



ESTROGENS & COGNITION
MANUSCRIPTS, CONFERENCE PRESENTATIONS, INVITED TALKS
*trainee

MANUSCRIPTS PUBLISHED

1. Subramaniapillai, S., Rajagopal, S. Snytte, J., Ross Otto, A., Einstein, G., Rajah, M.N. (2021). Sex differences in brain aging among adults with family history of Alzheimer's disease and APOE4 genetic risk. *NeuroImage: Clinical*. doi: <https://doi.org/10.1016/j.nicl.2021.102620>
2. Reuben, R., *Karkaby, L., *McNamee, C., Phillips, N., Einstein, G. (2021). Menopause and cognitive complaints: Are ovarian hormones linked with subjective cognitive decline? *Climacteric*, DOI: [10.1080/13697137.2021.1892627](https://doi.org/10.1080/13697137.2021.1892627)
3. Subramaniapillai S., *Almey, A., Rajah, M.N., Einstein, G. (2020) Sex and gender differences in cognitive and brain reserve: Implications for Alzheimer's disease in women. *Frontiers in Neuroendocrinology*. 60:100879. doi: 10.1016/j.yfrne.2020.100879.
4. Gervais, N., *Au, A., Almey, A., *Duchesne, A., *Gravelsins, L., *Brown, A., *Reuben, R., *Baker-Sullivan, E., *Schwartz, D.H., *Evans, K. Bernadini, M.Q., Eisen, A., Meschino, W., Foulkes, W.D., Hampson, E., Einstein, G. (2020) Cognitive markers of dementia risk in middle-aged women with bilateral salpingoophorectomy prior to menopause. *Neurobiology of Aging*. 94:1-6.
5. Edwards, H., *Duchesne, A., *Au, A., M., Einstein, G. (2018) The many menopauses: Implications for research and clinical practice. *Menopause*, DOI: <https://doi.org/10.1097/GME.0000000000001171>.
6. Skop, M., Lorentz, J., Vesprini, D., Einstein, G. (2018). "Guys don't have breasts": The lived experience of men who have BRCA gene mutations and are at risk for male breast cancer. *American J Men's Health*. 12: 961-972. (12 pages) 1-12. doi: 10.1177/1557988317753241
7. Au, A., *Feher, A., *McPhee, L., *Jessa A., *Oh, S. & Einstein, G. (2016). Estrogens, Inflammation and Cognition. *Frontiers in Neuroendocrinology*. 40: 87-100.

MANUSCRIPTS IN PREPARATION:

1. Brown, A., *Gravelsins, L., *Almey, A., *Gervais, N., *Shafi, R., *Duchesne, A., *Reuben, R., *Baker-Sullivan, E., Witt, S., Rydmark Kersley, Å., Classon, E., Lykke, N., Åsberg, C., Theodorsson, E., Ernerudh, J., Åvall Lundqvist, E., Kjølhede, P., Morrison, I., Novembre, G., Engstrom, M., Foulkes, W., Meschino, W., Bernadini, M., Eisen, A., Grady, C., Rajah, N., **Einstein, G.** (2021). Decreased memory and right frontal cortical thickness in middle aged women with surgical menopause: a protective role for estradiol replacement.

2. Gravelins, L.*, Reuben, R.*, Page-Gould, E., *Gervais, N.J., *Almey, A., *Brown, A., *Karkaby, L., *McNamee, C., Bernardini, M.Q., Andrea Eisen, Meschino, W.S., Foulkes, W.D., Hampson, E., **Einstein, G.** (2021) Working memory declines in women at midlife with time post-bilateral salpingo-oophorectomy.
3. Gervais, N., *Nicoll, G., *Baker-Sullivan, E., *Mendoza, L., *Lauzon, C., *Almey, A., *Gravelins, L., *Brown, A., *Duchesne, A., Olsen, R., Grady, C., **Einstein, G.** (2021). Impact of early estrogen deprivation on sleep quality and hippocampal volume in middle-aged women. (In Preparation).
4. Brown, A., *Gervais, N.J., Rieck, J., *Almey, A., *Gravelins, L., *Reuben, R., *Karkaby, L., Meschino, W.S., Foulkes, W.D., Grady, C., Einstein, G. (2021) Early Aging of Associative Memory-Related Brain Function after Bilateral Salpingo-Oophorectomy. (IN PREPARATION).
5. *Karkaby, L., *Vasudeva, A., Lykke, N., Classon, E., Ljungcrantz, D., Åsberg, C., & Einstein, G. (2021) The many selves of BRCA1/2 carriers post-oophorectomy: a descriptive qualitative study. (IN PREPARATION).
6. *Karkaby, L., Classon, E., Lykke, N., Ljungcrantz, D., Åsberg, C., Rydmark-Kersley, Å., Åvall-Lundqvist, E., Kjolhede, P. & Einstein, G. (2021) Healthcare experiences of Swedish women with mastectomy and oophorectomy: a descriptive qualitative study. (IN PREPARATION).
7. *Gervais, N.J., Olsen, R., *Almey, A., *Gravelins, L., *Brown, A., *Reuben, R., *Baker-Sullivan, E., *Mendoza, L., *Lauzon, C., Grady, C., Einstein, G. (2021). Structural integrity of the medial temporal lobe and recognition memory following early surgical menopause. (IN PREPARATION).
8. *Gervais, N.J., *Gravelins, L., *Brown, A., *Nicoll, G. Einstein, G. (2021). Impact of early ovarian hormone loss on sleep physiology in middle-aged women.
9. Gervais, N.J., *Scott, J., *Shafi, R., Einstein, G. (in preparation). A review of the dissociable effects of chemotherapy and endocrine therapy on cognition and brain activity in women with breast cancer.

CONFERENCE PRESENTATIONS

1. *Gervais, N.J., *Brown, A., *Gravelins, L., *Nicoll, G., *Sun, D.L., *Ge, J.X., Laird, K., *Almey, A., *Reuben, R., *Karkaby, L., *Perovic, M., Gosselin, N., Grady, C., Olsen, R., Einstein, G. (2021). Disturbed sleep and reduced hippocampal integrity at midlife: Implications for AD risk in women with early surgical menopause. Alzheimer's Association International Conference. Amsterdam, The Netherlands. July 26 – 30 (Oral Presentation).
2. *Gravelins, L., *Gervais, N.J., *Almey, A., *Duchesne, A., *Brown, A., *Reuben, R., Rieck, J., Baracchini, G., Foulkes, W., Meschino, W., Einstein, G., Grady, C. (2020). Surgical menopause affects resting-state functional connectivity and network segregation. Virtual poster presented at the Canadian Consortium on Neurodegeneration in Aging (CCNA) Partner Forum and Science Days. October 14 – 16. Online. *Both authors contributed equally to the study.
3. *Brown, A., *Almey, A., *Gervais, N. J., Duchesne, A., *Gravelins, L., *Reuben, R., *Baker-Sullivan, E., Rieck, J., Baracchini, G., Foulkes, W., Meschino, W., Grady, C., Einstein, G. (2020). Effects of menopausal estrogen loss on the functional brain activity underlying associative memory. Presented as a poster at the Canadian Consortium on Neurodegeneration in Aging (CCNA) Partners Forum and Science Days Virtual Conference. October 14 – 16.
4. *Brown, A., *Almey, A., *Gervais, N. J., Duchesne, A., *Gravelins, L., *Reuben, R., *Baker-Sullivan, E., Rieck, J., Baracchini, G., Foulkes, W., Meschino, W., Grady, C., Einstein, G. (2020). Effects of menopausal estrogen loss on the functional brain activity underlying associative memory. Presented as a poster at the Alzheimer's Association International Conference (Virtual). July 27 – 31.
5. *Gervais, N.J., *Lauzon, C., *Nicoll, G., *Baker-Sullivan, E., *Brown, A., *Reuben, R., *Duchesne, A., *Mendoza, L., *Perovic, M., *Kannampuzha, C., Grady, C., Olsen, R., & Einstein, G. (2020). Effects of early

- surgical menopause on sleep, memory, and medial temporal lobe structure at midlife. Presented at the Alzheimer's Association International Conference. Virtual conference. July 27 – 31.
6. *Reuben, R., *Almey, A., *Gervais, N.J., *Au, A., *Duchesne, A., *Gravelsins, L., *Brown, A., *Kannampuzha, C., *Perovic, M., Bernardini, M., Eisen, A., Meschino, W., Foulkes, W., Grady, C., & Einstein, G. (2020). Memory complaints are associated with impaired working memory and reduced frontal cortical thickness in mid-life surgically menopausal women. Poster presentation at the Alzheimer's Association International Conference. Virtual conference. July 27 – 31.
 7. *Brown, A., *Almey, A., *Gervais, N. J., *Duchesne, A., *Gravelsins, L., *Reuben, R., *Baker-Sullivan, E., *Rieck, J., *Baracchini, G., Foulkes, W., Meschino, W., Grady, C., & Einstein, G. (2020) Effects of menopausal estrogen loss on the functional brain activity underlying associative memory. Poster presentation at Organization for Human Brain Mapping Annual Meeting. Virtual conference. June 23 – July 3.
 8. *Gervais, N.J., *Lauzon, C., *Nicoll, G., *Baker-Sullivan, E., *Brown, A., *Reuben, R., *Duchesne, A., *Mendoza, L., *Perovic, M., *Kannampuzha, C., Grady, C., Olsen, R., & Einstein, G. (2020). Effects of early surgical menopause on sleep, memory, and medial temporal lobe structure at midlife. Poster presentation at the Organization for Human Brain Mapping Annual Meeting. Virtual conference. June 23 – July 3.
 9. *Gervais, N.J., *Nicoll, G., *Baker-Sullivan, E., *Lauzon, C., *Mendoza, L., *Almey, A... Einstein, G. (2019). Impact of early estrogen deprivation on sleep, memory, and hippocampal volume in middle-aged women. In: Human Brain Mapping and Imaging in Health and Diseases. Nanosymposium. Society for Neuroscience, Chicago, IL.
 10. *Gervais, N., *Nicoll, G., *Baker-Sullivan, E., *Mendoza, L., *Lauzon, C., *Almey, A., *Gravelsins, L., *Brown, A., *Duchesne, A., Olsen, R., Grady, C., Einstein, G. (2019). Impact of early estrogen deprivation on sleep quality and hippocampal volume in middle-aged women: Preliminary findings. Talk at The Canadian Society for Chronobiology. Montreal, May 26 – 28.
 11. *Brown, A., *Almey, A., *Gervais, N.J., *Duchesne, A., *Gravelsins, L., *Baker-Sullivan, E.B., *Nichol, D., Baracchini, G., Grady, C., Einstein, G. (2019). Effects of estrogen depletion, age, and functional brain activity on associative memory in spontaneous menopause and surgically-induced menopause. Poster at Canadian Organization for Neuroscience, Toronto, May 22 – 25.
 12. *Gervais, N., *Nicoll, G., *Baker-Sullivan, E., *Mendoza, L., *Lauzon, C., *Almey, A., *Gravelsins, L., *Brown, A., *Duchesne, A., Olsen, R., Grady, C., Einstein, G. (2019). Impact of early estrogen deprivation on sleep quality and hippocampal volume in middle-aged women: Preliminary findings. Poster at Canadian Association for Neuroscience, Toronto, May 22 – 25.
 13. *Almey, A., *Gervais, N., *Duchesne, A., *Reuben, R., *Gravelsins, L., *Baker-Sullivan, E., Witt, S.T., Rydmark Kersley, Å., Classon, E., Grady, C., Rajah, N., & Einstein, G. (2019). Bilateral salpingo-oophorectomy prior to spontaneous menopause is associated with reduced cortical thickness and working memory performance: A protective role for hormone therapy. Poster at Organization for the Study of Sex Differences, Washington, DC, May 6 – 8.
 14. *Brown, A., *Almey, A., *Gervais, N.J., *Duchesne, A., *Gravelsins, L., *Baker-Sullivan, E.B., Nichol, D., Baracchini, G., Grady, C., Einstein, G. (2019). Effects of estrogen depletion, age, and functional brain activity on associative memory in spontaneous menopause and surgically-induced menopause. Poster at Organization for the Study of Sex Differences, Washington, DC, May 6 – 8.
 15. *Almey, A., *Gervais, N., *Duchesne, A., *Reuben, R., *Gravelsins, L., *Baker-Sullivan, E., Witt, S.T., Rydmark Kersley, Å., Classon, E., Lykke, N., Shildrick, M., Åsberg, C., Theodorsson, E., Ernerudh, J., Åvall Lundqvist, E., Kjølhed, P., Grady, C., & Einstein, G. (2018). The effect of bilateral salpingo-oophorectomy prior to spontaneous menopause on cortical thickness and measures of attention and working memory: preliminary findings. Poster at Society for Neuroscience, San Diego, CA. Nov 3 – 7.
 16. *Gervais, N.J., *Almey, A., *Duchesne, A., *Reuben, R., *Gravelsins, L., *Baker-Sullivan, E., Wong, A., Olsen, R., Grady, S., & Einstein, G. (2018, November). Bilateral salpingo-oophorectomy reduces CA1 volume and impairs hippocampal-dependent memory in middle-aged women: preliminary findings. Poster at 48th Annual Meeting, Society for Neuroscience, San Diego, CA. Nov 3 – 7.
 17. *Almey, A., *Gervais, N., *Duchesne, A., *Reuben, R., *Gravelsins, L., *Baker-Sullivan, E., Witt, S.T., Rydmark Kersley, Å., Classon, E., Lykke, N., Shildrick, M., Åsberg, C., Theodorsson, E., Ernerudh, J., Åvall Lundqvist, E., Kjølhed, P., Grady, C., Rajah, N. & Einstein, G. (2018). The effect of bilateral salpingo-oophorectomy prior to spontaneous menopause on cortical thickness and measures of attention and

- working memory: pre-liminary findings. Poster presented at the International Neuroinformatics Coordinating Facility (ICNF) conference, Montreal, QC. Aug 9 – 10.
18. *Gervais, N.J., *Baker-Sullivan, E., Grady, S., Olsen, R., *Gravelsins, L., *Reuben, R., & Einstein, G. (2018). Structural integrity of the medial temporal lobe and recognition memory following natural and surgical menopause. Poster presented at the annual Alzheimer's Association International Conference, Chicago, IL. July 20 – 26.
 19. *Baker-Sullivan, E., *Gervais, N.J., Grady, S., Olsen, R., *Duchesne, A., *Gravelsins, L., *Reuben, R., & Einstein, G. (2018). Medial temporal lobe structural integrity and recognition memory following oophorectomy. Poster at the 9th International Congress of Neuroendocrinology, PS2.0025 Toronto, ON. July 15 – 18. <http://www.icn2018.org/wp-content/uploads/2018/07/ICN2018-Book-of-Abstracts.pdf>
 20. *Reuben, R., *Au, A., Gervais, N., Hampson, E., Tierney, M., & Einstein, G. (2018). Longitudinal change in cognitive performance of women post-oophorectomy. Talk at the 9th International Congress of Neuroendocrinology. BOP2B.006, Toronto, ON. July 15 – 18. <http://www.icn2018.org/wp-content/uploads/2018/07/ICN2018-Book-of-Abstracts.pdf>
 21. Witt, S.T., Rydmark Kersley, Å., Classon, E., Lykke, N., Shildrick, M., Åsberg, C., Grady, C., Theodorsson, E., Ernerudh, J., Åvall Lundqvist, E., Kjølhed, P., & Einstein, G. (2018). Bilateral salpingo-oophorectomy prior to natural menopause is associated with Alzheimer's disease-like reductions in gray and white matter. Poster at Joint Annual Meeting International Society for Magnetic Resonance Imaging in Medicine & European Society for Magnetic Resonance Imaging in Medicine 3762.90., Paris, France. June 16 – 21. https://www.ismrm.org/18/program_files/EP06.htm.
 22. *Edwards, H., *Duchesne, A., & Einstein, G. (2017) The Many Menopauses: Searching the cognitive research literature for menopause types. North American Menopause Society Annual Meeting. Philadelphia, PA. Oct 11 – 14.
 23. *Duchesne, A., Witt, S., Engström, M., Classon, E., Kjølhed, P., Rydmark Kersley, Å., Theodorsson, E., Lundqvist, E., Lykke, N., Shildrick, M., Åsberg, C., *Au, A., Einstein, G. (2017) Hippocampal integrity in Swedish women with bilateral salpingo-oophorectomy prior to natural menopause: Preliminary findings. Poster presentation at Alzheimer's Association International Conference, London, England, July 16 – 20.
 24. *Gervais, N., *Au, A., *Duchesne, A., Edwards, H., Karkaby, L., Einstein, G. (2017) Predictors of Cognitive Function in Women Following Oophorectomy: Implications for AD Risk. Poster presentation at Alzheimer's Association International Conference, London, England, July 16 – 20.
 25. *Scott, J., *Birze, A., Einstein, G. (2017) Sex Differences in the Autonomic Regulation of the Heart. Sexposium: The Science of Sex and Love. Royal Ontario Museum, Toronto. June 9.
 26. *Gervais, N., Au, A., *Duchesne, A., *Baker-Sullivan, E., Brake, W., Mumby, D., Einstein, G. (2017) Impact of ovarian hormones on recognition memory and perirhinal cortex in rats and humans. Oral presentation at the Canadian Association for Neuroscience Conference, Montreal, May 28 – 31.
 27. *Reuben, R., *Au, A., Hampson, E., Tierney, M., Narod, S., Bernardini, M., Einstein, G. (2017) Changes in women's performance on the RAVLT over time post-oophorectomy. Poster presentation at the Canadian Association for Neuroscience Conference, Montreal, May 28 – 31.
 28. Einstein, G. (2017) The effect of estrogen depletion on verbal memory in young women. Oral presentation at the Canadian Association for Neuroscience Conference, Montreal, May 28 – 31.
 29. *Duchesne, A., *Au, A., *Gervais, N., Grady, C., Meschino, W., Einstein, G. (2017) Hippocampal Integrity in women with Bilateral Salpingo-Oophorectomy Prior to Natural Menopause: Preliminary findings. Poster presentation at the Organization for the Study of Sex Differences Annual Meeting, Montreal, May 15 – 18.
 30. *Au, A., *Schwartz, D., Eisen, A., Finch, A., Hampson, E., May, T., Meschino, W., Murphy, J., Narod, S., Tierney, M., & Einstein, G. (2016). Long-Term Effects of Bilateral Salpingo-oophorectomy on Cognition. Poster presentation at the ENDO 2016 Conference, Boston, Massachusetts, April 1, 2016.
 31. *Au, A., Schwartz, D., Finch, A., Tierney, M. C., Hampson, E., Narod, S., Eisen, A., Meschino, W., & Einstein, G. (2015) The Relationship between 17 β -estradiol and Cognitive Functioning in Women. OSSD Annual Meeting, Palo Alto, CA. April 21-23.
 32. *Au, A., *Schwartz, D., Finch, A., Tierney, M. C., Hampson, E., Narod, S., Eisen, A., Meschino, W., & Einstein, G. (2015) Estrogen Deprivation as a Risk Factor of Dementia in Younger Women. 25th Annual Rotman Research Institute Conference – "25 Years of Brain and Aging" Toronto, ON, March 9 – 11 (poster).

33. *Au, A. S., *Schwartz, D., Finch, A., Tierney, M. C., Hampson, E., Narod, S., & Einstein, G. (2014) Long-Term Outcomes of Bilateral Salpingo-Oophorectomy on Memory. Oral presentation presented at the 16th World Congress of Gynecological Endocrinology, Florence, IT, Mar 5–8.
34. *Au, A. S., *Schwartz, D., Finch, A., Tierney, M. C., Hampson, E., Narod, S., & Einstein, G. (2013). Cognitive Outcomes of Oophorectomy. Poster session presented at the Alzheimer's Association International Conference

INVITED TALKS

Over 30 across Canada and internationally that include these data—including: Sweden, US, Japan, and Germany. Organizations include: WBHI, Universities, Canadian Consortium on Neurodegeneration and Aging, SynAD, Population Hearing Council, Alzheimer's Society, International Federation for Aging Global Café, Podcasts like: SHE 2.0