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LinkedIn: <https://www.linkedin.com/in/randy-faustino-phd-3a8297140/>**Education**

1996 – 2004

University of ManitobaPh.D. (Physiology), *Supervisor: Dr. Grant Pierce.*Thesis title: *Influences of lipid signaling on nucleocytoplasmic transport.*

1992 – 1996

University of Manitoba

B.Sc. Major with Distinction (Microbiology)

Grants/Funding/Contracts**Recent (Role as PI)****Dakota Seeds** (med/STEM Communications, LLC)

09/18/23 – 8/2/24

Funding from this innovative internship program based in South Dakota provides financial support for STEM internships, as well as helps establish a pipeline for future permanent employment. This money was awarded to my company to recruit several STEM Research and Education interns in the Fall semester of 2023, and the Spring and Summer semesters in 2024.

Sioux Falls Arts Council (Bamboo Panel Studios, LLC)

02/22/24

Recipient of the Artist Micro Grant – this money supports publication of the first book of the inaugural series, “Kosmotrope”, from Bamboo Panel Studios. The mission of BPS is to present impactful narratives with diverse characters set against a supernatural backdrop. “Kosmotrope” shares the story of an Oregon town that has as many secrets as it does residents, and these secrets will be key in saving the town from an ancient rampaging power.

Completed (Role as PI or similar)**Sanford Sport Science Institute (SSSI) and South Dakota State University (SDSU) Collaborative Grant**(PIs: **Faustino**, van Guilder)

06/01/20 – 06/01/21

This pilot/feasibility grant was awarded to support work investigating circulating microRNA dynamics in collegiate level athletes before and after a structured training program. The identification of functional markers associated with improved cardiac performance has immediate impacts in the areas of cardiac rehabilitation and performance genomics.

Role: Co-Principal Investigator

Sanford Foundation (PIs: **Faustino**, Kareta)

04/01/20 – 04/01/21

This pilot/feasibility grant was awarded to support the study of defining and optimizing minimum factors required for inducible hematopoiesis.

Role: Co-Principal Investigator

4P20GM103620-04 (PI: Pearce)
NIH/NIGMS

09/01/18-8/31/23

Center for Pediatric Research

The primary goal of this application is to establish a foundation of basic scientists with translational research projects studying developmental mechanisms underlying children's disease by establishing the Center for Pediatric Research.

Role: Project Leader

SR-2018-096N (PIs: **Faustino**, Baack)

04/01/19 – 04/01/20

Sanford Foundation

This pilot/feasibility grant was awarded to support the study of optimizing conditions that promote mesenchymal stem cell-derived cardiogenesis in differential extracellular matrices. Potential downstream applications include cardioregenerative therapeutic strategies.

Role: Co-Principal Investigator

4P20GM103620-04 (PI: Pearce)
NIH/NIGMS

09/01/13-8/31/18

Center for Pediatric Research

The primary goal of this application is to establish a foundation of basic scientists with translational research projects studying developmental mechanisms underlying children's disease by establishing the Center for Pediatric Research.

Role: Project Leader

14SDG20380322 (PI: **R. Faustino**)
(\$214, 500)

07/01/14-06/30/18

American Heart Association Scientist Development Grant

"Nucleoporin-driven cardiogenesis: Epigenomic role of NUP155 in cardiac specification"

The goal of this study is to investigate the epigenomic regulatory functions of a nuclear pore complex protein on differentiation in a model of stem cell-derived cardiogenesis.

Asper Foundation Research Fellowship (PI: **R. Faustino)**

"Genomic analysis of murine stem cells"

Period of Support: 08/01/2004 – 08/31/2009

Role: Principal Investigator

Completed (Other Role)

Cardio 3 Bio Sciences, SA (PI: A. Terzic)

"MCHS: Cardio-3 Biosciences/Mayo Clinic Collaborative Research Plan"

Period of Support: 06/04/2007 – 06/04/2017

Role: Co-Investigator (\$2, 564, 501)

Miami Heart Research Institute (Heart Failure Collaborative Study) (PI: A. Terzic)

"Decoding repair signatures in cardiopoietic stem cell-treated heart failure patients"

Period of Support: 09/15/2012 – 09/14/2015

Role: Other (\$300, 000)

National Heart, Lung, and Blood Institute (HL85208) (PI: C. Perez-Terzic)

“Regulation of cardiac nuclear pore structure and function”

Period of Support: 06/15/2007 – 05/31/2014

Role: Other Professional (\$1, 881, 195)

Ted Nash Long Life Foundation (PI: A. Terzic)

“Rejuvenation of the Aging Heart Through Regenerative Therapy”

Period of Support: 12/01/2004 – 06/30/2012

Role: Other (\$400, 000)

Honors and Awards

2024	Finalist - de Groot Foundation Courage to Write
2002	Canadian Student Health Research Forum Presentation Award
2002	Alpine Student Research Forum Presentation Award
2001	Graduate Student Conference Travel Award
1999 – 2001	Manitoba Health Research Council Studentship
1992 – 1996	Canada Scholarship
1992 – 1996	Dean’s Honor List
1992	St. Paul’s College Entrance Scholarship
1992	University of Manitoba Entrance Scholarship

Professional Background

Entrepreneurial Experience

July 2024 – present **Co-Founder, CEO, Scientific Director.** Young STEM Scholars, LLC, Sioux Falls, SD. Young STEM Scholars (YSS) is a STEM education spinoff from our STaR Program (see below) committed to providing advanced research training and tools to middle and high school students. As Scientific Director, I lead the students in developing their research and communication strategies; help them prepare presentations for regional, national, and international symposia; and guide them in manuscript preparation of their work. I also spearhead a STEAM initiative at YSS focused on creating sequential art and animation guided by student STEM research. These pieces are based on research conducted by students in the YSS programs, with the overall goal of improving STEM identity, accessibility and audience reach through mindful integration of scientific and artistic practices.
(www.thestarprogram.org; www.youngstemscholars.com)

Sept. 2021 – present **Founder & CEO.** med/STEM Communications, LLC, Sioux Falls, SD. Performed all entrepreneurial activities related to establishing and running a grant consulting and writing business. In this business, my portfolio of services includes grant writing, strategy, and project management with experience working on winning federal (R01, DoD, ARPA, NSF, SBIR) and foundation grants. In addition, I have provided scientific/clinical manuscript editing, proofing, and consultation services on written documents for research, clinical, and law enforcement professionals.
(www.med-stem.com)

May 2023 – Dec 2025

Co-Founder, Editor-in-Chief. Bamboo Panel Studios, LLC, Sioux Falls, SD. Bamboo Panel Studios is a comic book and art studio focused on developing young talent and promoting impactful pieces that advocate diversity, equity and inclusivity. In my role as Editor-in-Chief, I write original scripts for Bamboo Panel Studios properties as well as receive and review submissions from other creative teams for publication consideration.

(<https://www.instagram.com/bamboopanelstudios/>)

May 2022 – July 2024

Co-Founder & Scientific Director. The STaR Program, Sioux Falls, SD. Established a remote out-of-school STEM outreach initiative called the STaR (Science Telementoring and Research) Program originally offered by med/STEM Communications aimed at high school juniors and seniors interested in developing their scientific interests. Along with my Educational Director, we spend 12+ months helping students develop a project aligned with their scientific interests. Their work is presented at prestigious regional, national, and international competitions and culminates in a publication-grade manuscript sent to high school research journals for publication. (thestarprogram.org)

Research Experience

Mar. 2025 – present

Associate Professor of Practice. Department of Biomedical Engineering, University of South Dakota, Sioux Falls, SD. Research focused on characterizing and understanding the role of cellular noise in cell fate and function. Areas of interest include cell and tissue engineering; stem cell models of differentiation; regulators of cellular noise (<https://www.usd.edu/faculty-and-staff/Randy-Faustino>)

Nov. 2016 – Sept 2021

Principal Investigator/Assistant Scientist. Genetics and Genomics Group, Sanford Research, Sioux Falls, SD. Led the Cardiac Systems Biology research program as an independent investigator at Sanford Health. Responsible for initiating and developing scientific research projects, management of laboratory activities and personnel, manuscript preparation and publication, and grant proposal submissions.

Dec. 2008 – Oct. 2016

Research Associate (equivalent to Research Assistant Professor). Division of Cardiovascular Diseases, Department of Medicine, Department of Molecular Pharmacology and Experimental Therapeutics, Mayo Clinic, Rochester, MN. Work involves systems biology and bioinformatic analyses of cardiogenic signaling in stem cells, as well as profiling cohort gene expression signatures to build platforms for individualized medicine.

Aug. 2007 – Dec. 2008

Senior Postdoctoral Research Fellow. Division of Cardiovascular Diseases, Department of Medicine, Department of Molecular Pharmacology and Experimental Therapeutics, Mayo Clinic, Rochester, MN. *Supervisor:* Dr. Andre Terzic. Investigated systems biology of cardiogenic signaling in stem cells by bioinformatic analysis of mRNA expression profiles as well as concomitant

changes in nuclear transport machinery. Differentially profiled cohort bioinformatic signatures for individualized medicine implementation.

- Aug.2004 – Aug. 2007 **Postdoctoral Research Fellow.** Division of Cardiovascular Diseases, Department of Medicine, Department of Molecular Pharmacology and Experimental Therapeutics, Mayo Clinic, Rochester, MN. *Supervisor:* Dr. Andre Terzic. Work involved bioinformatic mapping of cardiogenic signaling cues in embryonic stem cells.
- Nov. 1995 – Sept. 1996 **Research Assistant.** Department of Physiology, St. Boniface Research Centre, Winnipeg, Manitoba, Canada. *Supervisor:* Dr. Grant Pierce. Duties involved animal handling, performing biochemical assays and basic lab maintenance.
- Jun. 1995 – Nov. 1995 **Laboratory Volunteer.** Department of Physiology, St. Boniface Research Centre, Winnipeg, Manitoba, Canada. *Supervisor:* Dr. Grant Pierce. Major duties consisted of learning and utilizing routine biochemical assays to test for levels of triglycerides, proteins, cholesterol and lactate dehydrogenase activity.

Teaching/Academic Experience

- Mar. 2025 – present **Associate Professor of Practice.** Department of Biomedical Engineering, University of South Dakota. Sioux Falls, SD. Responsibilities include teaching graduate level courses, research focused on cellular engineering, and service as the BME Graduate Program Director. Additional duties include mentoring undergraduate learners, graduate and medical school students and postdoctoral trainees; publishing scholarly research; entrepreneurial research advocacy through I-Corps service (<https://www.usd.edu/faculty-and-staff/Randy-Faustino>)
- Sept. 2023 – Dec. 2023 **Adjunct Faculty.** Department of Biology. St. Mary's University of Minnesota, Winona, MN. Responsibilities include teaching upper-level Microbiology as part of requirements for health professional programs; designing and implementing a semester-long course that includes syllabus creation, educational content planning, and assessment strategies; preparing and delivering lecture material as well as guided laboratory exercises; providing academic guidance to undergraduate students as necessary.
- Sept. 2017 – Mar. 2025 **Assistant Professor.** Department of Pediatrics, University of South Dakota Sanford School of Medicine, Sioux Falls, SD. Responsibilities include service on MD and MD/PhD Admissions Committees; mentoring undergraduate learners, graduate and medical school students and postdoctoral/staff scientist trainees; publishing scholarly research (<https://www.usd.edu/faculty-and-staff/Randy-Faustino>)
- Sept. 2010 – Oct. 2016 **Research Assistant Professor (equivalent).** Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN. Organization of graduate level didactic material covering nuclear structure and function. Mentoring activities within the laboratory

include advising graduate students regarding experimental planning, execution and analysis of genome and transcriptome bioinformatics work.

Dec. 2008 – Sept. 2010

Instructor. Mayo Clinic College of Medicine, Mayo Clinic, Rochester, MN. Organized and presented lecture materials in cardiovascular bioinformatics, systems and network biology to graduate students.

Publications

1. Storm EC, Preston C, **Faustino R.** (2022): An atrial fibrillation-associated variant of NUP155 maintains stable dynamics within the nuclear envelope. *Int. J. Heart Vas. Sys.* doi:10.51626/ijhvs.2022.02.00012.
2. Van Guilder GP, Preston CC, Munce TA, **Faustino RS.** (2021): Reply to Schmitz et al. *Am J Physiol: Heart Circ Physiol.* doi: 10.1152/ajpheart.0048.2021.
3. Rizvi F, Preston CC, Emelyanova L, Yousufuddin M, Viqar M, Dakwar O, Ross GR, **Faustino RS,** Holmuhamedov EL, Jahangir A. (2021): Effects of aging on cardiac oxidative stress and transcriptional changes in pathways of reactive oxygen species generation and clearance. *JAHA.* doi:10.1161/JAHA.120.019948.
4. Van Guilder GP, Preston CC, Munce TA, **Faustino RS.** (2021): Impacts of circulating microRNAs in exercise-induced vascular remodeling. *Am J Physiol: Heart Circ Physiol.* doi: 10.1152/ajpheart.00894.2020.
5. Preston CC, Larsen TD, Louwagie EJ, Gandy TCT, **Faustino RS[‡],** Baack ML[‡]. (2020): Maternal high-fat diet and diabetes disrupts transcriptomic pathways that regulate cardiac metabolism and cell fate in newborn rat hearts. *Front Endocrinol.* doi.org/10.3389/fendo.2020.570846. [‡]Co-senior authorship.
6. Burdine RD, Preston CC, Leonard RJ, Bradley TA, **Faustino RS.** (2020): Nucleoporins in cardiovascular disease. *J Mol Cell Cardiol.* doi: 10.1016/j.yjmcc.2020.02.010.
7. Leonard RJ, Preston CC, Gucwa ME, Afeworki Y, Selya AS, **Faustino RS.** (2020): Protein subdomain enrichment of NUP155 variants identify a novel predicted pathogenic hotspot. *Front Cardiovasc Med.* doi: 10.3389/fcvm.2020.00008.
8. Preston CC[‡], Storm EC[‡], Burdine RD, Bradley TA, Uttecht AD, **Faustino RS.** (2019): Nucleoporin insufficiency disrupts a pluripotent regulatory circuit in a pro-arrhythmogenic stem cell line. *Sci Rep.* doi: 10.1038/s41598-019-49147-4.
9. Neri T, Hiriart E, van Vliet PP, Faure E, Norris RA, Fahrat B, Jagla B, Lefrancois J, Sugi Y, Moore-Morris T, Zaffran S, **Faustino RS,** Zambon AC, Desvignes JP, Salgado D, Levine RA, de la Pompa JL, Terzic A, Evans SM, Markwald R, Puceat M. (2019): Human pre-valvular endocardial cells derived from pluripotent stem cells recapitulate cardiac pathophysiological valvulogenesis. *Nat Comm.* Apr 26;10(1):1929. doi: 10.1038/s41467-019-09459-5.
10. Preston CC, Storm EC, Leonard RJ, **Faustino RS.** (2019): Emerging roles for nucleoporins in reproductive cellular physiology. *Can J Physiol Pharmacol.* doi: 10.1139/cjpp-2018-0436.

11. Preston CC, **Faustino RS**. (2018): Nuclear envelope regulation of oncogenic processes: Roles in pancreatic cancer. *Epigenomes*. 2(3): doi.org/10.3390/epigenomes2030015.
12. McKenzie C, Preston CC, Finn R, Eyster K, **Faustino RS**, Lee L. (2018): Strain-specific differences in brain gene expression in a hydrocephalic mouse model with motile cilia dysfunction. *Sci Rep*. 8(1):13370. doi: 10.1038/s41598-018-31743-5.
13. Preston CC, Wyles SP, Reyes S, Storm EC, Eckloff BW, **Faustino RS**. (2018): NUP155 insufficiency recalibrates a pluripotent transcriptome with network remodeling of a cardiogenic signaling module. *BMC Syst Biol*. doi.org/10.1186/s12918-018-0590-x.
14. KC Birendra, May DG, Benson BV, Kim DI, Shivega WG, Ali MH, **Faustino RS**, Campos AR, Roux KJ. (2017): VRK2A is an A-type lamin-dependent nuclear envelope kinase that phosphorylates BAF. *Mol Biol Cell*. 28(17):2241-2250. doi: 10.1091/mbc.E17-03-0138.
15. **Faustino RS**, Pierce GN. (2016): Nucleocytoplasmic trafficking. *Curr Res Cardiol*. 3(2):43-52.
16. **Faustino RS**, Behfar A, Groenendyk J, Wyles SP, Niederlander N, Reyes S, Puceat M, Michalak M, Terzic A, Perez-Terzic C. (2016): Calreticulin secures calcium-dependent nuclear pore competency required for cardiogenesis. *J Mol Cell Cardiol*. 92:63-74.
17. **Faustino RS**, Wyles SP, Michalak M, Terzic A, Perez-Terzic C. (2015): Systems biology surveillance decrypts pathological transcriptome remodeling. *BMC Syst. Biol*. 9:36.
18. Wyles SP, **Faustino RS**, Li Xing, Terzic A, Nelson TJ. (2014): Systems-based technologies in profiling the stem cell molecular framework for cardioregenerative medicine. *Stem Cell Rev. Rep*. 11:501-510.
19. **Faustino RS**, Arrell DK, Folmes CD, Terzic A, Perez-Terzic C. (2013): Stem cell systems informatics for advanced clinical biodiagnostics: tracing molecular signatures from bench to bedside. *Croat. Med. J*. 54:319-329.
20. Folmes CD, Martinez-Fernandez A, **Faustino RS**, Yamada S, Perez-Terzic C, Nelson TJ, Terzic A. (2013): Nuclear reprogramming with c-myc potentiates glycolytic capacity of derived induced pluripotent stem cells. *J. Cardiovasc. Trans. Res*. 6:10-21.
21. Dzeja PP, Chung S, **Faustino RS**, Behfar A, Terzic A. (2011): Developmental enhancement of adenylate kinase-AMPK metabolic signaling axis supports stem cell cardiac differentiation. *PLoS One*. 6:e19300.
22. Chiriac A, Terzic A, Park S, Ikeda Y, **Faustino R**, Nelson TJ. (2010): SDF-1 enhanced cardiogenesis requires CXCR4 induction in pluripotent stem cells. *J. Cardiovasc. Trans. Res*. 3:674-682.
23. **Faustino RS**, Maddaford TG, Pierce GN. (2010): Mitogen activated protein kinase at the nuclear pore complex. *J. Cell. Mol. Med*. 15:928-937.

24. **Faustino RS**, Chiriac A, Niederlander NJ, Nelson TJ, Behfar A, Mishra PK, Macura S, Michalak M, Terzic A, Perez-Terzic C. (2010): Decoded calreticulin-deficient embryonic stem cell transcriptome resolves latent cardiophenotype. *Stem Cells*. 28:1281-1291.
25. Chung S, Arrell DK, **Faustino RS**, Terzic A, Dzeja PP. (2010): Glycolytic network restructuring integral to the energetics of embryonic stem cell cardiac differentiation. *J. Mol. Cell. Cardiol.* 48:725-734.
26. Chiriac A, Nelson TJ, **Faustino RS**, Behfar A, Terzic A. (2010): Cardiogenic induction of pluripotent stem cells streamlined through a conserved SDF-1/VEGF/BMP2 integrated network. *PLoS One*. 5:e9943.
27. Nelson TJ, Chiriac A, **Faustino RS**, Crespo-Diaz RJ, Behfar A, Terzic A. (2009): Lineage specification of Flk-1⁺ progenitors is associated with divergent Sox7 expression in cardiopoiesis. *Differentiation*. 77:248-255.
28. Chung S, Dzeja PP, **Faustino RS**, Terzic A. (2008): Developmental restructuring of the creatine kinase system integrates mitochondrial energetics with stem cell cardiogenesis. *Ann. NY Acad. Sci.* 1147:254-263.
29. **Faustino RS** and Terzic A. (2008): Bioinformatic networks: molecular reticles for pinpointing pharmacological target selection. *Clin. Pharmacol. Ther.* 84:543-545.
30. Behfar A, **Faustino RS**, Arrell DK, Dzeja PP, Perez-Terzic C, Terzic A. (2008): Guided stem cell cardiopoiesis: discovery and translation. *J. Mol. Cell. Cardiol.* 45:523-529.
31. **Faustino RS**, Chiriac A, Terzic A. (2008): Bioinformatic primer for clinical and translational science. *Clin. Trans. Sci.* 1:174-180.
32. **Faustino RS** and Terzic A. (2008): Interactome of a cardiopoietic precursor. *J. Cardiovasc. Trans. Res.* 1:120-126.
33. Nelson TJ, **Faustino RS**, Chiriac A, Crespo-Diaz RJ, Behfar A, Terzic A. (2008): Cxcr4⁺/Flk-1⁺ biomarkers select a cardiopoietic lineage from embryonic stem cells. *Stem Cells*. 26:1464-1473.
34. **Faustino RS**, Cheung P, Richard MN, Dibrov E, Kneesch AL, Deniset JF, Chahine MN, Lee K, Blackwood D, Pierce GN. (2008): Ceramide regulation of nuclear protein import. *J. Lipid Res.* 49:654-662.
35. Arrell DK, Niederlander NJ, **Faustino RS**, Behfar A, Terzic A. (2008): Cardioinductive network guiding stem cell differentiation revealed by proteomic cartography of TNF α -primed endodermal secretome. *Stem Cells*. 26:387-400.
36. **Faustino RS**, Behfar A, Perez-Terzic CM, Terzic A (2008): Genomic chart guiding embryonic stem cell cardiopoiesis. *Genome Biol.* 9: R6.
37. **Faustino RS**, Nelson T, Terzic A, Perez-Terzic C. (2007): Nuclear transport: A target for therapy. *Clin. Pharm. Ther.* 81:880-886.

38. Behfar A, Perez-Terzic C, **Faustino RS**, Arrell DK, Hodgson DM, Yamada S, Puceat M, Niederlander NJ, Alekseev AE, Zingman LV, Terzic A. (2007): Cardiopoietic programming of embryonic stem cells for tumor-free heart repair. *J. Exp. Med.* 204:405-420.
39. **Faustino RS**, Stronger LN, Richard MN, Czubryt MP, Ford DA, Prociuk MA, Dibrov E, Pierce GN. (2007): RanGAP-mediated nuclear protein import in vascular smooth muscle cells is augmented by lysophosphatidylcholine. *Mol. Pharmacol.* 71:438-445.
40. Perez-Terzic C, **Faustino RS**, Boorsma BJ, Arrell DK, Niederlander NJ, Behfar A, Terzic A. (2007): Stem cells transform into a cardiac phenotype with remodeling of the nuclear transport machinery. *Nat. Clin. Pract. Cardiovasc. Med.* 4:S68-S76.
41. Chung S, Dzeja PP, **Faustino RS**, Perez-Terzic C, Behfar A, Terzic A. (2007): Mitochondrial oxidative metabolism is required for the cardiac differentiation of stem cells. *Nat. Clin. Pract. Cardiovasc. Med.* 4:S60-67.
42. Yamada S, Kane GC, Behfar, A, Liu XK, Dyer RB, **Faustino RS**, Miki T, Seino S, Terzic A. (2006): Protection conferred by myocardial ATP-sensitive K⁺ channels in pressure overload-induced congestive heart failure revealed in KCNJ11 Kir6.2-null mutant. *J. Physiol.* 15:577:1053-1065.
43. **Faustino RS**, Rousseau D, Landry MN, Kostenuk AL, Pierce GN. (2006): Effects of mitogen-activated protein kinases on nuclear protein import. *Can. J. Physiol. Pharmacol.* 84:469-475.
44. **Faustino RS**, Clark TA, Sobrattee S, Czubryt MP, Pierce GN. (2004): Differential antioxidant properties of red wine in water soluble and lipid soluble peroxy radical generating systems. *Mol. Cell. Biochem.* 263:211-215.
45. **Faustino RS**, Sobrattee S, Edel AL, Pierce GN. (2003): Comparative analysis of the phenolic content of selected Chilean, Canadian and American Merlot red wines. *Mol. Cell. Biochem.* 249:11-19.
46. Dong Z, Zelmer CD, Canny MJ, McCully ME, Luit B, Pan B, **Faustino RS**, Pierce GN, Vessey JK. (2002): Evidence for protection of nitrogenase from O₂ by colony structure in the aerobic diazotroph *Gluconobacter diazotrophicus*. *Microbiology.* 148:2293-2298.
47. **Faustino RS**, Czubryt MP, Pierce GN. (2002): Determining influence of oxidants on nuclear transport using digitonin-permeabilized cell assay. *Methods Enzymol.* 352:123-134.

In revision/submission/preparation:

Meyer LM, Preston CC, **Faustino RS**. "Blood biomarkers for recognizing mild and moderate TBI". *Journal of Emerging Investigators*. (In revision).

Tolentino AH, Preston CC, **Faustino RS**. "Proteomic analysis prioritizes potential HO-1 involvement in macrophage-orthoerythroblast interactions". *Journal of Emerging Investigators*. (In revision).

Watson OM, Preston CC, **Faustino RS**. "Identification of single nucleotide polymorphisms associated with genes involved in cocaine dependence". *Heliyon* (In preparation).

Kalyanaraman KR, Preston CC, **Faustino RS**. "HTRA1 overexpression is a potential biomarker for early detection of PCOS". *Journal of Emerging Investigators* (In preparation).

Book Chapters:

Preston CC, Stoddard AC, **Faustino RS**. (2022): A Transient Mystery: Nucleolar Channel Systems. In: Nuclear, Chromosomal, and Genomic Architecture in Biology and Medicine. Eds. Kloc, M. and Kubiak, J.Z., Springer Nature Publ.

Terzic C, Preston CC, **Faustino RS**, Qu W. (2019): Stem cell research and regenerative medicine. In: Principles of Rehabilitation Medicine. Ed. Mitra, R., McGraw-Hill Publ.

Faustino RS, Landry MN, Gavel NT, Czubryt MP, Pierce GN. (2005): The influence of lipids on nuclear protein import, cell growth, and gene expression. In: Nutrients and Cell Signaling. Eds. Zemleni, J. and Dakshinamurti, K., Marcel Dekker Publ.

Mentored HS research oral/poster presentations

2025

- Kalyanaraman KR, Preston CC, **Faustino RS**. "HTRA1 overexpression is a potential biomarker for early detection of PCOS". (Presented at 2025 Iowa JSHS, 2025 Western Iowa Science Fair, 2025 SSTFI).
- Meyer LM, Preston CC, **Faustino RS**. "MiRNAs associated with mild and moderate TBI as a biomarker panel for early identification of neurodegenerative potential". (Presented at 2025 Northern Regional JSHS, 2025 Eastern South Dakota Science and Engineering Fair).
- Chung EA, Preston CC, **Faustino RS**. "SYNE2 is a potential biomarker linking central and peripheral neurodegeneration associated with ALS". (Presented at 2025 Missouri JSHS, 2025 Greater Kansas City Science & Engineering Fair).
- Hurd EC, Preston CC, **Faustino RS**. "Bioinformatic analysis identifies regulators of folliculogenesis with potential to treat female reproductive disorders". (Presented at 2025 Eastern South Dakota Science and Engineering Fair).

2024

- Tolentino AH, Preston CC, **Faustino RS**. "Proteomic analysis prioritizes potential HO-1 involvement in macrophage-orthocythoblast interactions". (Presented at 2024 Missouri JSHS, 2024 Greater Kansas City Science & Engineering Fair).
- Watson OM, Preston CC, **Faustino RS**. "Identification of single nucleotide polymorphisms associated with genes involved in cocaine dependence". (Presented at 2024 JSHS, 2024 Eastern South Dakota Science and Engineering Fair).

- Meyer LM, Preston CC, **Faustino RS**. “Blood biomarkers for recognizing mild and moderate TBI”. Prepared for submission to: *Journal of Emerging Investigators*. (Presented at 2024 JSBS (Regional and National), 2024 Eastern South Dakota Science and Engineering Fair).
- Anel S, Tynan B. Preston CC, **Faustino RS**. “Bioinformatic analysis reveals *GRIN2A* as a potential driver of addiction.” (Presented at 2024 Eastern South Dakota Science and Engineering Fair).

2023

- Anel SY, Preston CC, **Faustino RS**. “Bioinformatic identification and prioritization of a high-confidence helical structure within the disordered RNA binding domain of NUP153”. Prepared for submission to: *International Journal of High School Research*. (Presented at: 2023 JSBS, 2023 Eastern South Dakota Science and Engineering Fair).
- Watson OM, Preston CC, **Faustino RS**. “Conservation and functional enrichment of neurotransmitter receptors in addiction”. (Presented at 2023 JSBS (Regional and National), 2023 Regeneron ISEF)

2021

- Kalyanaraman KJ, Preston CC, **Faustino RS**. “Novel miRNA and gene enrichment associated with cardiac function in athletes”. Prepared for submission to: *Journal of Sport and Health Science*. (Presented at 2021 JSBS).
- Quartey CI, Preston CC, **Faustino RS**. “Bioinformatic analysis predicts novel tissue-specific enrichment of nucleoporin gene regulators”. Prepared for submission to: *Frontiers in Bioinformatics*. (Presented at 2021 JSBS).

Presentations

Talks/Seminars/Exhibits/Panels

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| 2025 | Bamboo Panel Studios Genre Writing Panelist
Siouxland Libraries Author Fair (November 2025)
<i>Sioux Falls, SD, USA.</i> |
| 2025 | Young STEM Scholars Table Exhibit
Dakota Horizons Girl Scouts’ Believe In Girls Event (October 2025).
<i>Sioux Falls, SD, USA.</i> |
| 2025 | Young STEM Scholars Table Exhibit
Siouxpercon (September 2025).
<i>Sioux Falls, SD, USA.</i> |
| 2025 | “Taking a cardiac systems biology approach to find some rhythm”.
University of South Dakota BME Seminar Series (January 2025) |

Sioux Falls, SD, USA.

- 2020 Pitch presentation – ECHO 2020 Competition.
University of Toronto. (September 2020)
Toronto, Ontario, Canada.
- 2020 “Finding new relationships for the heart: Networking for NUPS”.
Sanford Research Seminar series. (June 2020)
Sioux Falls, SD, USA.
- 2020 “Systems Biology Approaches to Understand Cardiovascular Development and Disease”.
Concordia College. (January 2020)
Moorhead, Minnesota, USA.
- 2020 Cardiac Science Education. Presenter for Challenge Center Student Visit.
Sanford Research. (January 2020)
Sioux Falls, South Dakota, USA.
- 2020 “Connecting With a Research Scientist”. Guest speaker for Augustana University Course
CHEM130 as part of the “Scientific Intersections and Impacts” area of study.
Sanford Research (January 2020)
Sioux Falls, South Dakota, USA.
- 2019 “Inside Sanford Research: The Faustino Lab”. Co-presented with Claudia Preston, MD.
USD, Guest lecturer for course ISCI-225L-UF1 (December 5, 2019)
Sioux Falls, South Dakota, USA.
- 2019 “Scientific Misconduct and Plagiarism”. Co-presented with Kyle Roux, PhD.
Sanford Research, Ethics Series (June 20, 2019)
Sioux Falls, South Dakota, USA.
- 2019 “Networking from the heart: Exploring the landscape of heart disease using molecular maps”.
Winona State University (April 5, 2019)
Winona, Minnesota, USA.
- 2018 “Nucleoporin regulation of cardiogenic gene networks”.
R30 Research Symposium, Albrechtsen Research Center (April 21, 2018)
Winnipeg, Manitoba, Canada.
- 2016 “Cardiac Systems Biology: Exploration and Decryption of Networks Underlying Development
and Disease”.
Children’s Health Research Center, Sanford Research (May 9, 2016)
Sioux Falls, South Dakota, USA.
- 2009 “Decrypting Cardiovascular Systems Biology Through Integrated Bioinformatics”.
Cardiovascular Research Seminar, Mayo Clinic

Rochester, Minnesota, USA.

- 2007 “Unveiling Cardiovascular Systems Biology Through Integrated Bioinformatics”.
Informatics Grand Rounds, Mayo Clinic
Rochester, Minnesota, USA.

Posters

- 2020 “Potential functions of the nuclear basket in dilated cardiomyopathy”.
Claudia C. Preston, Ryan D. Burdine, Emily C. Storm, **Randolph S. Faustino.**
2020 AHA Basic Cardiovascular Sciences – Systems Approach to Cardiovascular Biology
Moderated Poster Session 3A.
Chicago, Illinois, USA. (Virtual format)
- 2020 “Exploring Effects of Altered NUP153 Expression through CRISPR/dCas9 Systems”.
Ryan D. Burdine, Emily C. Storm, Tyler A. Bradley, Riley J. Leonard, Claudia C. Preston,
Randolph S. Faustino.
2020 USD Ideafest.
Vermillion, South Dakota, USA.
- 2019 “Potential Roles of a NUP155 Protein Subdomain in Cardiac Electrophysiological Development”.
Melanie E. Gucwa, Tyler A. Bradley, Riley J. Leonard, Claudia C. Preston, Ruby Hawks,
Randolph S. Faustino.
2019 Midstates Consortium for Math and Science Undergraduate Research Symposium.
St. Louis, Missouri, USA.
- 2019 “Bioinformatic prioritization of proteasomal and nucleoporin genes in human cardiomyopathy”.
Carina Cates, Claudia C. Preston, Ryan D. Burdine, Tyler A. Bradley, **Randolph S. Faustino.**
2019 South Dakota Undergraduate Research Symposium.
Sioux Falls, South Dakota, USA.
- 2019 “Potential Roles of a NUP155 Protein Subdomain in Cardiac Electrophysiological Development”.
Melanie E. Gucwa, Tyler A. Bradley, Riley J. Leonard, Claudia C. Preston, **Randolph S. Faustino.**
2019 South Dakota Undergraduate Research Symposium.
Sioux Falls, South Dakota, USA.
- 2018 “Identification of a Sin3A/Srsf2 RNA splicing pathway associated with cardiopathological
Nup155 insufficiency”.
Claudia C. Preston, Tyler A. Bradley, Riley J. Leonard, Emily C. Storm, **Randolph S. Faustino.**
Functional Genomics, Transcriptomics, Proteomics and Metabolomics of Cardiovascular
Disease II, American Heart Association.
Chicago, Illinois, USA.
- 2018 “Nup155 regulates pluripotent microRNA expression”.

- Emily C. Storm, Claudia C. Preston, Tyler A. Bradley, **Randolph S. Faustino**.
Functional Genomics, Transcriptomics, Proteomics and Metabolomics of Cardiovascular Disease II, American Heart Association.
Chicago, Illinois, USA.
- 2018 “Elys is a Y-subcomplex Nucleoporin Variant Associated with Cardiac Disease”.
Amrutha Alluri, Claudia C. Preston, Emily C. Storm, **Randolph S. Faustino**.
Sanford Summer Research Symposium.
Sioux Falls, South Dakota, USA.
- 2018 “Recapitulation of Clinical NUP155 R391H Exhibits Novel Nuclear Localization in Pluripotent Stem Cells”.
Riley J. Leonard, Tyler A. Bradley, Emily C. Storm, Claudia C. Preston, **Randolph S. Faustino**.
Sanford Summer Research Symposium.
Sioux Falls, South Dakota, USA.
- 2018 “Nup155 regulates pluripotent microRNA expression”.
Emily C. Storm, Claudia C. Preston, Tyler A. Bradley, **Randolph S. Faustino**.
5th Annual Epigenetics & Epigenomics Symposium (May 7-8, 2018)
Grand Forks, ND, USA.
- 2017 “Embryonic Stem Cell Transcriptome Remodeling by a Nucleoporin Substrate for Atrial Fibrillation”.
Claudia C. Preston, Saranya P. Wyles, Santiago Reyes, Emily C. Storm, **Randolph S. Faustino**.
Genetics and Genomics Session III, American Heart Association.
Anaheim, California, USA.
- 2017 “Targeted Development of Novel Arrhythmogenic Stem Cell Models: Phase I”.
Riley J. Leonard, Emily C. Storm, Claudia C. Preston, **Randolph S. Faustino**.
Sanford Summer Research Symposium.
Sioux Falls, South Dakota, USA.
- 2010 “Prediction of Abnormal Cardiac Development Through Bioinformatic Surveillance of an Embryonic Stem Cell Genome: A Novel Diagnostic Paradigm”.
Genomics of Common Diseases.
Houston, Texas, USA.
- 2004 National Research Forum for Young Investigators in Circulatory and Respiratory Health.
Winnipeg, Manitoba, Canada.
- 2001 XXXIV International Congress of Physiological Sciences.
Christchurch, New Zealand.
- 2001 XVII World Congress of the International Society for Heart Research.

Winnipeg, Manitoba, Canada.

- 2000 Annual Meeting for the American Society for Cell Biology.
San Francisco, California, USA.
- 1998 Annual Meeting for the International Society for Heart Research.
Ann Arbor, Michigan, USA.

Courses, Educational Series & Mentoring Activities

Academic instruction:

- (University of South Dakota) – National Science Foundation Innovation Corps (NSF I-Corps) Teaching Adjunct, Fall 2025 cohort. This intensive 5-week course provides instruction to student & faculty teams of emerging startups in aspects of customer discovery.
- (University of South Dakota) – BME 408/508/592: Frontiers & Innovations in Biomedical Engineering. This course exposes and immerses students in fundamentals of entrepreneurial innovation in the biomedical engineering space. Students learn fundamental principles of the discovery → invention → innovation pathway, communication skills within the BME space, and the process of setting up a venture/startup.
- (St. Mary's University of Minnesota) – Microbiology B434. This upper level course covers microbial biology including aspects of microbial structure and function, mechanisms of genetic diversity, pathology of infection and techniques to control and regulate microbial growth. This course is taken with a co-requisite lab section in which students learn basic aseptic techniques, microbiological assays, and case studies analysis and presentation.
- (University of South Dakota/Sanford Research) – CPHD601 Introduction to Bioinformatics, Section lecturer. This course reviews fundamental concepts and techniques in bioinformatics and computational bioscience, including techniques of data acquisition, analysis, archiving, access, and retrieval. Understanding concepts in the context of fundamental basic as well as translational research is discussed.
- (University of South Dakota/Sanford Research) – BIOC192 Topics: Biomedical Research Training and Techniques, Course Director. Internship course designed for motivated current as well as recently graduated high school students interested in the STEM field. Each intern participates in current research conducted by faculty at Sanford and learns real time lab practices (experimental as well as safety), research ethics and has the opportunity to attend biomedical research seminars.
- (University of South Dakota/Sanford Research) – CPHD725 Genetics of Human Disease, Section lecturer for Bioinformatics. Graduate level instruction in basic principles of transcriptome analysis. Educational activities consists of one didactic lectures and assigned reading determined by section lecturer. *Course Director: Lance Lee, PhD*

- (University of South Dakota/Sanford Research) – CPHD763 Developmental Biology of Disease, Section lecturer for Cardiovascular Development and Disease. Graduate level instruction in basic principles of cardiovascular development. Educational activities consists of two didactic lectures and assigned reading selected by each section lecturer. *Course Director: Lance Lee, PhD*
- (University of South Dakota/Sanford Research) – Research Ethics Seminar Series, Speaker. Responsibility in this role includes presenting and leading discussions on impacts of plagiarism on research.
- (University of South Dakota/Sanford Research) – Lecturer for Summer Undergraduate Research educational series. Presented material focused on bioinformatics, online/*in silico* tools, electronic archives and access.
- (Mayo Clinic) – Preparation and teaching Nuclear Structure and Function lectures as part of graduate level instruction in Molecular Cell Biology; pedagogy includes two didactic lectures and one interactive class discussion/critique of selected articles to expose students to critical thinking.
- (Mayo Clinic) – Preparation and presentation of Cardiovascular Bioinformatics as part of a Cardiovascular Biology and Molecular Pharmacology course, where key bioinformatic concepts are discussed with respect to systems biology applications in a cardiovascular context. Scope includes pedagogy related to gene network architecture.

Mentoring

NSF I-Corps – With my background as academic faculty, research PI, and STEM entrepreneur, I serve as Industry Mentor for startup teams at USD comprised of faculty and students with translational innovations. Teams are typically part of a regional cohort and competitively interview to participate in a National cohort where budding startup teams are trained on how to build a business based on their technological or engineering innovation.

- *Oncoplant Therapeutics, LLC (2025)*

Current graduate students:

- *Avery Del Grosso (2026 University of South Dakota):* Characterization of the mobile NUP153 protein and its ability to function as a regulator of condensate viscoelasticity in transcriptional activation during cell fate specification.
- *Tim Hartman (2025 University of South Dakota):* Identification and characterization of the OE:Macrophage interactome that facilitates enucleation in terminal erythropoiesis

Current undergraduate mentees:

- *Jasmine Shrestha (2026 Winter semester, University of South Dakota):* Understanding evolutionary genomic reduction driving endosymbiogenesis.

- *Samit Mishra (2026 Winter semester, 2025 BME summer student, University of South Dakota):* AI-guided analysis of proteomic datasets to capture the transient protein-protein network at the reticuloblast:macrophage interface during terminal erythropoiesis

Former trainees/mentees:

- *Megan Jorgensen (MD/PhD student, University of South Dakota, Expected graduation, 2024, PI: Pilar de la Puente)*
- *Hannah Wollenzien (PhD student, University of South Dakota, Expected graduation 2024, PI: Mike Kareta):* *In vivo* single cell barcoding to investigate tumor heterogeneity. (Currently postdoctoral researcher at VCU).
- *Ashley Cain-Stoddard (2020 Telementoring undergraduate intern, BYU, Provo UT, Expected graduation 2021):* Network biology and analysis.(Currently clinical research assistant at Intermountain Health).
- *Karshana Kalyanaraman (2020 Telementoring Intern, Johnston HS, Johnston, IA, Expected graduation 2021):* Meta analysis of athlete transcriptomes. (Currently enrolled in the accelerated BS/MD programs at the University of Pittsburgh).
- *Cheryl Quartey (2020 Telementoring Intern, Hume-Fogg Academic Magnet HS, Nashville, TN, Expected graduation 2021):* Genomic coordination of nuclear pore complex genes. (Currently completing a BS in the areas of Cellular and Molecular Biology and Data Science at Vanderbilt).
- *Claudia Preston, MD (Staff Scientist, Sanford Research):* Role of Sin3A in cardiopathology; Three dimensional nucleoporin dynamics in embryonic stem cells and cardiomyocytes. (Currently Assistant Professor in the Department of Biology at St. Mary's University of Minnesota).
- *Emily Storm (MD/PhD candidate, University of South Dakota, Graduated 2023):* NUP155 dynamics in stem cells. (Currently pathology resident at Sanford Health).
- *Ryan Burdine (Undergraduate intern, University of South Dakota, Graduated 2021):* Stem cell culture work; cloning; imaging, NUP153 work. (Currently lab manager of the Ronan Laboratory within the VA Medical Center in Sioux Falls, South Dakota).
- *Eli Louwagie (MD/PhD student, University of South Dakota, Graduated 2023, PI: Michelle Baack):* *Metabolic regulation of developmental cardiac disorders.*
- *Melanie Gucwa (2019, 2020 SPUR student, Carthage College, Graduated 2021):* Genome editing, stem cell culture. (Currently enrolled as a PhD student at Cincinnati Children's Hospital).
- *LaRae Lorenzen (2019 Research Shadow and Intern, Roosevelt HS, Graduated 2021):* General lab experience; manuscript preparation.
- *Ruby Hawks (2019 Undergraduate intern, University of South Dakota, Graduated 2023):* Microscopy. Currently a student researcher at the University of South Dakota.

- *Carina Cates (2019 SPUR student, Presentation College, Graduated 2020):* Bioinformatic analysis of transcriptome remodeling associated with cardiomyopathy. (Graduated with a BS from Presentation College).
- *Tyler Bradley, BS (Med Bio), MA (Biology), (Research Specialist, Sanford Research):* Human iPSC culture, cell differentiation; cardiogenesis. (Currently practicing law in Sioux Falls, South Dakota).
- *Riley Leonard (2017 SPUR student, St. John's University, Graduated 2019):* Novel stem cell models of arrhythmogenesis. (Currently enrolled as a PhD graduate student in the Cell and Developmental Biology program at the University of Iowa).
- *Amrutha Alluri (2018 PROMISE Scholar, Roosevelt HS, Graduated 2019):* Cardiopathological gene variants of Y-complex nucleoporins. (Currently accepted on scholarship into undergraduate studies at Augustana University).
- *Andrew Uttecht, BS (Applied Biological Sciences, Maj. Biomedical Engineering), (Associate Research Specialist):* Animal embryonic stem cell culture; ultrasonication and chromatin shearing; DNA/RNA extraction, isolation, and testing. (Finished with a Master's degree in the Biomedical Engineering program at the University of South Dakota).
- *Stephanie Safgren, PhD (Mayo Clinic, successfully defended 2018):* Served as external thesis committee member previously; finished a postdoc in the lab of Alex Maya at Mayo Clinic, Rochester, MN. (Currently an Associate Researcher in the Center of Individualized Medicine at Mayo Clinic).

High School Shadows

- *Gage Stromberg (Pelican Rapids HS)*
- *Radiana Simeonova (Lincoln HS)*
- *Lexi Rust (Yankton HS)*
- *Anna Orr (Irene-Wakonda HS)*
- *Jordan Engbrecht (Canistota HS)*
- *Olivia Petrik (Gayville-Volin HS)*
- *Bailey O'Hara (Montrose HS)*
- *Mary-Frances Ladd (Luverne HS)*
- *Shawna Lofland (Canton HS)*

Former co-mentees (with description of associated project):

- *Almudena Martinez-Fernandez (Predoctoral candidate, Mayo Clinic, graduated 2012):* Comparative genomic evaluation of induced pluripotent stem (iPS) cells *versus* embryonic stem cells.
- *Santiago Reyes-Ramirez (Predoctoral candidate, Mayo Clinic, graduated 2010):* Investigation of genomic changes that drive dysregulated metabolic handling induced by potassium channel knockout.

- *Anca Chiriac (Predoctoral candidate, Mayo Clinic, graduated 2010):* Cross-platform transcriptome profiling of stem cell derived models of cardiogenesis; gene network models of prediction and identification of candidate signature molecules essential to cardiogenesis.

Extracurriculars, Service & Outreach

August 2024 – present

Head STEM Coach, Science Coach. Responsibilities include meeting with High School STEM Educators and provide guidance and leadership as they educate their students in authentic research experiences working on NSF-mandated use-inspired science projects. Science Coach is a non-profit organization focused on building equity and accessibility in STEM for high schools students nationwide while providing professional development for educators in the STEM space.

June 2020 – present

Editorial Board Member (Review Editor), *Frontiers in Physiology (Striated Muscle Physiology Section)*. Roles include reviewing journal submissions to ensure proper scientific rigor, engaging with the authors, Associate Editor and other Review Editors.

Sep 2021 – May 2022

Committee member, *Alumni Student Scholar Program*. Responsible for interviewing and selecting candidates for admission to the advanced/guaranteed entry to medical school program at the University of South Dakota. Applicants to this program are among some of the most outstanding high school students applying to their freshman year at USD seeking advanced assured entry into med school upon completing their undergraduate degree.

Sep 2021 – May 2022

Committee member, *USD MD/PhD Admissions Committee*. Responsible for interviewing and selecting candidates for admission to the MD/PhD Graduate School program at the University of South Dakota.

Sep 2021 – May 2022

Committee member, *USD MD Admissions Committee*. Responsible for interviewing and selecting candidates for admission to the Sanford School of Medicine at the University of South Dakota.

Aug 2020

Guest Editor, *Cells*. Responsible for establishing aim and scope of a special issue of *Cells* focused on the theme of Cardiac Diseases and Stem Cell Modeling (provisional).

Sep 2018 – Sep 2021

Committee member, *Eastern South Dakota Research Symposium organizing committee, Sanford Research*. Responsibilities include selecting plenary speakers for the scientific program and organizing event schedules; serving as session chair as needed.

Jan 2018 – Aug 2021

Chair, *Data Club Oversight Committee, Sanford Research*. Working with colleagues, Dr. Valerie Bares and

Dr. Alexei Savinov, responsibilities include providing feedback to presenters on experimental design, conceptual implementation, statistical rigor/robustness, data interpretation, and implications of findings.

Sep 2019 – Jan 2021

Director, Sanford PROMISE Scholars Program, Sanford Research. Leadership role includes oversight on all aspects of the PROMISE Scholars Program. This includes program design, content, administration, and recruitment. This program is intended for regional high school students with an interest in science and is particularly suited for those demonstrating an aptitude for the biomedical sciences. Acceptance into the program is competitive. Students selected as PROMISE Scholars complete an immersive 10 week mentored summer research internship in a designated Sanford Research lab, and receive a scholarship upon completion.

Feb 2017– 2018

Co-ordinator, Sanford Research Seminar Series, Sanford Research. Responsibilities include networking with internal and external colleagues as part of a regular speaker series; organizing schedules of scientific presentations by intramural and extramural scientists; introducing and facilitating discussion for visiting faculty.

Jul 2007 – Jun 2008

President, Mayo Research Fellows' Association, Mayo Clinic. Responsible for chairing executive committee meetings of the MRFA to determine and provide educational, social and networking opportunities that contribute towards career advancement for postdoctoral community members.

2006 – 2007

Vice-President, Mayo Research Fellows' Association, Mayo Clinic. Responsible for chairing meetings with postdoctoral representatives from different departments to facilitate communication between members of the postdoctoral community.

2005 – 2006

Governing Committee Member, Mayo Research Fellows' Association, Mayo Clinic. Responsible for serving as liaison between MRFA and research fellows in the postdoctoral community.

1999 – 2004

Medical Council of Canada Proctor, University of Manitoba. Invigilator for the Medical Council of Canada licensing examinations for undergraduate medical students at the end of every spring and fall session.

2002

Graduate student representative, University of Manitoba. Attended faculty council meetings at which issues pertaining to both clinicians and basic researchers were discussed.

2000

Alpine Student Research Forum Co-chair, University of Manitoba. Organized student speakers and mediated question-and-answer periods.

1999 – 2001

Student co-ordinator, University of Manitoba. Hosted and mediated informal lunch sessions between students and visiting speakers/scientists.

1999 – 2001

Student outreach program, University of Manitoba. Visited elementary schools to educate children about basic concepts concerning the heart and to stimulate an interest in the basic sciences. This activity involved bringing a porcine heart to the class and fostering interest by interactive questions and hands-on experience.

Ongoing – *Ad hoc* reviewer for:

- *Heliyon*
- *Clinical Pharmacology and Therapeutics*
- *Bioinformatics*
- *Nature Clinical Practice Cardiovascular Medicine*
- *BMC Genomics*
- *Scientific Reports*
- *Cells*
- *Molecular Biology Reports*
- *Stem Cells International*
- *Current Bioinformatics*
- *International Journal of Molecular Sciences*
- *Applied Sciences*
- *Development*
- *Pharmaceuticals*
- *European Journal of Sport Science*

Professional Memberships

- 2025 – present McAllister & Quinn (Freelance Grant Consultant)
- 2025 – present Grantify (Freelance Grant Writer)
- 2023 – present American Grant Writers' Association
- 2023 – present Startup Sioux Falls
- 2016 – present American Heart Association
- 2016 – 2021 American Society for Cell Biology
- 1998 – 2004 International Society for Heart Research