

**Nárlon C Boa Sorte Silva, PhD**

Assistant Professor

Department of Health, Kinesiology, and Applied Physiology

Faculty of Arts and Science, Concordia University

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[narlon.silva@concordia.ca](mailto:narlon.silva@concordia.ca) | +1 (514) 848-2424 x3322 | @BoaNarlon**ACADEMIC APPOINTMENTS**

2024 – **Assistant Professor, Concordia University, Montréal, Canada**  
Department of Health, Kinesiology, and Applied Physiology  
Faculty of Arts and Science

**EDUCATION**

2017 – 2020 **PhD (School of Kinesiology), Western University, London, Canada**  
*Dissertation: The Effects of Exercise on Cognition, Mobility, and Neuroimaging Outcomes in Older Adults without Dementia*  
Supervisor: Robert J Petrella

2015 – 2017 **MSc (School of Kinesiology), Western University, London, Canada**  
(Transferred to PhD program before completion)  
Advisor: Robert J Petrella

2011 – 2014 **BSc (Physical Education), Nove de Julho University, Sao Paulo, Brazil**  
*Dissertation: Analysis of Postural Control in Young and Older Adults Under Dual-task Condition*

**RESEARCH TRAINING**

2020 – 2024 **Postdoctoral Fellow, The University of British Columbia, Vancouver, Canada**  
Supervisor: Teresa Liu-Ambrose

2020 – 2024 **Postdoctoral Research Assistant**  
Centre for Studies in Family Medicine, Schulich School of Medicine and Dentistry.  
Western University, London, Canada.

2018 – 2020 **Graduate Research Assistant**  
Centre for Studies in Family Medicine, Schulich School of Medicine and Dentistry.  
Western University, London, Canada.

2015 – 2018 **Research Assistant**  
Lawson Health Research Institute. Western University, London, Canada

2014 **Research Intern**  
Lawson Health Research Institute. Western University, London, Canada

2011 – 2014 **Undergraduate Student Researcher**  
Faculty of Education, Nove de Julho University, Sao Paulo, Brazil

**AWARDS, DISTINCTIONS AND OTHER ACCOLADES**

2024 – 2025 **Post-Doctoral Fellowship Award**  
StrokeCog-Clinical Trials Training Platforms  
Amount awarded: \$65,000

2020 – 2024 **Research Trainee Program**  
Michael Smith Health Research BC & Canadians for Leading Edge Alzheimer Research  
Amount awarded: \$148,500 (received only top-up funding due to overlapping award: \$42,250)

2020 – 2023 **Postdoctoral Fellowship Award**  
Canadian Institutes of Health Research

2020 – 2021	Amount awarded: \$135,000 <b>Innovation Fund Postdoctoral Trainee Award</b> Djavad Mowafaghian Centre for Brain Health
2018 – 2019	Amount awarded: \$5,000 (declined due to overlapping award) <b>International Ontario Graduate Scholarship</b> Ministry of Colleges and Universities of Ontario/Western University
2017 – 2018	Amount awarded: \$15,000 <b>Globalink Graduate Fellowship Award</b> MITACS
2016 – 2020	Amount awarded: \$20,000 <b>Western Graduate Research Scholarship</b> School of Graduate and Postdoctoral Studies/Western University
2016 – 2017	Amount awarded: Merit-based award to fully fund MSc/PhD programs <b>Lawson Internal Research Fund Studentship Award</b> Lawson Health Research Institute
2015 – 2016	Amount awarded: \$15,000 <b>Globalink Graduate Fellowship Award</b> MITACS
2014	Amount awarded: \$10,000 <b>Globalink Research Internship Award</b> MITACS
	Amount awarded: \$7,500

## GRANT FUNDING HISTORY

2024 – 2027	<b>Alzheimer's Association Research Fellowship to Promote Diversity (AARF-D)</b> Project Title: Myelin loss and cognitive impairment following SARS-CoV-2 infection. PI: Nárlon C Boa Sorte Silva, Mentor: Teresa Liu-Ambrose, Co-Mentor: Roger C Tam, Grant amount: US\$160,000	<b>Status:</b> Awarded
2024 – 2025	<b>Canadian Institutes of Health Research Project Grant (Priority Funding)</b> Project Title: EPIC Brain: Exercise in perimenopause to improve cognitive & brain health PI: Teresa Liu-Ambrose, Role: Co-Applicant, Grant amount: C\$100,000	<b>Status:</b> Awarded
2024 – 2025	<b>Canadian Institutes of Health Research Catalyst Grant: Analysis of Canadian Longitudinal Study in Aging Data</b> Project Title: Health or wealth? Socioeconomic status as a moderator of the associations between healthy activity behaviours and cognitive function. PI: Teresa Liu-Ambrose, Role: Co-Applicant, Grant amount: C\$70,000	<b>Status:</b> Awarded
2018 – 2020	<b>The Heart and Stroke Foundation of Canada Grant-in-Aid Competition</b> Project Title: Exercise to Improve the Hearts and Minds of Canadian Older Adults with Hypertension: The Heart & Mind Study. PI: Robert J Petrella, Role: Co-Applicant, Grant amount: C\$236,000	<b>Status:</b> Awarded

## PEER-REVIEWED PUBLICATIONS

1. **Silva, N. C. B. S.**, Barha, C. K., Erickson, K. I., Kramer, A. F., & Liu-Ambrose, T. (2024). Physical exercise, cognition, and brain health in aging. *Trends in Neurosciences*, 47(6), 402–417. <https://doi.org/10.1016/J.TINS.2024.04.004>  
**Impact Factor:** 15.9  
**Role:** Contributed to study concept and conducted literature search. Contributed in writing and editing the final version of the manuscript. Percent contribution: 60%.

2. Petrella, R. J., Gill, D. P., **Silva, N. C. B. S.**, Rigglin, B., Blunt, W. M., Kfrerer, M., Majoni, M., Marsh, J., Irwin, J. D., Stranges, S., Zwarenstein, M., & Zou, G. (2024). The Hockey Fans in Taining intervention for men with overweight or obesity: A pragmatic cluster randomised trial. *eClinicalMedicine*, (*in press*).  
**Impact Factor:** 9.6  
**Role:** Contributed to data collection, data analysis, interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 30%.
3. Stein, R. G., Ten Brinke, L. F., **Silva, N. C. B. S.**, Hsu, C. L., Handy, T. C., Hsiung, G.-Y. R., & Liu-Ambrose, T. (2024). The Effect of Computerized Cognitive Training, with and without Exercise, on Cortical Volume and Thickness and Its Association with Gait Speed in Older Adults: A Secondary Analysis of a Randomized Controlled Trial. *Journal of Alzheimer's Disease Reports*, 8(1), 817–831. <https://doi.org/10.3233/ADR-230206>  
**Impact Factor:** 3.2  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 25%.
4. Balbim, G. M., Falck, R. S., **Silva, N. C. B. S.**, Kramer, A. F., Voss, M., & Liu-Ambrose, T. (2024). The Association of the 24-Hour Activity Cycle Profiles With Cognition in Older Adults With Mild Cognitive Impairment: A Cross-Sectional Study. *The Journals of Gerontology: Series A*, 79(7), 99. <https://doi.org/10.1093/GERONA/GLAE099>  
**Impact Factor:** 5.1  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 25%.
5. Falck, R. S., Hsu, C. L., Best, J. R., **Silva, N. C. B. S.**, Hall, P. A., Li, L. C., Liu-Ambrose, T. (2023). It's all in your head: Cross-sectional and longitudinal neural predictors of physical activity and sedentary behaviour. *Scientific Reports*, 14(919). <https://doi.org/10.1038/s41598-023-48715-z>  
**Impact Factor:** 4.6  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 20%.
6. **Silva, N. C. B. S.**, ten Brinke, L. F., Bielak, A. A. M., Handy, T. C., & Liu-Ambrose, T. (2023). Improved intraindividual variability in cognitive performance following cognitive and exercise training in older adults. *Journal of the International Neuropsychological Society*, 1–11. <https://doi.org/10.1017/S1355617723000577>  
**Impact Factor:** 2.6  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
7. Falck, R. S., **Silva, N. C. B. S.**, Balbim, G. M., Li, L. C., Barha, C. K., & Liu-Ambrose, T. (2023). Addressing the elephant in the room: the need to examine the role of social determinants of health in the relationship of the 24-hour activity cycle and adult cognitive health. *British Journal of Sports Medicine*, 57(22), 1416–1418. <https://doi.org/10.1136/BJSPORTS-2023-106893>  
**Impact Factor:** 18.4  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 20%.
8. Balbim, G. M.\*, **Silva, N. C. B. S.\***, ten Brinke, L. F., Falck, R. S., Hortobágyi, T., Granacher, U., Erickson, K., Hernández-Gamboa, R., Liu-Ambrose, T. (2023). Aerobic exercise training effects on hippocampal volume in healthy older individuals: a meta-analysis of randomized controlled trials. *GeroScience* 2023, 1–10. <https://doi.org/10.1007/S11357-023-00971-7>  
**Impact Factor:** 5.6

**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 40%. \*Co-first authors.

9. Elahi, F. M., Alladi, S., Black, S. E., Claassen, J. A. H. R., Decarli, C., Hughes, T. M., ... **Silva, N. C. B. S.**, ... Kistler, J. P. (2023). Clinical trials in vascular cognitive impairment following SPRINT-MIND: An international perspective. *Cell Reports Medicine*, 4, 101089. <https://doi.org/10.1016/j.xcrm.2023.101089>  
**Impact Factor:** 14.3  
**Role:** Contributed to reviewing literature, writing specific sections on lifestyle interventions, and editing the final version of the manuscript. Percent contribution: 10%.
10. Petrella, R. J., Gill, D. P., Kfrerer, M., Riggin, B, Majoni, M., Blunt, W., Bliss, B., **Silva, N. C. B. S.**, Aspinall, P. S., Adekoya, P., DiNunzio, M., Marsh, J., Zou, G., Irwin, J. D. (2023). Hockey Fans in Training (Hockey FIT): Rationale, design, and baseline characteristics from a cluster randomized controlled trial in men with overweight or obesity. *Contemporary Clinical Trials*, 129, 107178. <https://doi.org/10.1016/J.CCT.2023.107178>  
**Impact Factor:** 2.2  
**Role:** Contributed to collection, analysis, and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 5%.
11. **Silva, N. C. B. S.**, Dao, E., Hsu, C. L., Tam, R. C., Lam, K., Alkeridy, W., Laule, C., Vavasour, I. M., Stein, R. G., & Liu-Ambrose, T. (2022). Myelin and physical activity in older adults with cerebral small vessel disease and mild cognitive impairment. *The Journals of Gerontology: Series A*, glac149. <https://doi.org/10.1093/gerona/glac149>  
**Impact Factor:** 5.1  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
12. **Silva, N. C. B. S.**, Dao, E., Hsu, C. L., Tam, R. C., Stein, R., Alkeridy, W., Laule, C., Vavasour, I. M., & Liu-Ambrose, T. (2022). Myelin content and gait impairment in older adults with cerebral small vessel disease and mild cognitive impairment. *Neurobiology of Aging*, 119, 56–66. <https://doi.org/https://doi.org/10.1016/j.neurobiolaging.2022.03.020>  
**Impact Factor:** 4.9  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%
13. **Silva, N. C. B. S.**, Falck, R. S., Chan, P. C. Y., Tai, D., Backhouse, D., Stein, R., & Liu-Ambrose, T. (2022). The association of sleep and cortical thickness in mild cognitive impairment. *Experimental Gerontology*, 111923. <https://doi.org/https://doi.org/10.1016/j.exger.2022.111923>  
**Impact Factor:** 3.9  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
14. **Silva, N. C. B. S.**, Bracko, O., Nelson, A. R., De Oliveira, F. F., Robinson, L. S., Shaaban, C. E., Hainsworth, A. H., Price, B. R. (2022). Vascular cognitive impairment and dementia: An early career researcher perspective. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*. 14(1), e12310. <https://doi.org/10.1002/dad2.12310>  
**Impact Factor:** 5.3  
**Role:** Contributed to manuscript concept, writing, and editing the original draft, revising and submission of the manuscript. Percent contribution: 30%.

15. Falck, R. S., Hsu, C. L., **Silva, N. C. B. S.**, Li, L. C., Best, J. R., & Liu-Ambrose, T. (2022). The independent associations of physical activity and sleep with neural activity during an inhibitory task: cross-sectional results from the MONITOR-OA study. *Journal of Sleep Research*, e13692. <https://doi.org/10.1111/jsr.13692>  
**Impact Factor:** 4.4  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 20%.
16. Hortobágyi, T., Vetrovsky, T., Balbim, G. M., **Silva, N. C. B. S.**, Manca, A., Deriu, F., Kolmos, M., Kruuse, C., Liu-Ambrose, T., Radák, Z., Váczi, M., Johansson, H., dos Santos, P. C. R., Franzén, E., & Granacher, U. (2022). The impact of aerobic and resistance training intensity on markers of neuroplasticity in health and disease. *Ageing Research Reviews*, 80, 101698. <https://doi.org/10.1016/j.arr.2022.101698>  
**Impact Factor:** 13.1  
**Role:** Contributed to reviewing literature, writing specific sections on exercise interventions for older adults, contributed to and editing and revising the final version of the manuscript. Percent contribution: 5%.
17. Liu-Ambrose, T., Dao, E., Crockett, R. A., Barha, C. K., Falck, R. S., Best, J. R., Hsiung, G. Y. R., Field, T. S., Madden, K. M., Alkeridy, W. A., **Silva, N. C. B. S.**, Davis, J. C., ten Brinke, L. F., Doherty, S., & Tam, R. C. (2021). Reshaping the path of vascular cognitive impairment with resistance training: a study protocol for a randomized controlled trial. *Trials*, 22(1), 1–12. <https://doi.org/10.1186/s13063-021-05156-1>  
**Impact Factor:** 2.5  
**Role:** Contributed to writing and reviewing the final version of the manuscript. Percent contribution: 5%.
18. **Silva, N. C. B. S.**, Petrella, A. F. M., Christopher, N., Marriott, C. F. S., Gill, D. P., Owen, A. M., & Petrella, R. J. (2021). The Benefits of High-Intensity Interval Training on Cognition and Blood Pressure in Older Adults With Hypertension and Subjective Cognitive Decline: Results From the Heart & Mind Study. *Frontiers in Aging Neuroscience*, 13(April), 1–17. <https://doi.org/10.3389/fnagi.2021.643809>  
**Impact Factor:** 4.8  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
19. Marriott, C. F. S., Petrella, A. F. M., Marriott, E. C. S., **Silva, N. C. B. S.**, & Petrella, R. J. (2021). High-Intensity Interval Training in Older Adults: a Scoping Review. *Sports Medicine - Open*, 7(1), 1–24. <https://doi.org/10.1186/s40798-021-00344-4>  
**Impact Factor:** 4.6  
**Role:** Contributed to study concept, study design, writing and reviewing the final version of the manuscript. Percent contribution: 25%.
20. **Silva, N. C. B. S.**, Gill, D. P., Nagamatsu, L. S., Owen, A. M., & Petrella, R. (2020). Systolic blood pressure dipping may be associated with mobility impairment and brain volume in community-dwelling older adults: An exploratory study. *Experimental Gerontology*, 141, 1–10. <https://doi.org/10.1016/j.exger.2020.111100>  
**Impact Factor:** 3.9  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.

21. **Silva, N. C. B. S.**, Gill, D. P., & Petrella, R. J. (2020). A scoping review of multiple-modality exercise and cognition in older adults: Limitations and future directions. *Current Sports Medicine Reports*, 19(8), 298–325. <https://doi.org/10.1249/JSR.0000000000000736>  
**Impact Factor:** 1.8  
**Role:** Contributed to study concept and design of the review, original search, screening, and data extraction of papers, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 80%.
22. **Silva, N. C. B. S.**, Nagamatsu, L. S., Gill, D. P., Owen, A. M., & Petrella, R. J. (2020). Memory function and brain functional connectivity adaptations following multiple-modality exercise and mind–motor training in older adults at risk of dementia: An exploratory sub-study. *Frontiers in Aging Neuroscience*, 12, 1–16. <https://doi.org/10.3389/fnagi.2020.00022>  
**Impact Factor:** 4.8  
**Role:** Contributed to study concept and design, acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
23. **Silva, N. C. B. S.**, Pulford, R. W., Lee, D. S., & Petrella, R. J. (2020). Heart failure management insights from primary care physicians and allied health care providers in Southwestern Ontario. *BMC Family Practice*, 21(1), 8. <https://doi.org/10.1186/s12875-020-1080-y>  
**Impact Factor:** 2.9  
**Role:** Contributed to analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.
24. Gill, D. P., Blunt, W., **Silva, N. C. B. S.**, Stiller-Moldovan, C., Zou, G. Y., & Petrella, R. J. (2019). The HealthSteps™ lifestyle prescription program to improve physical activity and modifiable risk factors for chronic disease: A pragmatic randomized controlled trial. *BMC Public Health*, 19(1), 1–15. <https://doi.org/10.1186/s12889-019-7141-2>  
**Impact Factor:** 4.5  
**Role:** Contributed to acquisition of data and contributed in reviewing, writing and editing the final version of the manuscript. Percent contribution: 25%.
25. Alber, J., Alladi, S., Bae, H. J., Barton, D. A., Beckett, L. A., Bell, J. M., Berman, S. E., Biessels, G. J., Black, S. E., Bos, I., Bowman, G. L., Brai, E., Brickman, A. M., Callahan, B. L., Corriveau, R. A., Fossati, S., Gottesman, R. F., Gustafson, D. R., Hachinski, V., Hayden, K.M., Helman, A.M., Hughes, T.M., Isaacs, J.D., Jefferson, A.L., Johnson, S.C., Kapasi, A., Kern, S., Kwon, J.C., Kukolja, J., Lee, A., Lockhart, S.N., Murray, A., Osborn, K.E., Power, M.C., Price, B.R., Rhodius-Meester, H.F.M., Rondeau, J.A., Rosen, A.C., Rosene, D.L., Schneider, J.A., Scholtzova, H., Shaaban, C.E., **Silva, N.C.B.C.**, Snyder, H.M., Swardfager, W., Troen, A.M., van Veluw, S.J., Vemuri, P., Wallin, A., Wellington, C., Wilcock, D.M., Xie, S.X. and Hainsworth, A.H. (2019). White matter hyperintensities in vascular contributions to cognitive impairment and dementia (VCID): Knowledge gaps and opportunities. *Alzheimer's and Dementia: Translational Research and Clinical Interventions*, 5, 107–117. <https://doi.org/10.1016/j.trci.2019.02.001>  
**Impact Factor:** 4.8  
**Role:** Contributed primarily to section 6 of the manuscript, discussing nonpharmacological interventions to prevent and treat white matter hyperintensities. Also contributed in reviewing, writing and editing the final version of the manuscript. Percent contribution: 5%.
26. Tavares, J. T., Biasotto-Gonzalez, D. A., **Silva, N. C. B. S.**, Suzuki, F. S., Lucareli, P. R. G., & Politti, F. (2019). Age-related changes in postural control in physically inactive older women. *Journal of Geriatric Physical Therapy*, 42(3), 1–6. <https://doi.org/10.1519/JPT.0000000000000169>  
**Impact Factor:** 2.4

**Role:** Contributed to study implementation, acquisition of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 30%.

27. **Silva, N. C. B. S.**, Gill, D. P., Owen, A. M., Liu-Ambrose, T., Hachinski, V., Shigematsu, R., & Petrella, R. J. (2018). Cognitive changes following multiple-modality exercise and mind-motor training in older adults with subjective cognitive complaints: The M4 study. *PLOS ONE*, 13(4). <https://doi.org/10.1371/journal.pone.0196356>

**Impact Factor:** 3.7

**Role:** Contributed to acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.

28. **Silva, N. C. B. S.**, Gill, D. P., Gregory, M. A., Bocti, J., & Petrella, R. J. (2018). Multiple-modality exercise and mind-motor training to improve mobility in older adults: A randomized controlled trial. *Experimental Gerontology*, 103, 17–26. <https://doi.org/10.1016/j.exger.2017.12.011>

**Impact Factor:** 3.9

**Role:** Contributed to acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.

29. **Silva, N. C. B. S.**, Gregory, M. A., Gill, D. P., McGowan, C. L., & Petrella, R. J. (2018). The impact of blood pressure dipping status on cognition, mobility, and cardiovascular health in older adults following an exercise program. *Gerontology and Geriatric Medicine*, 4, 1–11. <https://doi.org/10.1177/2333721418770333>

**Impact Factor:** 2.7

**Role:** Contributed to acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%

30. **Silva, N. C. B. S.**, Gregory, M. A., Gill, D. P., & Petrella, R. J. (2017). Multiple-modality exercise and mind-motor training to improve cardiovascular health and fitness in older adults at risk for cognitive impairment: A randomized controlled trial. *Archives of Gerontology and Geriatrics*, 68, 149–160. <https://doi.org/10.1016/j.archger.2016.10.009>

**Impact Factor:** 4.0

**Role:** Contributed to acquisition of data, analysis and interpretation of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 70%.

31. Shellington, E. M., Gill, D. P., Pfisterer, K., Brown, S., Killingbeck, J., Simmavong, P. K., ... Petrella, R. J. (2017). Mind-Fun Study: Feasibility of square-stepping exercise in assisted living homes. *The Health & Fitness Journal of Canada*, 10(4), 3–22. <https://doi.org/10.14288/HFJC.V10I4.243>

**Impact Factor:** Pending

**Role:** Contributed to study implementation, acquisition of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 10%.

32. Gregory, M. A., **Silva, N. C. B. S.**, Gill, D. P., McGowan, C. L., Liu-Ambrose, T., Shoemaker, J. K., ... Petrella, R. J. (2017). Combined dual-task gait training and aerobic exercise to improve cognition, mobility, and vascular health in community-dwelling older adults at risk for future cognitive decline. *Journal of Alzheimer's Disease*, 57(3), 1–17. <https://doi.org/10.3233/JAD-161240>

**Impact Factor:** 4.0

**Role:** Contributed to study implementation, acquisition of data, and contributed in writing and editing the final version of the manuscript. Percent contribution: 30%.

## TEXTBOOK CHAPTERS

1. **Silva, N. C. B. S.**, Balbim, G. M., Falck, R. S., & Liu-Ambrose, T. (2023). Physical activity interventions in cognitive aging. Reference Module in Neuroscience and Biobehavioral Psychology. <https://doi.org/10.1016/B978-0-12-820480-1.00034-6>

**PRESENTATIONS: POSTERS, TALKS, SYMPOSIA**

1. **Silva, N. C. B. S.**, Gill, D. P., Riggan, B., Blunt, W. M., Kfrerer, M. L., Bliss, B., Majoni, M., Marsh, J., Irwin, J., Stranges, S., Zwarenstein, M., Zou, G., & Petrella, R. (2024). Comorbidities may mitigate the impact of a gender-sensitized lifestyle intervention for weight loss in men with overweight or obesity. *Obesity and Hypertension in Canada: From Science to Solutions*. Oral Presentation. Banff, Canada, Apr 2024.
2. **Silva, N. C. B. S.**; Dao, E.; Hsu, C. L.; Tam, R. C.; Lam, K.; Alkeridy, W.; Laule, C.; Vavasour, I. M.; Stein, R. G.; Liu-Ambrose, T. Can exercise benefit cerebral white matter myelin? Findings from a 12-month randomized controlled trial in older adults with vascular cognitive impairment. *Alzheimer's Association International Conference*. Poster presentation. Amsterdam, The Netherlands, Jul 2023.
3. **Silva, N. C. B. S.**; ten Brinke, L. F.; Bielak, A. M.; Handy, T. C.; Liu-Ambrose, T. Cognitive and exercise training improves intraindividual variability in cognitive performance in older adults: secondary findings of a randomized controlled trial. *Alzheimer's Association International Conference*. Poster presentation. Amsterdam, The Netherlands, Jul 2023.
4. **Silva, N. C. B. S.**; Dao, E.; Hsu, C. L.; Tam, R. C.; Lam, K.; Alkeridy, W.; Laule, C.; Vavasour, I. M.; Stein, R. G.; Liu-Ambrose, T. Exercise effects on white matter myelin in older adults with vascular cognitive impairment. *Interdisciplinary Conference in Rehabilitation Sciences of British Columbia (INCREASE BC)*. Oral presentation. Vancouver, Canada, Apr 2023.
5. **Silva, N. C. B. S.**; ten Brinke, L. F.; Bielak, A. M.; Handy, T. C.; Liu-Ambrose, T. Changes in cognitive intraindividual variability in older adults: results from an 8-week randomized controlled trial. *Interdisciplinary Conference in Rehabilitation Sciences of British Columbia (INCREASE BC)*. Poster presentation. Vancouver, Canada, Apr 2023.
6. **Silva, N. C. B. S.**; Dao, E.; Hsu, C. L.; Tam, R. C.; Lam, K.; Alkeridy, W.; Laule, C.; Vavasour, I. M.; Stein, R. G.; Liu-Ambrose, T. Higher physical activity is associated with greater myelin content in older adults with cerebral small vessel disease and mild cognitive impairment. *Alzheimer's Association International Conference*. Poster presentation. San Diego, United States, Jul 2022.
7. **Silva, N. C. B. S.**; Dao, E.; Hsu, C. L.; Tam, R. C.; Stein, R.; Alkeridy, W.; Laule, C.; Vavasour, I. M.; Liu-Ambrose, T. Lower myelin content is associated with poorer gait variability in older adults with cerebral small vessel disease and mild cognitive impairment. *Alzheimer's Association International Conference*. Poster presentation. San Diego, United States, Jul 2022.
8. **Silva, N. C. B. S.**, Dao, E.; Liu-Ambrose, T. Physical activity may prevent myelin loss in older adults with vascular cognitive impairment. *7<sup>th</sup> Annual Rehabilitation Sciences Research Symposium*. Oral presentation, Vancouver, Canada, Apr 2022.
9. **Silva, N. C. B. S.**, Dao, E.; Liu-Ambrose, T. Myelin integrity in older adults with vascular cognitive impairment: implications for mobility performance. *Alzheimer's Association International Conference*. Virtual poster presentation. Denver, United States, Jul 2021.
10. **Silva, N. C. B. S.**, Gill, D. P.; Owen, A. M.; Petrella R. P. Cognition and elevated blood pressure in community-dwelling older adults with subjective cognitive decline: A cross-sectional exploratory study. *Alzheimer's Association International Conference*. Virtual poster presentation. Denver, United States, Jul 2021.
11. **Silva, N. C. B. S.**, Petrella, A. F. M; Gill, D. P.; Owen, A. M.; Petrella R. P. The effects of exercise on blood pressure and cognitive function in older adults with hypertension and subjective cognitive decline. *Alzheimer's Association International Conference*. Virtual poster presentation. Denver, United States, Jul 2021.
12. **Silva, N. C. B. S.** Exercise interventions to improve cognition in older adults with early cognitive decline: the role of multiple-modality exercise and high-intensity training. *American College of Sports Medicine Annual Meeting*. Exercise and Dementia: Current Evidence and Opportunities in Prevention and Treatment. Invited Presentation. Jun 2021.
13. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. Improvements in memory and brain functional connectivity in older adults with subjective cognitive complaints following multiple-modality exercise and mind-motor training: an exploratory sub-study. *Alzheimer's Association International Conference*. Virtual poster presentation. Virtual meeting, Jul 2020.



14. **Silva, N. C. B. S.**, Petrella A. F. M., Petrella R. J. Dual-task gait and cardiorespiratory fitness, but not vascular health, predict cognitive function in community-dwelling older adults with subjective cognitive complaints. *American College of Sports Medicine Annual Meeting*. Virtual poster presentation. Virtual meeting, Jun 2020.
15. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. The influence of hypertension diagnosis on cognition and dual-task gait in community dwelling adults at increased risk for dementia. *Canadian Association on Gerontology Annual Scientific and Educational Meeting*. Oral presentation. Vancouver, Canada, Oct 2018.
16. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. Dual-task gait and cardiorespiratory fitness, but not vascular health, predict cognitive function in community-dwelling older adults with subjective cognitive complaints. *Alzheimer's Association International Conference*. Poster presentation. Chicago, United States, Jul 2018.
17. **Silva, N. C. B. S.**, Gill D. P., De Cruz A., Petrella R. J. Gender-specific effects in cognition and mobility following exercise in older adults at risk for dementia. *American College of Sports Medicine Annual Meeting*. Poster presentation. Minneapolis, United States, May 2018.
18. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. Systolic blood pressure dipping in older adults: implications for mobility and cognition outcomes. *Canadian Association on Gerontology Annual Scientific and Educational Meeting*. Poster presentation. Winnipeg, Canada, Oct 2017.
19. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. Multi-modality exercise and mind-motor training to improve cognition in older adults: results from the M4 Study. *Alzheimer's Association International Conference*. Oral presentation. London, England, Jul 2017.
20. **Silva, N. C. B. S.**, Gill D. P., Petrella R. J. Does a 6-month dual-task gait and aerobic exercise intervention differentially impact older adults with normal vs. non-normal blood pressure dipping status? *Alzheimer's Association International Conference*. Poster presentation. London, England, Jul 2017.
21. **Silva, N. C. B. S.**, Gill D. P., Gregory M. A., De Cruz A., Petrella R. J. Multi-modality exercise training may decrease risk for dementia and improve mobility in older adults with subjective cognitive complaints. *Canadian Association on Gerontology Annual Scientific and Educational Meeting*. Oral presentation. Montreal, Canada, Oct 2016.
22. **Silva, N. C. B. S.**, Gill D. P., Gregory M. A., De Cruz A., Petrella R. J. The efficacy of a multi-modality exercise program combined with mind-motor task training for older adults at risk of cognitive impairment on usual and dual-task gait: a randomized controlled trial. *Alzheimer's Association International Conference*. Oral presentation. Toronto, Canada, Jul 2016.

## INVITED RESEARCH TALKS

- |      |  |
|------|--|
| 2022 | White matter myelin content as a novel neuroplasticity marker in older adults with cognitive impairment. <i>Canadian Institute for Seniors Care</i> . Conestoga College, Kitchener, Canada (Virtual),                            |
| 2021 | Exercise and other lifestyle interventions to improve cognition and brain health: towards the prevention of Alzheimer's disease and dementia. <i>Tapestry Talks</i> . Tapestry at Wesbrook Village, Vancouver, Canada (Virtual), |
| 2019 | Unveiling the effects of exercise in brain function: A way to prevent Alzheimer's disease and other dementias? <i>REXPO – Free Recreation and Leisure Fair</i> . Kiwanis Senior's Centre, London, Canada                         |
| 2018 | Exercise and cognitive interventions in older adults at risk for Alzheimer's disease and vascular dementia. <i>Dr. Ian McWhinney Lecture Series</i> . Centre for Studies in Family Medicine, Western University                  |
| 2018 | What to do until I get old and grey: insights into dementia prevention. <i>Lawson's Talks on Friday</i> . St. Joseph's Health Care Hospital. London, Canada, Aug.  |
| 2018 | Physical Activity, Mobility and Nutrition. <i>Networking for an Inclusive Community: Maintaining Resiliency</i> . City of London, Canada   |
| 2018 | Exercise and aging: implications for cognition, cardiovascular health and mobility. <i>Geriatric Interdisciplinary Grand Rounds</i> . Parkwood Institute Research. Parkwood  |

- 2018 Hospital, London, Canada  
Exercise and Aging: Is it possible to prevent dementia? *Society for Learning in Retirement in London*. London, Canada
- 2017 Exercise, aging and cognition: Is it possible to prevent cognitive decline in older adults? *Research to Action Conference*. Canadian Centre for Activity and Aging, Western University, London, Canada

## TEACHING EXPERIENCE

- Summer 2024 Postdoctoral Teaching Fellow, The University of British Columbia  
Vancouver Summer Program in Medicine (Package L)
- Summer 2023 Postdoctoral Teaching Fellow, The University of British Columbia  
Vancouver Summer Program in Medicine (Package L)
- Winter 2019 Graduate Teaching Assistant, Western University, London, Canada  
Research Design in Human Movement Science (KIN 2032B)
- Winter 2018 Graduate Teaching Assistant, Western University, London, Canada  
Exercise in Older adults (KIN 4474B)
- Fall 2017 Graduate Teaching Assistant, Western University, London, Canada  
Exercise Neuroscience (KIN 3371A)
- Fall 2015 Graduate Teaching Assistant, Western University, London, Canada  
Laboratory in Exercise Physiology (KIN 3330F)
- 2011 – 2014 Undergraduate Teaching Assistant, Nove de Julho University, Sao Paulo, Brazil  
Laboratory in Cadaveric Human Anatomy

## PROFESSIONAL DEVELOPMENT AND TRAININGS

- 2024 Canadian Institutes of Health Research Summer Program in Aging  
Centre for Aging SMART, Vancouver Coastal Health Research Institute  
The University of British Columbia, Vancouver, Canada
- 2022 Summer Institute in Project Management  
The University of British Columbia, Vancouver, Canada
- 2018 FSL Course, FMRI Centre  
San Diego, USA
- 2017 Advanced Teaching Program  
Western University, London, Canada
- 2017 Teaching Assistant Training Program  
Western University, London, Canada

## MENTORING ACTIVITIES

### The University of British Columbia, Vancouver, Canada

Membership on Graduate Student Supervisory Committees

- 2024 – **Yeon Soo Seo** (MSc student)  
MSc Supervisory Committee Member  
Primary supervisor: Teresa Liu-Ambrose
- 2023 – **Victoria Cirone** (MSc student)  
MSc Supervisory Committee Member  
Primary supervisor: Teresa Liu-Ambrose
- 2023 – **Daniel Elsein** (MSc student)  
MSc Supervisory Committee Member  
Primary supervisor: Teresa Liu-Ambrose

Other Mentorship Activities

- 2023 – 2024 **Ryu Lien** (MSc student)  
Mentorship on scientific writing, neuroimaging data processing and analysis

- 2021 – 2024 Primary supervisor: Teresa Liu-Ambrose  
**Vicky Gu** (PhD student)  
 Mentorship on developing neuroimaging data processing and analysis
- 2021 – 2024 Primary supervisor: Teresa Liu-Ambrose  
**Rebecca Hernadéz-Gamboa** (PhD student)  
 Mentorship on developing systematic review and meta-analysis protocol, as well as neuroimaging data processing and analysis
- 2020 – 2024 Primary supervisor: Teresa Liu-Ambrose  
**Ryan Stein** (PhD student)  
 Mentorship on scientific writing, neuroimaging data processing and analysis
- 2022 – 2023 Primary supervisor: Teresa Liu-Ambrose  
**Daniel Elsein** (Undergraduate student)  
 Mentorship on neuropsychological data processing and analysis
- 2021 – 2023 Primary supervisor: Teresa Liu-Ambrose  
**Daniel Do** (Undergraduate student)  
 Mentorship on neuroimaging data processing and analysis
- Western University, London, Canada**
- 2021 – 2022 Primary supervisor: Robert Petrella  
**Olivia Crozier** (Undergraduate student)  
 Mentorship on scientific writing, data processing and analysis

## SERVICE TO THE SCIENTIFIC COMMUNITY

- 2024 Ad Hoc Reviewer. Canadian Institutes of Health Research (CIHR) Doctoral Research Award Committee (Competition Year: 2024)
- 2024 Abstract Reviewer. Featured Research Sessions, Alzheimer's Association International Conference. Philadelphia, USA
- 2023 Ad Hoc Reviewer. Canadian Institutes of Health Research (CIHR) Doctoral Research Award Committee (Competition Year: 2023)
- 2023 Abstract Reviewer. Featured Research Sessions, Alzheimer's Association International Conference. Amsterdam, The Netherlands
- 2022 Ad Hoc Reviewer. Featured Research Sessions, Alzheimer's Association International Conference. San Diego, USA
- 2022 Organizing Committee. 7<sup>th</sup> Annual Rehabilitations Sciences Research Symposium. The University of British Columbia, Vancouver, Canada
- 2021 Session Facilitator. Vascular Cognitive Disorders Lightning Round Competition. Vascular Cognitive Disorders PIA Scientific Meeting (Virtual)
- 2021 ISTAART Postdoc Virtual Volunteer. Alzheimer's Association International Conference (Virtual)
- 2021 Session Facilitator. Exercise and Sedentary Behaviour. Brain Health Virtual Symposium. The University of British Columbia (Virtual)
- 2021 Session Facilitator. Physical Activity and Exercise. Brain Health Virtual Symposium, The University of British Columbia (Virtual)
- 2021 Invited Panelist. Neuroscience Undergraduate Research Conference. UBC Neuroscience Club, The University of British Columbia (Virtual)
- 2020 Session Facilitator. Vascular Cognitive Disorders Lightning Round Competition. Vascular Cognitive Disorders PIA Scientific Meeting (Virtual)
- 2019 Session Facilitator. Vascular Cognitive Disorders 3MT Competition. Vascular Cognitive Disorders PIA Scientific Meeting. Los Angeles, USA
- 2018 ISTAART Student Volunteer. Alzheimer's Association International Conference. Chicago, USA
- 2017 Abstract Reviewer. Canadian Association on Gerontology 46<sup>th</sup> Annual Scientific and Educational Meeting. Winnipeg, Canada

**MEMBERSHIPS ON SCHOLARLY SOCIETIES**

- 2016 – Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART)
- 2017 – 2022 American College of Sports Medicine
- 2016 – 2019 Canadian Association on Gerontology
- 2013 – 2015 State of Sao Paulo Cardiology Society, Brazil

**MEMBERSHIP ON SCHOLARLY COMMITTEES**

- 2023 – 2024 Executive Committee Member. Vascular Training (VAST) Platform. University of Calgary. Calgary, Canada
- 2022 – 2024 Postdoctoral Fellow Representative. Faculty of Medicine Research Committee, The University of British Columbia. Vancouver, Canada
- 2018 – Executive Committee Member. Vascular Cognitive Disorders Professional Interest Area (PIA). Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART). Chicago, USA
- 2021 – 2023 Advisory Council Member. Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART). Chicago, USA
- 2021 – 2023 Trainee Committee Member. Centre for Aging SMART, Vancouver Coastal Health Research Institute. Vancouver, Canada
- 2021 – 2022 Postdoctoral Representative. Rehabilitation Sciences Student Executive Committee (RSEC). The University of British Columbia. Vancouver, Canada
- 2018 – 2019 Executive Committee Member. Exercise Is Medicine Chapter. Western University, London, Canada
- 2017 – 2018 Executive Committee Member. Kinesiology Graduate Student Association (KGSA). Western University, London, Canada

**GUEST EDITOR**

- 2022 – 2024 Cerebral Circulation – Cognition and Behaviour  
Special Issue: *Non-Pharmacological Interventions and Modifiable Risk Factors to Prevent Cognitive Decline and Dementia*

**AD HOC REVIEWER**

- Aging Research Reviews
- Alzheimer's & Dementia
- Alzheimer's & Dementia: Translation Research & Clinical Interventions
- Archives of Gerontology and Geriatrics
- BMC Geriatrics
- BMJ Open
- Brain and Behaviour
- Brain and Cognition
- British Journal of Sports Medicine
- Cerebral Circulation – Cognition and Behaviour
- Clinical Epidemiology
- Experimental Gerontology
- Frontiers in Aging Neuroscience, Neurodegeneration
- Frontiers in Neuroscience, Neurodegeneration
- JAMA Network Open
- Journal of Alzheimer's Disease
- Journal of Gerontology: Medical Sciences
- Journal of Human Hypertension
- Journal of the International Neuropsychological Society

Medicine & Science in Sports & Exercise  
Sports Medicine Open