DOI: 10.1002/alz.12710

Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

NEWS

The Latin American Brain Health Institute, a regional initiative to reduce the scale and impact of dementia

Claudia Duran-Aniotz[1,2] | **Jorge Sanhueza**[1,2] | **Lea T. Grinberg**[3,4] | **Andrea Slachevsky**[5,6,7,8] | **Victor Valcour**[10] | **Ian Robertson**[10] | **Brian Lawlor**[10] | **Bruce Miller**[10] | **Agustín Ibáñez**[1,2,9,10]

[1]Latin, American Brain Health Institute (BrainLat), Universidad Adolfo Ibáñez, Santiago, Chile

[2]Center for Social and Cognitive Neuroscience (CSCN), School of Psychology, Universidad Adolfo Ibanez, Santiago, Chile

[3]Departments of Neurology and Pathology, University of California San Francisco (UCSF), San Francisco, California, USA

[4]Department of Pathology, University of Sao Paulo Medical School, Sao Paulo, Brazil

[5]Geroscience Center for Brain Health and Metabolism (GERO), Neuropsychology and Clinical Neuroscience Laboratory (LANNEC), Physiopathology Department, Santiago, Chile

[6]Intitute of Biomedical Sciences (ICBM), Neurocience and East Neuroscience Departments, Faculty of Medicine, University of Chile, Santiago, Chile

[7]Memory and Neuropsychiatric Clinic (CMYN) Neurology Department, Hospital del Salvador and Faculty of Medicine, University of Chile, Santiago, Chile

[8]Servicio de Neurología, Departamento de Medicina, Clínica Alemana-Universidad del Desarrollo, Santiago, Chile

[9]Cognitive Neuroscience Center (CNC), Universidad de San Andrés, & CONICET, Buenos Aires, Argentina

[10]Global Brain Health Institute (GBHI), University of California San Francisco (UCSF), San Francisco, California, USA; and Trinity College Dublin (TCD), Dublin, Ireland

Correspondence
Agustín Ibáñez, Latin American Brain Health Institute (BrainLat), Santiago, RM, Chile; and Trinity College Dublin (TCD) 42A Pearse St, Dublin, D02 R123, Ireland.
E-mail: agustin.ibanez@gbhi.org

Funding information
National institute of Aging of the National Institutes of Health, Grant/Award Number: R01AG057234; Alzheimer's Association, Grant/Award Number: SG-20-725707-ReDLat; Rainwater Foundation, Alector, and the Global Brain Health Institute; ANID/FONDECYT Regular, Grant/Award Number: 1210195; Takeda, Grant/Award Number: CW2680521; ANID/PIA/ANILLOS, Grant/Award Number: ACT210096; ANID/FONDAP, Grant/Award Number: 15150012; ANID/FONDEF, Grant/Award Number: ID20I10152; Alzheimer Disease Association, Grant/Award Number: 2018-AARG-591107

Abstract

Latin American and Caribbean countries face complex challenges to improve brain health and reduce the impact of dementia. Regional hubs devoted to research, capacity building, implementation science, and education are critically needed. The Latin American Brain Health Institute represent an important step to address many of these needs.

KEYWORDS
brain health, capacity building, dementia, Latin America, networking, translational research

Latin America and the Caribbean countries (LACs) urgently require the development of harmonized, innovative, multisectoral, educational, and regional centers focused on brain health and dementia research.[1] The prevalence of dementia in LACs is higher than that in Europe or the United States and is expected to increase by 100% to 250% by 2050.[2] Environmental inequities, including social determinants of

TABLE 1 Latin American Brain Health Institute: Achievements and projections (2021–2026)

Goals	2021 & 2022 (achievements)	2023 & 2024 (projections)	2025 & 2026 (projections)
Teamwork	6 faculty, 6 postdocs, 3 PhD students, administrative staff	4 faculty, 6 postdocs, 6 PhD students, administrative staff	3 faculty, 6 postdocs, 6 PhD students, administrative staff
Projects	12 national, 10 international 12 BrainLat funding seed grants	5 national (Chile), one large local project, 2 international (NIH, AA); 1–2 large collaborative projects.	5 national (Chile), 2 international (NIH, AA); 1–2 large collaborative projects
Publications	132 published papers	40–60 published papers	40–60 published papers
Educational curriculum	ELBHA pilot (IDB grant) Regional training (seed grant)	-Brain Health PhD Program -Fellowship program	-ELBHA project
Partnerships and agreements	Conformation of the International Advisory Board (currently 62 members)	- GBHI (dual affiliation) - Agreements with Latin American institutions -Local government organizations (ministries) and international organizations	-New local and international agreements
Outreach activities	Annual BrainLat meeting 72 webinars & meetings, 60 newsletters, 9 interviews, 15 awards, 9 designations	Annual BrainLat meeting LAC-CD and ReDLat meetings, seminars with AA + GBHI, postdoc and PhD monthly presentations	Annual BrainLat meeting, LAC-CD and ReDLat meeting, seminars with AA + GBHI postdoc and PhD monthly presentations

Abbreviations: AA, Alzheimer's Association; BrainLat, Latin American Brain Health Institute; GBHI, Global Brain Health Institute; IDB, Inter-American Development Bank; LAC-CD, Latin America and Caribbean Consortium on Dementia; NIH, National Institutes of Health; ReDLat, The Multi-Partner Consortium to Expand Dementia Research in Latin America;

health (SDH) and unique genetic profiles of LAC populations are the main factors that impact the prevalence, presentation, and risk of dementia.[1] Fragile and unsuitable integrated health care and development systems, overburdened public health organizations, unstable economies, substantial inequalities, caregiver burden,[3,4] limited funding/research infrastructure, and lack of training[1] are all critical drivers of this urgent call to action.

The Latin American Brain Health Institute (BrainLat) was recently created to tackle many of these challenges. Launched at the University Adolfo Ibáñez (Chile), BrainLat is guided by an international advisory board (60 institutions) and is affiliated with the Global Brain Health Institute (GBHI), which works in partnership with the University of California San Francisco (UCSF), and Trinity College Dublin (TCD). GBHI is an Atlantic Philanthropies–funded initiative that aims to reduce the scale and impact of dementia. Links to GBHI, together with connections with regional initiatives and public centers, have been spurring BrainLat research collaborations and joint training programs, crucial to boost productive networking. BrainLat is supporting the regional dementia research agenda through seed grants, postdoctoral positions, specialized infrastructure, educational programs, and permanent full-time research positions (Table 1). BrainLat's focus on strengthening regional and international multidisciplinary brain health research and diplomacy has empowered innovative brain health leaders across LACs.

Regional capacity building is a core goal of BrainLat as illustrated by ongoing consortia, including the Latin America and Caribbean Consortium on Dementia (LAC-CD)[1,5] and The Multi-Partner Consortium to Expand Dementia Research in Latin America (ReDLat).[6] LAC-CD, a task force consisting of >250 dementia experts in LACs, has been harmonizing practices, providing professionals with training opportunities, and developing a new knowledge-to-action regional plan that includes a biomarker framework.[1] ReDLat, a research project involving 13 sites across Latin America and the United States, aims to expand open regional research by combining genomic, SDH, neuroimaging, and cognition in >4000 individuals to improve the characterization of Alzheimer's disease and frontotemporal lobar degeneration.[6] ReDLat is funded by the Alzheimer's Association, the National Institute on Aging of the National Institutes of Health (NIH), the Rainwater Foundation, Alector, and Takeda. BrainLat supports ReDLat by providing dedicated research positions (faculty positions, postdocs), seed grants, and funds for mobility. The institute complements ReDLat research by focusing on novel and affordable biomarkers (e.g., electroencephalogram, functional magnetic resonance imaging, blood-based biomarkers) relevant to the region.[7,8] BrainLat, in association with LAC-CD and the International Society to Advance Alzheimer's Research and Treatment is currently delivering webinars focused on dementia with content that includes biomarkers, technology, care, and interventions after surveying regional experts' knowledge on these topics.

Despite its short tenure, BrainLat already has had a high impact. Researchers at BrainLat have co-authored >130 academic publications, developed transfer of available technological innovation (e.g., Neureka [https://www.neureka.ie/]), and provided regional professional training (Table 1). BrainLat is also involved in different LAC-CD and ReDLat ongoing collaborations with external centers across the globe (e.g., NIH Intramural Center for Alzheimer's and Related Dementias, European Dementia of Lewy Body Consortium, World Health Organization–Alzheimer's

Association global consortium to assess the impact of coronavirus, and Creative Aging International) as well as regional organizations (e.g., Inter-American Development Bank, local research centers).

Efforts to improve the landscape of dementia in LACs are plagued by a lack of critical mass. Another core goal of BrainLat relies on increasing education and training through three novel programs. First, the BrainLat fellowship for brain health, leveraging content created at GBHI, will be launched in 2024 to train a new generation of regional leaders in brain health. Inspired by the GBHI Atlantic Fellows for Equity in Brain Health program, the BrainLat fellowship will include regional adaptations to address specific needs and challenges of the region. The second initiative consists of a PhD program in brain health that will bring together researchers from diverse disciplinary perspectives (i.e., psychology, neuroscience, computational approaches, geriatrics, health economics, epidemiology, diplomacy, and engineering, among others). Starting in 2023, this research-oriented PhD program will focus on supervisor-based mentoring and will benefit from the multidisciplinary faculty as well as synergies with the fellowship program. Third, the European-Latin American Brain Health Academy (ELBHA) is a training program coordinated by BrainLat and GBHI at TCD, bringing innovative educational modules for use by multiple professional groups. ELBHA takes a transdisciplinary approach to expand the educational ecosystem for scientists, government policy makers, private organizations, and entrepreneurs in brain health. This year, the Inter-American Development Bank, in association with the Ministry of Health of Argentina, will fund ELBHA's first international courses on brain health in the country. Designed by BrainLat and faculty from Europe, the United States, and LACs, the educational curricula include classical (dementia research, care and prevention, risk factors, health economics), and innovative approaches to promote brain capital[9] and brain health diplomacy.[10] Launching these educational initiatives represents an enduring investment for the region.

Finally, the long-term goal of BrainLat is to foster multilateral efforts via capacity building, implementation science, and diversity, hoping said efforts become sustainable in the region. This is perhaps the most challenging goal, as it requires the integration of care and public systems with research, as well as coordination across private/public sources and local/regional/international stakeholders. BrainLat initiatives, taken together, will accelerate opportunities to improve brain health and brain capital by connecting various stakeholders, universities and institutions, governments and non-governmental organizations toward a common purpose. By forging translational research and educational collaborations across the continent, these initiatives will build research capacity and evidence, support the realization of regional dementia plans, enhance the regional health systems' infrastructure in brain health, and facilitate future agreements with governments to increase the budget for dementia prevention, care, and research. BrainLat is also committed to improving diversity in leadership (women, people of color, Native and Indigenous people). Through a combination of interdisciplinary innovation, collaboration, and creativity, we hope to transform our local challenges into global opportunities for brain health.

ACKNOWLEDGMENTS

The authors thank the patients, families, policy makers, non-governmental organizations, and health professionals across Latin America that every day fight against dementia and poor brain health conditions. This work is partially supported by grants from the Multi-Partner Consortium to Expand Dementia Research in Latin America (ReDLat, funded by the National Institutes of Aging of the National Institutes of Health under award number R01AG057234, an Alzheimer's Association grant [SG-20-725707-ReDLat], the Rainwater Foundation, Alector, and the Global Brain Health Institute); Takeda CW2680521; CONICET; FONCYT-PICT (2017-1818, 2017-1820); ANID/FONDECYT Regular (1210195, 1210176, 1220995, 1210622, 443865, 1191726); ANID/FONDAP (15150012); ANID/PIA/ANILLOS ACT210096; ANID/FONDEF ID20I10152; and Alzheimer Disease Association 2018-AARG-591107. The content is solely the responsibility of the authors and does not represent the official views of these institutions.

CONFLICTS OF INTEREST

There are no conflicts of interest to declare.

REFERENCES

1. Parra MA, Baez S, Sedeño L, et al. Dementia in Latin America: Paving the way toward a regional action plan. *Alzheimers Dementia* 2021;17(2):295-313.
2. Estimation of the global prevalence of dementia in 2019 and forecasted prevalence in 2050: an analysis for the Global Burden of Disease Study 2019. *Lancet Public Health* 2022;7(2):e105-e125.
3. Ibáñez A, Pina-Escudero SD, Possin KL, et al. Dementia caregiving across Latin America and the Caribbean and brain health diplomacy. *Lancet Healthy Longev* 2021;2(4):e222-e31.
4. Ibanez A, Kosik KS. COVID-19 in older people with cognitive impairment in Latin America. *Lancet Neurol* 2020;19(9):719-721.
5. Ibanez A, Parra MA, Butler C. The Latin America and the Caribbean Consortium on Dementia (LAC-CD): from networking to research to implementation science. *J Alzheimers Disease* 2021;82(s1):S379-S394.
6. Ibanez A, Yokoyama JS, Possin KL, et al. The Multi-Partner Consortium to Expand Dementia Research in Latin America (ReDLat): driving multicentric research and implementation science. *Front Neurol* 2021;12:631722.
7. Duran-Aniotz C, Orellana P, Leon Rodriguez T, et al. Systematic review: genetic, neuroimaging, and fluids biomarkers for frontotemporal dementia across Latin America countries. *Front Neurol* 2021;12:663407.
8. Ogonowski N, Salcidua S, Leon T, et al. Systematic review: microRNAs as potential biomarkers in mild cognitive impairment diagnosis. *Front Aging Neurosci* 2021;13:807764.
9. Eyre HA, Ayadi R, Ellsworth W, et al. Building brain capital. *Neuron* 2021;109(9):1430-1432.
10. Dawson WD, Bobrow K, Ibanez A, et al. The necessity of diplomacy in brain health. *Lancet Neurol* 2020;19(12):972-974.

How to cite this article: Duran-Aniotz C, Sanhueza J, Grinberg LT, et al. The Latin American Brain Health Institute, a regional initiative to reduce the scale and impact of dementia. *Alzheimer's Dement*. 2022;18:1696–1698. https://doi.org/10.1002/alz.12710