal Retinol Status in a Midwest Academic Medical Center is Associated with Race and Food Security Index. *Midwest Society for Pediatric Research*, Chicago IL, October 2017
attenuates the adverse effect of indoor particulate matter on asthma symptoms in children. American Thoracic Society, San Diego, CA, May 2018


- Yuil-Valdes A, Muhkerjee M, Nordgren T, Hanson C, Berry E, Anderson-Berry A. GRP expression and distribution in human placenta. Experimental Biology, San Diego, April 2018

- Yuil-Valdes A, Muhkerjee M, Nordgren T, Hanson C, Berry E, Anderson-Berry A. GRP expression in placental smooth muscle cells. Pediatric Academic Society, Toronto, Ontario, May 2018

- Hanson C, Anderson-Berry A, Lyden E, Obaro S, Delair S. Serum vitamin E tocopherols are associated with mode of delivery in Nigerian women. Pediatric Academic Society, Toronto, Ontario, May 2018

- Hanson C, Anderson-Berry A, Lyden E, Obaro S, Delair S. Maternal Vitamin D Status and Head Covering are Associated with Infant Z-scores at Birth in a Population of Nigerian Women. Pediatric Academic Society, Toronto, Ontario, May 2018

- Brigham E, Hanson C, Schweitzer A, Oh S, Thaxton S, Wineke J, LeVan T, Quiros-Alcal I, McCormack M. Diet, the Microbiome, and Asthma: The BREATHE-Easy Trial Protocol. Association for Clinical and Translational Science meeting, Washington DC, April 2018

- Anderson-Berry A, Hanson C, Kocmich N, Rezac A, Obaro S, Delair S. Fat Soluble Vitamin Carotenoid Status in Nigerian Mothers and Newborns Associates with Socioeconomic Status. Pediatric Academic Society, Toronto, Ontario, May 2018


- Delair S, Hanson C, Lyden E, Kocmich N, Rezac A, Obaro S. Maternal Vitamin D Status is associated with increased risk of Neonatal Sepsis in a Cohort of Nigerian Women. American Society for Nutrition, Boston MA, June 2018


- Manker B, Anderson-Berry A, Hanson C. Gestational length and birthweight are affected by maternal Omega-3 and Omega-6 intake. Global Health Conference Midwest, Omaha NE, February 2018


- Hanson C, Lyden E, Weissenburger-Moser L, LeVan T, Romberger D. Protein Intake is Associated with Lung Function in Veterans with COPD. Midwest Rural Agricultural Safety and Health Conference, Council Bluffs, IA, November 2018

Presentation


- Overview of Early Nutrition in the United States. Presentation to faculty and students as a visiting scientist, University of Agder, Kristiansand Norway. August 2017

- Fat Soluble Compounds in Maternal-Child Health. Presentation to faculty and students as a visiting scientist, University of Agder, Kristiansand Norway. August 2017

- Diet Quality, Smoking and Lung Function in the UK Biobank. The COPD Foundation COPD10 meeting. Chicago, IL, July 2017

- Maternal Lycopene and Lycopene Isoforms are Associated with Infant Growth at Delivery. 5th International Conference on Nutrition and Growth, Paris, France. March 2018

Grants: Active/Funded since Last Report

External

• Title: Priority Research Center on Lifecourse Nutrition
  Funding Agency: University Board of University of Agder
  Start and End Dates: October 2018-September 2023
  Total Dollars: $1,202,080
  Role: Co-Investigator;
  Principal Investigator: Nina Overby, PhD

• Title: Targeting Airway Inflammation from Concentrated Animal Feeding Dust
  Funding Agency: United States Department of Veteran's Affairs Merit Award
  Start and End Dates: October 2018-September 2022
  Total Dollars: $497,850
  Role: Co-Investigator; Principal Investigator: Debra Romberger, MD

• Title: Relationship Between Indoor Ultrafine Particle Exposure and Respiratory Morbidity, Inflammation, and Oxidative Stress in Children with Asthma
  Funding Agency: National Institute of Environmental Health Sciences K23
  Start and End Dates: July 2018-June 2023
  Total Dollars: $983,805
  Role: Mentor;
  Principal Investigator: Emily Brigham, MD

• Title: The Effect of Dietary Fiber and the Gut Microbiome on COPD
  Funding Agency: Nebraska Department of Health and Human Services, LB506
  Start and End Dates: July 2018-June 2019
  Total Dollars: $50,000
  Role: Co-Principal Investigator with Tricia LeVan, PhD

• Title: Comparing Urban and Rural Effects of Poverty on COPD (CURE COPD)
  Funding Agency: National Institute of Health/National Institute on Minority Health and Health Disparities
  Start and End Dates: July 2015-June 2019
  Total Dollars: $4,997,009
  Role: Co-Investigator (UNMC site PI); Principal Investigator: Nadia Hansel, MD

• Title: The Role of Omega-3 Fatty Acids and Bioactive Lipid Signaling in Airway Inflammation and Resolution Following Organic Dust Exposures
  Funding Agency: National Institute of Environmental Health Sciences K01
  Start and End Dates: July 2016-June 2019
  Total Dollars: $836,735
  Role: Mentor;
  Principal Investigator: Tara Nordgren PhD

Grants completed since last report

• Title: Healthy Friends and Families in Action
  Funding Agency: Children's Hospital & Medical Center Preventing Childhood Obesity
  Start and End Dates: December 2018-December 2019
  Total Dollars: $5,000
  Role: Co-Investigator

• Title: Impact of Obesity on Omega-3 Fatty Acid-Derived Pro-Resolving Mediators in Maternal-Infant Health
  Funding Agency: Nebraska Center for the Prevention of Obesity Diseases, University of Nebraska Lincoln
  Start and End Dates: December 2018-June 2019
  Total Dollars: $32,000
  Role: Co-Principal Investigator with Ann Anderson Berry, MD

• Title: Evaluation of Simulation-Based Training in Healthcare Education and its Impact on the Delivery and Quality of Health Care
  Funding Agency: University of Nebraska Collaboration Initiative
  Start and End Dates: July 2018-June 2019
  Total Dollars: $13,000
  Role: Co-Investigator
  Principal Investigator: Maheswari Muhkerjee, PhD

• Title: Impact of Iron Supplementation on the Gut Microbiome and Necrotizing Enterocolitis in Preterm Neonates
  Funding Agency: University of Nebraska Collaboration Initiative
  Start and End Dates: July 2018-June 2019
  Total Dollars: $19,228
  Role: Co-Investigator, Principal Investigator: Tricia LeVan

• Title: Association Between Systemic Inflammation and Nutritional Mediators in Term and Preterm Infants
  Funding Agency: UNMC Center for Clinical and Translational Research
  Start and End Dates: Feb 2018-March 2019
  Total Dollars: $25,000
  Role: Co-Investigator
  Principal Investigator: Jessica Snowden, MD

Internal

• Title: Effect of Vitamin D Supplementation on Balance in Patients with Chronic Kidney Disease
  Funding Agency: University Committee on Research and Creative Activity

Role of Omega-3 Fatty Acid-Derived Pro-Resolving Lipid Mediators in Maternal-Fetal Health

Funding Agency: Edna Ittner Pediatric Research Foundation
Start and End Dates: November 2016-October 2017
Total Dollars: $35,000 (Direct costs: $35,000)
Role: Co-Principal Investigator with Ann Anderson-Berry, PhD, MD

Committee Service
- UNMC Faculty Senate President
- Chair, Academy of Nutrition and Dietetics Evidence Analysis Project for Pulmonary Disease
- Chair, Nutritional Analysis, UK Biobank
- Nebraska Food for Health Center
- Nebraska Society for the Prevention of Obesity-Related Diseases

Financial Summary as of December 31, 2018
- Book Value - $261,735
- Market Value - $261,122
- Income - $17,467
- Available for Spending - $6,182

Planned Activities
- Relationship Between Indoor Ultrafine Particle Exposure and Respiratory Morbidity, Inflammation, and Oxidative Stress in Children with Asthma: Funded through a National Institute of Environmental Health Sciences K23 award, this study will evaluate the impact of ultrafine particulate matter exposure on pediatric asthma health, exploring the modification of indoor air pollution effects on asthma by polyunsaturated fatty acid intake.
- Impact of Obesity on Omega-3 Fatty Acid-Derived Pro-Resolving Mediators in Maternal-Infant Health: Funded through a grant from the Nebraska Society for the Prevention of Obesity-Related Diseases, the aim of this study is to define the relationships between omega-3 fatty acid intake, fatty acid metabolism, production of inflammation-resolving compounds, and maternal-fetal health outcomes in obese compared to normal weight pregnancies.
Completed Activities

- **Health and appearance reasons for weight loss as predictors of long-term weight change.** Mroz JE, Pullen CH, Hageman PA. This study investigated whether women’s initial reasons (health, appearance to others, or appearance to self) for wanting to lose weight influenced their weight change over a 30-month web-based intervention. The study results are published in Health Psychology Open.

- **Physical function and health-related quality of life in overweight and obese rural women who meet physical activity recommendations.** Hageman PA, Pullen CH, Yoerger M. This cross-sectional study examined the associations of physical function with health-related quality of life in rural women, ages 40–69 who were overweight or obese, by whether or not they met physical activity recommended guidelines. Study findings are published in the Journal of Aging and Physical Activity.

- **Cardiometabolic biomarkers, physical function and activity in women with arthritis who completed a 30-month web-based weight loss Intervention.** Hageman PA, Yoerger M, Wellsandt E. This study examined if women who attained differing levels of weight loss following a 30 month intervention would present with changes in cardiometabolic biomarkers, physical function and activity. Findings show meeting weight loss targets of $\geq 5\%$ loss of initial bodyweight improves blood pressure, self-reported physical function and increased physical activity. Results were presented as a peer-reviewed presentation for the 2018 American Physical Therapy Association (APTA) Combined Sections Meeting (CSM), with the presentation receiving the Best Poster Award from the Section on Cardiovascular and Pulmonary Physical Therapy.

- **Moderating effects of cognitive-behavioral variables on the effectiveness of two different long-term web-based weight loss interventions among women living in rural underserved areas.** Hageman PA, Kupzyk K, Yoerger M, Pullen CH. This study investigated the differences between two-augmented web-based weight-loss interventions, with differences observed between high and low performers based upon the type of augmented web-based weight loss intervention. The practical implications show varying designs of technology-based interventions influences women’s success at behavior change differently based upon the women’s personal characteristics (eg. depression, self-efficacy). Study findings were presented as a peer-reviewed presentation at the 2018 APTA CSM meeting with a manuscript submission to Health Psychology.

- **Interpersonal support and self-efficacy influences on weight loss among mid-life and older rural women.** Pullen CH, Eisenhauer C, Hageman PA. This study compares cognitive-perceptual variables among rural overweight/obese women who met differing weight loss achievements at 6 months post-baseline. Findings reveal rural women who achieved a weight loss target of $\geq 10\%$ weight loss perceived increased self-efficacy and interpersonal support for healthy eating and activity compared to women who were low/non-achievers. Study results were presented as a peer-reviewed presentation at the 2018 Midwest Nursing Research Society Meeting.

Mentorship

- Mentorship/Financial Support for PhD Student
- Mentored and supported 2 PhD Graduate Students (M Yoerger, Jan 2017-May 2018; J Mroz, Jan 2018-May 2019).
- Supervisory Committee for a Doctor of Philosophy Student in Medical Sciences Interdisciplinary Area
- Supervisory Committee for two Master of Science Students in Medical Sciences Interdisciplinary Area
- Expanded Role as Senior Faculty Mentor for Academic Success
- Mentored 5 Junior CAHP PT Faculty Members, 1 CON Faculty Member, and 1 COPH Faculty Member
Publications


Peer-reviewed Presentations


- **Hageman P, Yoerger M, Wellsandt E.** Cardiometabolic biomarkers, physical function and activity in women with arthritis who completed a 30-month web-based weight loss intervention. Combined Sections Meeting of the American Physical Therapy Association, New Orleans, LA, February 21-24, 2018


- **Pullen CH, Eisenhauer C, Hageman P.** Interpersonal support and self-efficacy influences on weight loss among mid-life and older rural women. 2018 Annual Meeting of the Midwest Nursing Research Society, Cleveland, OH, April 2018


Grant (External) Active

Title: Engaging Rural Men with Mobile Technologies for Weight Loss. A Randomized Controlled Trial.
ID Number: 1R15NR017522-01
Funding Agency: DHHS/NIH/NINR
Project Period: 2017-2020
Total Dollars: $380,566
Role: Co-Investigator (C Eisenhauer, PI)

Manuscript Reviewer (2017-2018)

- BMC Public Health
- BMC Women's Health
- Contemporary Clinical Trials
- International Journal of Behavioral Nutrition and Physical Activity
- Journal of Human Hypertension
- Obesity

Awards

2018 Cardiovascular & Pulmonary Poster Research Award, Section for Cardiovascular and Pulmonary, American Physical Therapy Association (APTA)

Committee Service

National
- Member, Council of Catherine Worthingham Fellows of the American Physical Therapy Association

University
- Chair, College of Allied Health Professions (CAHP), Promotion and Tenure Advisory Committee
- Member, CAHP, Alumni & External Relations Committee
- Member, CAHP, Search Committee for Director of Physical Therapy Education
- Member, Division of Physical Therapy, Admissions Interview Committee
- Member, Division of Physical Therapy Taskforce, Focus Group Feedback UNMC-Omaha and UNMC-Kearney
- Vice-Chair, Division Kearney Omaha Response (KOR) Team

Financial Summary as of December 31, 2018

- Book Value - $253,122
- Market Value - $253,438
- Income - $15,057
- Available for Spending - $26,628

Planned Activities

- Continue financial support/mentorship of a Doctor of Philosophy graduate student (J Mroz) with goal of advancement of data analysis and research dissemination of women's health data
- Mentorship of junior CAHP and PT faculty, professional and graduate students
- Prioritize manuscript submission of completed projects to increase CAHP visibility nationally / internationally
- Complete research as indicated below:
  - Level of engagement with technology-based intervention features and behavior change outcomes in rural women. This study will evaluate the engagement of various features of web-based weight loss interventions associated with attaining criterion-based outcome targets for weight loss, healthy eating and activity in rural women.
• Engaging rural men with mobile technologies for weight loss: A randomized controlled trial. Co-investigator on an NIH funded project designed to evaluate a basic mobile application (app) intervention with a more comprehensive intervention using app combined with culturally based text messaging, to achieve weight loss in rural men. This work will also allow for gender comparison of behavior change approaches for weight loss, healthy eating and activity.

• Physical activity in rural women with arthritis during a 30-month web-based weight-loss and weight-maintenance intervention. This study will examine the change in weight, physical activity, and perceived benefits and barriers to physical activity in women across 30-months, during their enrollment in a weight management program.
Charles R. O’Malley Chair of Radiation Science Technology Education
The purpose of this Fund is to advance research and program development in the division of radiation science technology education, currently known as the Department of Medical Imaging and Therapeutic Sciences (MITS).

Lisa Bartenhagen, MS, RT(R)(T), is the O’Malley Chair and Director of the Department of Medical Imaging and Therapeutic Sciences at the University of Nebraska Medical Center. She is also the Program Director of the Radiation Therapy Program. She received a Bachelor Degree in Radiation Science Technology Education from the University of Nebraska Medical Center. After graduation Bartenhagen became certified and registered in Radiography and Radiation Therapy by the American Registry of Radiologic Technologists. She went on to obtain a Master of Science in Radiologic Science from Midwestern State University.

Donors: Charles R. O’Malley Charitable Lead Trust through the New York Community Trust  |  Appointed January 3, 2018

Completed Activities
• The O’Malley funds continue to sponsor an activity that took place in May, 2018 in the Advanced Anatomy Lab. This simulated lab session is part of an ongoing research study involving Interprofessional Education (IPE), between Diagnostic Medical Sonography students (DMS) and Nephrology fellows. The aim is to improve DMS students’ perceived competence for their role in ultrasound guided renal biopsy exams while working collaboratively with the nephrology team.

• Oxidants-Antioxidants Status in Workers Occupationally Exposed to Long Term Low Levels of Ionizing Radiation – A pilot study. The purpose of this project is to study the long-term effect of low levels of Ionizing Radiation (IR) on x-ray workers’ antioxidant status and to quantify superoxide levels on those workers at different occupational settings. Furthermore, to explore the effect of lifestyle factors on radiation-induced oxidative stress as well as DNA damage and immune response alterations on healthcare workers. Funding for this study continued as to include radiation therapists.

• Virtual Environment Radiotherapy Training (VERT) curriculum expansion. The funds have allowed for collaboration with a program in New Orleans, software upgrades, and the purchase of patient positioning devices. A pilot study called Implementing a Virtual Radiation Therapy Session for Pediatric Cancer Patients includes a qualitative study looking to decrease the anxiety children and their families experience as a child undergoes treatments and therefore reduce the need to be sedated every day for up to 4-6 weeks.

Presentations and Publications

• Bartenhagen L. Continuing Qualification Requirements. Nebraska Society of Radiologic Technologists Annual Conference Kearney, NE April 2018.

• Ahmad IM. Occupational Health Hazards in Radiography: Time for a Safe Environment. Department of Epidemiology, College of Public Health, UNMC, Omaha, NE. Feb 7, 2018


• Bartenhagen L. Cancer Biology and the Use of Radiation Therapy in its Management. Nebraska Society of Radiology Technologists CE Saturday, Omaha, NE February 2018.

• Ahmad IM. Occupational Health Hazards in Radiography: Time for a Safe Environment. Department of Epidemiology, College of Public Health, UNMC, Omaha, NE. Feb 7, 2018


Committee Service
• Vice President, Board of Trustees- American Registry of Radiologic Technologists, July 2018-present

• Secretary/Treasurer, Board of Trustees- American Registry of Radiologic Technologists, July 2017-2018

• Member, Editorial Review Board: American Society of Radiologic Technologist, July 2014-present

• Member, Interprofessional Academy of Educators, UNMC, September 2016-present
• Member, Editorial Review Board: Journal of Medical Imaging and Case Reports, January 2017-2018
• Member, Proton Beam Therapy Advisory Committee, American Registry of Radiologic Technologists, November 2017-2018
• Member, Radiation Therapy Curriculum Revisions Workgroup, American Society of Radiologic Technologists, September 2017-2018
• Member, Radiation Therapy Examination Committee, American Registry of Radiologic Technologists, July 2013-present
• Secretary, UNMC Interprofessional Academy of Educators- Simulation Interest Group, October 2016-present
• Member, UNMC Interprofessional Academy of Educators Associate Director Search Committee, February-March 2018
• Member, UNMC Interprofessional Academy of Educators Premier Education Planning Committee, January 2017-September 2017
• Member, CAHP Promotion and Tenure Committee, January 2013-present
• Member, CAHP Financial Stewardship Committee, January 2017-present
• Co-Chair, CAHP Alpha Eta Nomination Committee, March 2000-present
• Member, CAHP Leadership Council, March 2000-present
• Chair, MITS Leadership Council, April 2017-present
• Co-Chair/Member, MITS Student Advisory Committee, January 2018-present
• Chair, Radiation Therapy Program Advisory Committee, January 2017-present

Financial Summary as of December 31, 2018
• Book Value - $500,000
• Market Value - $523,231
• Income - $34,962
• Available for Spending - $46,806

Planned Activities
• Planned publication in a refereed Professional Journal in the Spring 2019 to disseminate data on the Interprofessional study of renal biopsy simulation sessions.
• Expand the study of Oxidants-Antioxidants Status in Workers Occupationally Exposed to Long Term Low Levels of Ionizing Radiation to include Nuclear Medicine and Cardiovascular Interventional Technologists.
• Continue to enroll participants in the Virtual Radiation Therapy Session for Pediatric Cancer Patients program, submit initial findings, and present material at the national level.
• Submit IRB for a study to Examine the Admission Practices of Programatically Accredited Radiography Programs. This will include conducting focus groups of high school and entry level college students on their experiences with various admission processes. Qualtrics: analytic and survey distribution software.
• Present findings of the study A Video Intervention for Head and Neck Cancer Patients at the American Society of Radiologic Technologists.
Mr. Charles R. O’Malley was a businessman, educator and philanthropist. At age 17, during the depths of the Great Depression, the Perry, Iowa native rode a freight train to Boston where he became a nurse. He eventually settled in New York City. Over the years, he worked for Pan American Airways, Mobil Oil and the T.J. Stevenson Shipping Company. Mr. O’Malley met and interacted with many powerbrokers, including Aristotle Onassis. He represented the Plough group of more than 50 radio and TV stations in their dealings with ad agencies, and served as director of the Columbia Scholastic Press Association. Mr. O’Malley passed away on March 19, 2008, at the age of 93. His estate created the Charles R. O’Malley Charitable Trust, whose wonderful generosity to non-profit organizations across the country provides a living legacy.