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Personal Statement

I am a cognitive and clinical neuroscientist and speech-language Therapist with a strong international research trajectory focused on the neural bases of language and its disorders. My work combines behavioral assessments, neuroimaging, and lesion-symptom mapping to better understand how language functions are organized and reorganized in the brain following stroke and neurodegenerative disease. I am committed to producing research that is both scientifically rigorous and clinically meaningful, and to advancing interdisciplinary approaches to language neuroscience.

1.- ACADEMIC AND PROFESSIONAL TRAINING

- 2013-2018 PhD in Neuropsychology and Cognitive Neuroscience, University College London (UCL), United Kingdom.
PhD Thesis: Investigating the contribution of the right hemisphere to language processing in the damaged and healthy brain. *PhD Supervisors:* Professor Cathy Price, Dr. Thomas Hope and Dr. Mohamed Seghier.
- 2012-2013 MSc in Cognitive Neuroscience, University College London (UCL), United Kingdom
MSc Dissertation: Preliminary normative data for the Spanish version of the Comprehensive Aphasia Test (CAT) and cross-cultural comparison with previous standardization studies. *MSc Supervisor:* Professor Cathy Price.
- 2008 Postgraduate Diploma in Adult Neuropsychology and Neuropsychiatry, Universidad de Chile and Pontificia Universidad Católica de Chile.
- 2002-2007 BSc in Speech, Language and Hearing Sciences (awarded with Maximum Distinction), Universidad de Concepcion, Chile. Professional Qualification: Speech and Language Therapist

2.- GRANTS, AWARDS, & SCHOLARSHIPS

- 2025 **Fondecyt de Iniciación, ANID – Chile (2025–2028).** Competitive national grant supporting early-career researchers. **Role:** Principal Investigator
Title: Revealing the compensatory neural mechanisms that support word finding abilities in adults with acquired brain damage. This project investigates the neural plasticity underlying lexical retrieval following brain injury, using behavioral and neuroimaging approaches. **Amount awarded:** US 100,000
- 2024 Young Neuroscientist Award, granted by the Chilean Society for Neuroscience for scientific merit.
- 2021 Honorable Mention, awarded by the Society for the Neurobiology of Language (SNL) for the quality of the abstract submitted to the annual conference (October 5–8).
- 2019 Becas Chile: Postdoctoral Scholarship Abroad — awarded by the Chilean Government to conduct a postdoc in Cognitive and Clinical Neuroscience at the University of California San Francisco, USA.

- 2018 Guarantors of Brain Travel Award, to cover travel, accommodation, and registration costs for the 10th Annual Society for Neurobiology of Language conference, Quebec, Canada.
- 2018 Society for the Neurobiology of Language Travel Award funded by the NIH (USA) to support travel and registration for the 10th SNL conference, Quebec, Canada.
- 2016 Merit Abstract Award, from the Organization for Human Brain Mapping (OHBM), recognizing the quality of the abstract submitted for the annual meeting, Geneva, Switzerland.
- 2014 SNL Travel Award, funded by the NIH (USA) for the 6th annual SNL conference, Amsterdam, Netherlands.
- 2014 Academic Excellence Scholarship, awarded by the Vice Rectorate for Research and Doctoral Studies, Universidad del Desarrollo, to pursue a PhD at University College London.
- 2013 “Becas-Chile” Scholarship award from the Chilean Government to study the PhD in Neuropsychology and Cognitive Neuroscience at University College London (UCL).
- 2012 “Becas-Chile” Scholarship award from the Chilean Government to study the MSc in Cognitive Neuroscience at University College London (UCL).
- 2011 Academic Excellence Scholarship, awarded by the Vice Rectorate for Research and Doctoral Studies to pursue a MSc in Cognitive Neuroscience at University College London (UCL).
- 2008 “Banco Santander” Scholarship (30% fees plus accommodation and food allowance): award from the Santander Bank to study the Postgraduate Certificate “Children’s Learning Disabilities” at Universidad Complutense de Madrid, Spain.

3.- PROFESSIONAL EXPERIENCE

- 2023-present Research Professor, Center for Research in Social Complexity (CICS), School of Government, Universidad del Desarrollo.
- 2021-2023 Postdoctoral Researcher, Memory and Aging Center, Department of Neurology, Weill Institute for Neurosciences, University California, San Francisco (UCSF), USA.
- Research Topics:** (i) Prefrontal cortex regions mediating executive function influence on sentence processing in primary progressive aphasia. (ii) Compensatory neural mechanisms supporting phonological processing amid left supramarginal gyrus neurodegeneration.
Supervisor: Professor Maria Luisa Gorno-Tempini (MD, PhD).
- 2019-2020 Postdoctoral Researcher, Wellcome Centre for Human Neuroimaging, Queen Square Institute of Neurology, Faculty of Brain Sciences, University College London (UCL), United Kingdom.
Research Topics: Broca’s area damage, its effects on speech production, and compensatory brain mechanisms post-stroke. **Supervisor:** Professor Cathy J. Price.
- 2017-2018 Research Assistant, Wellcome Centre for Human Neuroimaging, Queen Square Institute of Neurology, Faculty of Brain Sciences, University College London (UCL), United

Kingdom.

Research Topics: (i) Validation of PLORAS (Predicting Language Outcome and Recovery After Stroke) in Chile. (ii) Factors contributing to false negatives in voxel-based lesion-symptom mapping. **Supervisor:** Professor Cathy J. Price.

2010-2011 Internship Supervisor, CESFAM La Floresta, CESFAM Talcahuano Sur, and Hogar San Vicente de Paul — Speech Therapy Program, Universidad del Desarrollo, Chile.

2008-2011 Internship Supervisor and Speech Therapist, Instituto de Rehabilitación Infantil (Teletón), Universidad de Concepción and Teletón, Chile.

4.- TEACHING EXPERIENCE

2023-present Faculty Member, course "Social Neuroscience", PhD in Social Complexity Sciences, Universidad del Desarrollo.

2022-present Lecturer, International Diploma in Adult Neuropsychiatry, Universidad de Chile.

2019-2020 Co-supervisor, PhD students Justyna Ekert and Storm Anderson, Wellcome Centre for Human Neuroimaging, University College London (UCL).

2019 Supervisor, MSc student Viktoria Sefcikova, Wellcome Centre for Human Neuroimaging, University College London (UCL).

2017-2018 Co-supervisor, MSc students Letitia Schneider and Megan Creasey, Wellcome Centre for Human Neuroimaging, University College London (UCL).

2017 Instructor, "SPM for fMRI" course, Wellcome Centre for Human Neuroimaging, University College London.

2014 Seminar Leader, "Voxel-based Morphometry" (March 26), Methods for Dummies, University College London (UCL).

2008-2011 Academic Collaborator, Universidad del Desarrollo.
Taught Courses: Neurorehabilitation II (Lead Lecturer), Neurosciences II (Associate Lecturer). Other Roles: Thesis Supervisor, Licensing Exam Committee Member.

2009-2011 Associate Lecturer, Neurolinguistics, Universidad de Concepción, Chile.

5.- CONFERENCE PRESENTATIONS

2024 **Gajardo-Vidal A.** (October 24). *Left prefrontal regions mediate the influence of executive functions on language processing in primary progressive aphasia.* **Talk** presented at the 20th Annual Symposium of the Chilean Society for Neuroscience, Concón, Chile.

2022 **Gajardo-Vidal A,** Lorca-Puls DL, Licata AE, Ratnasiri B, Bogley R, Mandelli ML, Miller ZA, Miller BL, Kramer J, Henry ML, de Leon J, Gorno-Tempini ML (November 5). *Left prefrontal regions mediate the influence of executive functioning on sentence processing in primary progressive aphasia.* **Poster** presented at the annual meeting of the International Society for Frontotemporal Dementias (ISFTD), Paris, France.

2021 **Gajardo-Vidal A,** Lorca-Puls DL, Warner H, Pshdary B, Crinion JT, Leff AP, Hope TMH, Geva S, Seghier ML, Green DW, Bowman H, Price CJ (October 6). *Damage to Broca's*

- area does not contribute to long-term speech production outcome after stroke. Talk presented at the 13th Annual Meeting of the Society for the Neurobiology of Language (SNL).*
- 2018 **Gajardo-Vidal A**, Lorca-Puls DL, Crinion JT, White J, Seghier ML, Leff AP, Hope TMH, Ludersdorfer P, Green DW, Bowman H, Price CJ (August 17). *How distributed processing produces false negatives in voxel-based lesion-deficit analyses. Poster presented at the 10th Annual Meeting of the Society for the Neurobiology of Language, Quebec, Canada.*
- 2016 **Gajardo-Vidal A**, Lorca-Puls DL, Hope TMH, Oberhuber M, Prejawa S, Seghier ML, Leff AP, Green DW, Price CJ (30 de Junio). *Lesion and fMRI data reveal how right-hemisphere regions contribute to sentence comprehension. Talk presented at the 22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM), Geneva, Switzerland.*
- 2014 **Gajardo-Vidal A**, Lorca-Puls DL, Hope TMH, Oberhuber M, Prejawa S, Seghier ML, Leff AP, Green DW, Price CJ (29 de Agosto). *Right hemisphere lesion sites that result in speech production and/or comprehension difficulties. Poster presented at the 6th Annual Meeting of the Society for the Neurobiology of Language, Amsterdam, Netherlands*

6.- PUBLICATIONS

- 2024 **Gajardo-Vidal A**, Montembeault M, Lorca-Puls DL, Licata AE, Bogley R, Mandelli ML, Battistella G, Tsoy E, Erhoff S, Watson C, Rankin KP, Possin K, Gorno-Tempini ML. *Assessing processing speed and executive functioning in the three variants of primary progressive aphasia with a non-verbal tablet-based task. Cortex. 2024 Feb;171:165-177.*
- 2024 Lorca-Puls DL, **Gajardo-Vidal A**, Mandelli ML, Illán-Gala I, Battistella G, Bogley R, Ratnasiri B, Licata AE, Battista P, García AM, Miller BL, Miller ZA, Henry ML, Dronkers NF, Gorno-Tempini ML. *Mapping characteristic speech-language features of the nonfluent/agrammatic variant primary progressive aphasia to their neural substrates. Brain. 2024 Feb 1;147(2):607-626.*
- 2023 Sajid N, **Gajardo-Vidal A**, Ekert JO, Lorca-Puls DL, PLORAS team, Hope TMH, Green DW, Friston KJ, Price CJ. Degeneracy in the neurological model of auditory speech repetition. *Communications Biology. 2023 Nov 13;6(1):1161.*
- 2023 Mandelli ML, Lorca-Puls DL, Lukic S, Montembeault M, Licata A, Scheffler A, Grasso S, Battistella G, **Gajardo-Vidal A**, Bogley R, La Joie R, Strom A, Rabinovici G, Miller BL, De Leon J, Henry M, Miller Z, Gorno-Tempini ML. Network anatomy in the logopenic variant of primary progressive aphasia. *Human Brain Mapping 2023; 44: 4390-4406.*
- 2023 Geva S, Schneider LM, Khan S, Lorca-Puls DL, **Gajardo-Vidal A**; PLORAS team, Hope TMH, Green DW, Price CJ. *Enhanced left superior parietal activation during successful speech production in patients with left dorsal striatal damage and error-prone neurotypical participants. Cerebral Cortex. 2023. 33, 3437–3453.*
- 2022 Yamamoto AD, Sanjuán A, Pope R, Parker Jones O, Hope TMH, Prejawa S, Oberhuber M, Mancini L, Ekert JO, **Gajardo-Vidal A**, Creasey M, Yousry TA, Green DW, Price CJ. The effect of right temporal lobe gliomas on left and right hemisphere neural processing during speech perception and production tasks. *Frontiers Human Neuroscience 2022; 16:803163.*

- 2021 Ekert JO, **Gajardo-Vidal A**, Lorca-Puls DL, Hope TMH, Dick F, Crinion JT, Green DW, Price CJ. *Dissociating the functions of three left posterior superior temporal regions that contribute to speech perception and production.* **Neuroimage 2021; 245:118764.**
- 2021 Ekert JO, Lorca-Puls DL, **Gajardo-Vidal A**, Crinion JT, Hope TMH, Green DW, Price CJ. *A functional dissociation of the left frontal regions that contribute to single word production tasks.* **Neuroimage 2021; 245:118734.**
- 2021 Lorca-Puls DL, **Gajardo-Vidal A**, PLORAS Team, Oberhuber M, Prejawa S, Hope TMH, Leff AP, Green DW, Price CJ. *Brain regions that support accurate speech production after damage to Broca's area.* **Brain Communications 2021; 3: fcab230.**
- 2021 Geva S, Schneider LM, Roberts S, Khan S, **Gajardo-Vidal A**, Lorca-Puls DL, PLORAS Team, Hope TMH, Green DW, Price CJ. *Right cerebral motor areas that support accurate speech production following damage to cerebellar speech areas.* **Neuroimage Clinical 2021; 32: 102820.**
- 2021 Lorca-Puls DL, **Gajardo-Vidal A**, Green DW, Price CJ. *Reply: Broca's area: why was neurosurgery neglected for so long when seeking to re-establish the scientific truth? and Where is the speech production area? Evidence from direct cortical electrical stimulation mapping.* **Brain 2021; 144: e62.**
- 2021 Roberts S, Bruce R, Lim L, Woodgate H, Ledingham K, Anderson S, Lorca-Puls DL, **Gajardo-Vidal A**, Leff AP, Hope TMH, Green DW, Crinion JT, Price CJ. *Better long-term speech outcomes in stroke survivors who received early clinical speech and language therapy: What's driving recovery?* **Neuropsychological Rehabilitation 2021; Jul 2:1-23.**
- 2021 Geva S, Truneh T, Seghier ML, Hope TMH, Leff AP, Crinion JT, **Gajardo-Vidal A**, Lorca-Puls DL, Green D, PLORAS team, Price CJ. *Lesions that do and do not impair digit span: A study of 816 stroke survivors.* **Brain Communications 2021; 3: fcab031.**
- 2021 **Gajardo-Vidal A***, Lorca-Puls DL*, PLORAS Team, Warner H, Pshdary B, Crinion JT, Leff AP, Hope TMH, Geva S, Seghier ML, Green DW, Bowman H, Price CJ. *Damage to Broca's area does not contribute to long-term speech production outcome after stroke.* **Brain 2021; 144: 817-832. * Primer autor.**
- 2020 Sajid N, Parr T, **Gajardo-Vidal A**, Price CJ, Friston KJ. *Paradoxical lesions, plasticity and active inference.* **Brain Communications 2020; 2: fcaa164.**
- 2019 Loughnan R, Lorca-Puls DL, **Gajardo-Vidal A**, Espejo-Videla V, Gillebert CR, Mantini D, Price CJ, Hope TMH. *Generalizing post-stroke prognoses from research data to clinical data.* **Neuroimage Clinical 2019; 24: 102005.**
- 2018 **Gajardo-Vidal A**, Lorca-Puls DL, Hope TMH, Parker Jones O, Seghier ML, Prejawa S, Crinion J, Leff AP, Green DW, Price CJ. *How right hemisphere damage after stroke can impair speech comprehension.* **Brain 2018; 141: 3389-404.**
- 2018 Lorca-Puls DL, **Gajardo-Vidal A**, White J, Seghier ML, Leff AP, Green DW, Crinion JT, Ludersdorfer P, Hope TMH, Bowman H, Price CJ. *The impact of sample size on the reproducibility of voxel-based lesion-deficit mappings.* **Neuropsychologia 2018; 115: 101-11.**

- 2018 **Gajardo-Vidal A**, Lorca-Puls DL, Crinion JT, White J, Seghier ML, Leff AP, Hope TMH, Ludersdorfer P, Green DW, Bowman H, Price CJ. *How distributed processing produces false negatives in voxel-based lesion-deficit analyses*. **Neuropsychologia** 2018; **115**: 124-33.
- 2017 Lorca-Puls DL, **Gajardo-Vidal A**, Seghier ML, Leff AP, Sethi V, Prejawa S, Hope TMH, Devlin JT, Price CJ. *Using transcranial magnetic stimulation of the undamaged brain to identify lesion sites that predict language outcome after stroke*. **Brain** 2017; **140**: 1729-42.

7.- RESEARCH INTERESTS

Cognitive and Clinical Neuroscience; Language Neuroscience; Neural correlates of aphasia; Interaction between language and other cognitive functions; Brain-behavior relationships in adults with neurological disorders; Lesion-symptom mapping; Structural and functional brain plasticity; Predictors of cognitive deficits, recovery, and treatment response.