

Young-Eun Cho, Ph.D. RN

Assistant Professor

The University of Iowa
College of Nursing
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EDUCATION

2010	PhD	Yonsei University College of Medicine, Medical Science (Vascular physiology) Seoul, S. Korea
2005	MS	Yonsei University College of Medicine, Seoul, S. Korea
2001	BSN	Yonsei University College of Nursing – Nursing, Seoul, S. Korea

PhD Dissertation:

Enhanced contraction and myosin phosphorylation induced by Ca^{2+} -independent MLCK in spontaneously hypertensive rats (*Cardiovasc Res.* 2011;91(1):162-170)

Master's Thesis:

Intracellular acidosis induced myogenic tone change in rabbit basilar artery: Role of extracellular Ca^{2+} , SR Ca^{2+} release and Ca^{2+} sensitization (*Vascul Pharmacol.* 2007;47(1):74-82)

LICENSURES

2000	Registered Nurse in S. Korea (#1666792)
2020	Registered Nurse in Iowa (#160789)
2020	Registered Nurse in NY (#801172)

PROFESSIONAL EXPERIENCE

Academic Appointments

8/2019-present	Assistant Professor, University of Iowa, College of Nursing; Obesity Research and Education Initiative
1/2016-8/2019	Research fellow, National Institute of Nursing Research, National Institutes of Health <ul style="list-style-type: none">▪ Single-cell RNA-sequencing project in PBMCs from minor stroke▪ Exosomal miRNA changes with Mediterranean diet in breast cancer survivors▪ Exosomal protein changes with weight gain in kidney transplant recipients▪ Altered DNA methylation patterns with PTSD symptoms
9/2014-1/2016	Visiting Fellow, National Institute of Nursing Research, National Institutes of Health

Health

- Gene expression in old TBI patients linked to MRI images
- Increased oxidative stress in weight gain of kidney transplant recipients

- 3/2011-8/2014 Postdoctoral Fellow, University of Illinois at Chicago College of Medicine
- Endothelial dysfunction and oxidative stress in coronary artery of type 2 diabetic mice
 - Increased oxidative stress in cardiac hypertrophy of miR450 knockout mice

Clinical

- 10/2002-8/2003 Clinical Research Associate in Choongwae Pharmaceutical Corporation (Seoul, Korea);
- Overseeing the clinical trials for a new statin drug
 - Participating in developing the protocol for other clinical trials
- 4/2001-10/2002 Registered nurse in Thoracic surgery ICU in Samsung Medical Center (Seoul, Korea)
- Providing intensive care for adult and infant patients who undergo heart, lung and esophagus surgeries
 - Developing the protocol for ICU nursing care

HONORS AND AWARDS

- 2025 MNRS PBGS RIIG Early Career Award
- 2024 University of Iowa College of Nursing Student Mentorship Award
- 2020 Best Article Award (Journal of Korean Biological Nursing Science)
- 2018 Performance Award: National Institute of Nursing Research in NIH
- 2013 BCVS Abstract Travel Grant: American Heart Association's Council on Basic Cardiovascular Sciences (BCVS)
- 2009 Excellent poster presentation award: the 61st federation meeting of the Korean physiological society

PATENT

- 2024 Provisional application: Extracellular Vesicle MicroRNAs as Predictive Biomarkers in Postoperative Delirium after Spine Surgery (10-2024-0077051)

SCHOLARSHIP

Publications

(Note: # Co-first authors; * Data Based; Underline student or trainee author; ¶ Corresponding author)

Journal articles

1. *Kwon JH, Jang H, Kim JS, Lee SH, Kim DH, **Cho YE**, Park HS, Cho YE. (2024) Human Breast Milk-derived Extracellular Vesicles Promote Osteoblast Activation. *Cell Biochemistry &*

Function. (under review)

2. ***Choi YE**, Chen S, Dhutt D, Kaufman J, **Singh B**. (2024) Human Breast Milk EVs Mitigate Endothelial Dysfunction. *Journal of Cardiovascular Pharmacology and Therapeutics* (under review)
3. Howland C, White SH, Chen S, **Choi YE**. (2024) Social Determinants of Health and Epigenetic Age Acceleration in Type 2 Diabetes: A Systematic Review. *Biological Research For Nursing* (under review)
4. *Zhao Y, Morgan D, Guo D-F, **Choi YE**, Rahmouni K. (2024) Adipocyte-Specific Disruption of the BBSome Causes Metabolic and Autonomic Dysfunction. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* May 13 doi: 10.1152/ajpregu.00039.2024.
5. ***Choi YE**, Chen S, Crouch K, Yun J, Klingelhutz A. (2024) Impact of Aging and High-Fat Diet on Adipose Tissue-Derived Extracellular Vesicle miRNA Profiles in Mice. *Biomedicine* 12(1), 100. doi:10.3390/biomedicines12010100
6. ***Choi YE**, Kim J, Vorn R, Baik WH, Park H, Yun S, Kim HS, Cashion AK, Gill J, Koo BN, Lee H. (2024) Extracellular Vesicle MicroRNAs as Predictive Biomarkers in Postoperative Delirium After Spine Surgery: Preliminary Study. *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences*. 79(11), glae162 doi.org/10.1093/gerona/glae162
7. Moon C, Schneider A, **Choi YE**, Zhang M, Dang HL, Vu KH. (2024) Sleep Duration, Sleep Efficiency, and Amyloid β Among Cognitively Healthy Later-Life Adults: A Systematic Review and Meta-Analysis. *BMC Geriatr* 24 (408). doi.org/10.1186/s12877-024-05010-4
8. ***Choi YE**, Vorn R, Chimenti M, Shaoshuai C, Crouch K, Narayanaswamy J, Harken A, Schmidt R, Gill J, Lee H. (2022) Extracellular Vesicle miRNAs in Breast Milk of Obese Mothers. *Frontiers in Nutrition*. doi.org/10.3389/fnut.2022.976886
9. ***Choi YE**, Lee H, Bae HR, Kim H, Yun S, Vorn R, Cashion A, Rucker MJ, Afzal M, Latour L, Gill J (2022). A Circulating Immune Cell Landscape in Patients who had Mild Ischaemic Stroke. *Stroke and Vascular Neurology*, svn-2021-001224. doi: 10.1136/svn-2021-001224
10. *Edwards KA, Motamedi V, Osier ND, Kim HS, Yun S, **Choi YE**, Lai C, Dell KC, Carr W, Walker P, Ahlers S, LoPresti M, Yarnell A, Tschiffley A, Gill J. (2020). A Moderate Blast Exposure Results in Dysregulated Gene Network Activity Related to Cell Death, Survival, Structure, and Metabolism. *Front Neurol*, 26(11):91. doi: 10.3389/fneur.2020.00091.
11. ***Kwon YJ**, **Choi YE**, Cho AR, Choi WJ, Yun S, Park H, Kim HS, Cashion AK, Gill J, Lee H and Lee JW (2020). The Possible Influence of Mediterranean Diet on Extracellular Vesicle miRNA Expression in Breast Cancer Survivors. *Cancers (Basel)*, 12(6):1355. doi: 10.3390/cancers12061355.
12. ***Choi YE**, Lee H, Yun S, Kim HS, Cashion AK. (2020). Exosomal Protein Profiles as Novel Biomarkers in Weight Gain After Kidney Transplantation: A Pilot Study. *Journal of Korean*

13. *Hladek MD, Szanton SL, **Cho YE**, Lai C, Sacko C, Roberts L, Gill J (2018). Using Sweat to Measure Cytokines in Older Adults Compared to Younger Adults: A pilot study. *J Immunol Methods*, Mar(454):1-5. doi: 10.1016/j.jim.2017.11.003
14. *#Martin C, #**Cho YE**, Kim HS, Yun SJ, Kanefsky R, Lee H, Mysliwiec V, Cashion AK, Gill J. (2018). Altered DNA Methylation Patterns Associated With Clinically Relevant Increases in PTSD symptoms and PTSD Symptom Profiles in Military Personnel. *Biological Research in Nursing*, 20(3):352-358. doi: 10.1177/1099800418758951
15. *Pantik C, **Cho YE**, Hathaway D, Tolley E, Cashion AK (2017). Characterization of Body Composition and Fat Mass Distribution 1 year After Kidney Transplantation. *Progress in Transplantation*, 27(1):10-15. doi: 10.1177/1526924816681007
16. ***Cho YE**, Latour L, Kim HS, Olivera A, Livingston W, ...Gill J and Cashion AK (2016). Older Age Results in Differential Gene Expression after Mild Traumatic Brain Injury and is Linked to Imaging Differences at Acute Follow-up. *Frontiers in Aging Neuroscience*, 13(8);168. doi: 10.3389/fnagi.2016.00168
17. ***Cho YE**, Kim HS, Lai C, Stanfill A, Cashion AK (2016). Oxidative Stress is associated with Weight Gain in Recipients at 12-months Following Kidney Transplantation. *Clinical Biochemistry*, 49(3):237-42. doi: 10.1016/j.clinbiochem.2015.11.002
18. **Cho YE**, Cashion AK (2016). Mechanism of Weight Gain in Kidney Transplantation Recipients. *Keimyung Journal of Nursing Science*, 19(3):71-79
19. *Han Y, **Cho YE**, Ayon R, Youssef K, Pan M, Dai A, Yuan J, Makino A (2015). SGLT Inhibitors Attenuate NO-dependent Vascular Relaxation in Pulmonary Artery but not in Coronary Artery. *Am J Physiol Lung Cellular and Molecular Physiology*, 309(9):L1027-36. doi:10.1152/ajplung.00167.2015.
20. ***Cho YE**, Basu A, Dai A, Heldak M, Makino A (2013). Coronary Endothelial Dysfunction and Mitochondrial Reactive Oxygen Species in Type 2 Diabetic Mice. *Am J Physiol Cell Physiol*, 305(10):C1033-40. doi: 10.1152/ajpcell.00234.2013.
21. *Lim M, Choi SK, **Cho YE**, Yeon SI, Kim EC, Ahn DS, Lee YH (2012). The Role of Sphingosine Kinase 1/sphingosine-1-phosphate Pathway in the Myogenic Tone of Posterior Cerebral Arteries. *Plos One*, 7(4):e35177. doi: 10.1371/journal.pone.0035177
22. *Sasaki K, Donthamsetty R, Heldak M, **Cho YE**, Scott BT, Makino A (2012). VDAC: Old Protein with New Roles in Diabetes. *Am J Physiol Cell Physiol*, 303(10):C1055-6. doi: 10.1152/ajpcell.00087.2012.
23. ***Cho YE**, Ahn DS, Morgan KG, Lee YH (2011). Enhanced contraction and myosin phosphorylation induced by Ca²⁺-independent MLCK in spontaneously hypertensive rats. *Cardiovasc Res*, 91(1):162-170. doi: 10.1093/cvr/cvr043

24. *Ahn DS, Choi SK, Kim YH, **Cho YE**, Shin HM, Morgan KG, Lee YH (2007). Enhanced Stretch-induced Myogenic Tone in the Basilar Artery of Spontaneously Hypertensive Rats. *J Vasc Res*, 44(3):182-91. doi: 10.1159/000100374.
25. ***Cho YE**, Ahn DS, Kim YH, Taggart MJ, Lee YH (2007). Changes in Stretch-induced Tone induced by Intracellular Acidosis in Rabbit Basilar Artery: Effects on BK_{Ca} Channel Activity. *Vascul Pharmacol*, 47(1):74-82. doi: 10.1016/j.vph.2007.04.006
26. *Ryu SK, Ahn DS, **Cho YE**, Choi SK, Kim YH, Morgan KG, Lee YH (2006). Augmented sphingosylphosphorylcholine-induced Ca²⁺-Sensitization of Mesenteric Artery Contraction in Spontaneously Hypertensive Rat. *Naunyn Schmiedebergs Arch Pharmacol*, 373(1):30-6. doi: 10.1007/s00210-006-0036-7
27. *Jang GJ, Ahn DS, **Cho YE**, Morgan KG, Lee YH (2005). C2-ceramide Induces Vasodilation in Phenylephrine-induced Pre-contracted Rat Thoracic Aorta: role of RhoA/Rho-kinase and intracellular Ca²⁺ concentration. *Naunyn Schmiedebergs Arch Pharmacol*, 372(3):242-50. doi: 10.1007/s00210-005-0008-3

Abstract

1. ***Cho YE**, Vorn R, Crouch K, Narayanaswamy J, Chang C. (2021). Characteristics of Extracellular Vesicle miRNAs in the Breast Milk. *Circulation 144 (Suppl_1)*, A14050-A14050. https://doi.org/10.1161/circ.144.suppl_1.14050
2. *Edwards KA, Motamedi V, Osier ND, Kim HS, Yun S, **Cho YE**, Lai C, Dell KC, Carr W, Walker P, Ahlers S, LoPresti M, Yarnell A, Tschiffley A, Gill J. (2020). Moderate Blast Exposure Results in Deregulated Gene Network Activity. *Journal of Neurotrauma* 35 (16), A278-A278
3. ***Cho YE**, Martin C, Kim HS, Yun SJ, Kanefsky R, Lee H, Mysliwiec V, Cashion AK, Gill J. (2017). Altered DNA Methylation Patterns Associated with Clinically Relevant Increases in PTSD Symptoms and PTSD Symptom Profiles in Military Personnel. *The FASEB Journal* 31, 1058.7-1058.7
4. ***Cho YE**, Zhang C, Ranjan R, Christman JW, Zhao Q, Xiao L. (2018). Novel Role of microRNA (miR)-451 in Modulation of Oxidative Stress and Kinase Signaling in Mouse Myocardium. *Circulation 128 (suppl_22)*, A14003-A14003.
5. ***Cho YE**, Zhang C, Ranjan R, Christman JW, Xiao L, Zhao Q. (2015). microRNA (miR)-451 Regulates Cardiac Growth and Myocardial Reactive Oxidative Species (ROS) Level via Nrf2 and AMPK Pathways. *Circulation 132 (suppl_3)*, A16546-A16546
6. *Han Y, **Cho YE**, Ayon R, Guo R, Youssef KD, Pan M, Dai A, Yuan J, Makino A. (2015) SGLT inhibitors Attenuate NO-dependent Vascular Relaxation in Mouse Pulmonary Artery. *The FASEB Journal* 28, 677.3
7. *Han Y, **Cho YE**, Ayon R, Pan M, Dai A, Yuan J, Makino A. (2014) Vascular Response to the Sodium-Glucose Cotransporter Inhibitor in Type 2 Diabetic Mice. *Circulation 130 (suppl_2)*,

A12295-A12295.

8. ***Cho YE**, Pangare M, Makino A. (2012) Role of Superoxide Anion in Coronary Endothelial Dysfunction in Type 2 Diabetic Mice. *The FASEB Journal* 26, 1129.8-1129.8
9. ***Cho YE**, Kim YH, Lee YH, Ahn DS. (2008) Effects of pH_i Change on Spontaneous Contraction and Ionic Currents in Pregnant Rat Uterine Smooth Muscle. *The FASEB Journal* 22, 1206.12-1206.12
10. *Choi SK, **Cho YE**, Ahn DS, Lee YH (2007) Comparison of Difference of Patterns and Mechanisms between SPC-and S1P-induced Contraction in Rabbit Coronary Artery. *Korean Journal of Physiology & Pharmacology* 11, 32-0
11. ***Cho YE**, Ahn DS, Kim YH, Choi SK, Taggart MJ, Lee YH (2006) Changes in Myogenic Tone induced by Intracellular Acidosis in Rabbit Basilar Artery: Effects on BKCa channel Activity. *Korean Journal of Physiology & Pharmacology* 10, 143-0
12. *Kim YH, Choi SK, **Cho YE**, Lee YH (2005) Differences of Sphingosylphosphorylcholine (SPC)-induced Vascular Contractility Between SHR and WKY. *The FASEB Journal* 19 (5), A1624-A1624
13. ***Cho YE**, Choi SK, Kang BS, Lee YH (2005) Intracellular Acidosis Induced Myogenic Tone Change in Rabbit Basilar Artery-Role of Ca²⁺ Influx, SR Ca²⁺ Release and Ca²⁺ Sensitization. *Korean Journal of Physiology & Pharmacology* 9, 36-0
14. *Kim YH, Choi SK, **Cho YE**, Sa YS, Kang BS, Lee YH (2004) Effects of Intracellular Alkalosis or Acidosis in Phasic Contractions of Pregnant Rat Uterine Smooth Muscle. *Korean Journal of Physiology & Pharmacology* 8, 26-0
15. *Choi SK, Kim YH, **Cho YE**, Sa YS, Lee YH (2004) SPC Induces Rho-kinase Mediated Ca²⁺ Sensitization in Rabbit Middle Cerebral Artery. *Korean Journal of Physiology & Pharmacology* 8, 34-0
16. ***Cho YE**, Kim YH, Choi SK, Sa YS, Ahn DS, Lee YH Elevation of Myogenic Tone Induced Intracellular Acidosis in Rabbit Basilar Artery-Role of Extracellular Ca²⁺ and SR Ca²⁺ Release (2004) *Korean Journal of Physiology & Pharmacology* 8, 29-0
17. *Sa YS, **Cho YE**, Kim YH, Choi SK, Lee YH (2003) Mechanisms of Vasorelaxation by Ceramide and Its Role on the Production of Hypertension. *Korean Journal of Physiology & Pharmacology* 7, 23-0

Scientific and Educational Research Grants

Intramural research grants

2024 Cho YE (PI). Targeting Inflamed Endothelial Cells Using Engineered Extracellular Vesicles. The Fraternal Order of Eagles Diabetes Research Center (FOEDRC) in the

University of Iowa, College of Medicine, \$5,000
 2020-2022 Cho YE (PI). Extracellular Vesicles in Breastmilk: a Mediator between Obese Mothers and Children. The Fraternal Order of Eagles Diabetes Research Center (FOEDRC) in the University of Iowa, College of Medicine, \$100,000

Extramural research grants

2013-2014 Cho YE (Post-doctoral Fellow). Role of p67phox in Myocardial Hypertension. National Research Foundation of Korea, \$33,000
 2013 American Heart Association's Council on Basic Cardiovascular Sciences (BCVS) International Travel Grant, \$1,000

Training grants

2024 Scored to Funded Initiative, University of Iowa College of Nursing, \$10,000
 2023 Investment in Strategic Priorities, University of Iowa, \$5,000
 2021 Old Gold Summer Fellowships, The University Iowa, \$6,000
 2021 Summer Grant Writing Support, The University Iowa, \$3,000

Research Presentations

International

1. 2025, **Cho YE**, Kaufman JW, Singh B. *Engineered EVs Mitigate Endothelial Cell Dysfunction*. American Physiology Society, Baltimore, MD. Poster
2. 2024, **Cho YE**, Chen S, Crouch K, Yun J. *Altered adipose tissue-derived extracellular vesicle miRNAs in different ages and diets*. American Physiology Society, Long Beach, LA. Poster.
3. 2024, Pavlovic M, Lee DK, **Cho YE**, Kim JS. *Inflammatory Response Dynamics to Copper Oxide Nanoparticle Inhalation in Obese Mouse Model*. The Society of Toxicology, Salt Lake City, UT. Poster
4. 2023, **Cho YE**, Chen S, Crouch K, Yun J. *Altered adipose tissue-derived extracellular vesicle miRNAs in different ages and diets*. American Association of Extracellular Vesicles. Boston, MA. Oral
5. 2023, Lee DK, Pavlovic M, **Cho YE**, Kim JS. *The Role of Exosomes in Cellular Toxicity induced by Copper Oxide Nanoparticles*. The Society of Toxicology, Nashville, TN. Poster
6. 2022, **Cho YE**, *The Role of Breast Milk Extracellular Vesicles on Endothelial Dysfunction*. American Heart Association Scientific Sessions, Chicago, IL. Poster
7. 2021, **Cho YE**, *Characteristics of Extracellular Vesicle miRNAs in the Breast Milk*. American Heart Association Scientific Sessions, Boston, MA. Virtual meeting. Poster
8. 2019, **Cho YE**, *Changes in circulating miRNA profiles after dietary interventions*. International Society of Nurses in Genetics 2019 Congress, San Antonio, TX. Poster
9. 2018, **Cho YE**, *Exosomal protein profiles and weight gain after kidney transplantation*. International Society of Nurses in Genetics, 2018 Congress in Orlando, FL. Oral
10. 2017, **Cho YE**, *Altered DNA methylation patterns associated with clinically relevant increases in PTSD symptoms and PTSD symptom profiles in military personnel*. Experimental Biology, The American Physiological Society Physiological Genomics Interest Group Annual Research

Conference, Chicago, IL. Oral

11. 2015, **Cho YE**, *microRNA(miR)-451 regulates cardiac growth and myocardial reactive oxidative species (ROS) level via Nrf2 and AMPK and pathways*. American Heart Association Scientific Sessions, Orlando, FL. Poster
12. 2013, **Cho YE**, *Novel role of microRNA (miR)-451 in modulation of oxidative stress and kinase signaling in mouse myocardium*. American Heart Association Scientific Sessions, Dallas, TX. Oral
13. 2012, **Cho YE**, *Role of superoxide in endothelial dysfunction in coronary artery from a mouse model of type 2 diabetes*. Experimental Biology, San Diego, CA. Poster

National

1. 2021, Zhang M, **Cho YE**, and Moon C, *The Relationship Between Neuropsychiatric Symptoms, Nighttime Behaviors, and Alzheimer's Disease CSF Biomarkers*. The Gerontological Society of America Annual Scientific Meeting, Virtual meeting. Poster
2. 2009, **Cho YE**, *Role of Ca^{2+} independent myosin light chain kinase in hypertension*. The 61st Federation Meeting of Korean Physiological Society. Seoul, Korea. Poster
3. 2008, **Cho YE**, *Intracellular acidosis induced myogenic tone change in rabbit basilar artery- Role of Ca^{2+} influx, SR Ca^{2+} release and Ca^{2+} sensitization*. The 57th Federation Meeting of Korean Physiological Society, Seoul, Korea. Poster

Regional

1. 2024, Howland C, Chen S, **Cho YE**. *Social Determinants of Health and Accelerated Epigenetic Aging in Type 2 Diabetes: A Systematic Review*. Midwest Nursing Research Society. Poster
2. 2023, **Cho YE**, Kim J, Vorn R, Baik WH, Park H, Yun S, Kim HS, Cashion AK, Gill J, Koo BN, Lee H. *Extracellular Vesicle MicroRNAs as Predictive Biomarkers in Postoperative Delirium after Spine Surgery*. Midwest Nursing Research Society, Des Moines. 20x20 Presentation (Oral)
3. 2022, Lee D, Pavlovic M, **Cho YE**, and Kim JS, *Investigating the roles of exosomes in cellular toxicity induced by copper oxide nanoparticles*, Central States Chapter of the Society of Toxicology (CSSOT), Kansas. Poster
4. 2022, **Cho YE**, *Characteristics of Extracellular Vesicle miRNAs in the Breast Milk*, Midwest Nursing Research Society, Chicago. 20x20 Presentation (Oral)
5. 2021, **Cho YE**, *Extracellular Vesicles in Breast Milk; mediators between obese mother and children*, Midwest Nursing Research Society, Virtual Conference. Poster
6. 2018, **Cho YE**, *Single cell clustering of PBMCs by using ddSeq technology*. Molecular Biology in Single Cells Symposium, NIH, Bethesda, MD. Poster

Local

1. 2021 **Cho YE**, *Changes in circulating miRNA profiles after dietary interventions*. Presented at the 6th Annual University of Iowa Nursing Recognition Day, Iowa City, IA.
2. 2021 **Cho YE**, *Breast milk Extracellular Vesicles, a mediator between mothers and children*. Presented at 2021 DRC Retreat at Levitt Center, Iowa City, IA

SERVICE

Editorial and Peer Review Service

2022- present	Associate Editor of <i>Frontiers in Cardiovascular medicine</i>
2021- present	Reviewer of <i>Nutrition</i>
2021- present	Reviewer of <i>International Journal of Molecular Sciences</i>
2020- present	Reviewer of <i>Frontiers in Physiology, section Vascular Physiology</i>

Membership

2023- present	American Physiological Society; Regular Member
2023- present	American Association of Extracellular Vesicles; Early Career Membership
2021- present	American Heart Association; Professional Member
2020- present	Midwest Nursing Research Society; RIG- Physiology, Behavior, Genomics, & Society
2019- present	Fraternal Order of Eagles Diabetes Research Center in University of Iowa
2017- present	International Society of Nurses in Genetics
2021- present	Korean-American Scientists and Engineers Association (KSEA)
2013-2014	Trainee membership; American Heart Association

Professional Service

2022- present	International Society of Nurses in Genetics, Research Committee
2022- present	American Heart Association, Volunteer Peer Reviewer
2020- present	Midwest Nursing Research Society; RIG- Physiology, Behavior, Genomics, & Society Abstract Reviewer
2017- 2020	International Society of Nurses in Genetics, Communication Committee
1999	Student Representative in International Council of Nursing (London, UK)

Collegiate Service

2023-present	U of Iowa College of Nursing, IT Committee
2023-present	U of Iowa College of Nursing, Transcultural Nursing & Global Health SIG
2022	U of Iowa College of Medicine, Fraternal Order of Eagles Diabetes Research Center (FOEDRC), DRC Pilot & Feasibility Grant Reviewer
2022	U of Iowa College of Public Health, Environmental Health Sciences Research Center (EHSRC), Pilot Grant Reviewer
2022	U of Iowa College of Nursing, Faculty Awards Reviewer
2020-present	U of Iowa College of Nursing, BSN Admissions Committee
2020-present	Center Associate, Center for Advancing Multimorbidity Science: Profiling risk and symptom expression to develop customized therapies for adults with multiple chronic conditions (CAMS, 1 P20 NR018081-01, University of Iowa, College of Nursing)
2020	U of Iowa College of Nursing, Nursing Honor Program Reviewer

TEACHING

Instructional Activities

(Note: * indicates team-teaching courses)

Courses

9/2021-present	DNP: Doctor of Nursing Practice Project I-IV (graduate course)
9/2021-present	End of Life Care for Adults & Families (undergraduate course)
1/2023-8/2023	Global Health Nursing (undergraduate course)
2/2021-present	Invited lecturer: Biological Markers in Health Research (graduate course)
9/2020-12/2021	RN-BSN: Pathology* (undergraduate course)
9/2020-5/2022	RN-BSN: Intro in Human Genetics* (undergraduate course)
9/2010-2/2011	Patho-physiology* (undergraduate course, appx. 100 students): Adjunct instructor in Seoul National University College of Nursing: Developed lectures on; <ul style="list-style-type: none">○ Disorders of Hematology System, Cardiovascular System, Respiratory System, Gastrointestinal System, and Urinary System○ Fluid, Electrolyte & Acid-Base Homeostasis
3/2005-2/2011	Physiology labs* (undergraduate course, appx. 100 medical school students): Teaching assistant in Yonsei University College of Medicine <ul style="list-style-type: none">○ Cellular physiology○ Respiratory physiology○ Renal physiology○ Neuromuscular physiology○ Cardiovascular physiology

Mentoring

2025-	Hannah E Hazzard (College of Medicine, Comprehensive Exam Committee)
2025-	Jemmie Hoang (College of Nursing, DRP committee)
2023-present	Joseph Yun (Walter Johnson High School, big data analysis)
2023	Luhmann, Emma (College of Medicine Graduate Research Assistant, Career counseling)
2023-2024	Jaewon Bae (College of Nursing, PhD dissertation committee)
2023-2024	Meina Zhang (College of Nursing, F99K00 application mentor)
2022-present	Yuying Zhao (College of Medicine Graduate School, vascular research and extracellular vesicle research)
2022-present	Dongkeun Lee (College of Public Health, Postdoctoral Fellow, extracellular vesicle research)
2021-present	Chen Shaoshuai (College of Nursing Graduate Research Assistant)
2020-present	Janhavi Narayanaswamy (MS. Volunteer in the lab)
2019-2022	Young Scientist Program, The University of Iowa, College of Nursing (Gracie Torres, Alaria Harken and Reegan Schmidt)
2017-2019	Mentoring for summer interns and post-baccalaureates in NINR <ul style="list-style-type: none">○ Taylor Brewer (Summer student, 2018); Exosome research○ Sara Mithani (Graduate Partnership Program fellow, 2017); TBI research with big data analysis○ Tamar Rodney (Research Residence, 2017 and currently assistant professor at The Johns Hopkins University); TBI research with various lab skills
2014	Summer Science Camp lecturer in Hanul Family Alliance (Chicago, IL);

Microbiology overview

Invited talks

08/2024	Breast Milk Exosome Summer Symposium at Andong University, South Korea “The Impact of Breast Milk Extracellular Vesicles on Cardiovascular Health”
12/2021	Environmental Health Sciences Research Center Monthly Seminar “Breast milk Extracellular Vesicles, a mediator between mothers and children”
12/2021	Fraternal Order of Eagles Diabetes Research Center Seminar “Breast milk Extracellular Vesicles, a mediator between mothers and children”
5/2021	NINR’s NEWS meeting, “The Single Cell RNA-seq in Mild Stroke Patients”
10/2020	Chonnam University College of Nursing in South Korea; Global Nursing Leadership project for Undergraduate Students
11/2019	Dr. Gray Pierce (Department of Health and Human Physiology) Lab Meeting “Extracellular Vesicles (EVs); potential biomarkers in CVDs”