

**Addressing dementia challenges through international networks:
Evidence from the Latin American and Caribbean Consortium on Dementia (LAC-CD)**

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Background: LAC-CD has recently reported that challenges faced by LAC countries are very similar to those experienced by HIC, and that regional networks will be needed to bridge gaps. ReDLat is a US-LAC multi-partner consortium aimed at expanding dementia research in LAC. The UK-Latin America Brain Connectivity Research Network (UL-BCRN) focuses on developing new affordable EEG-based biomarkers for dementia. The Language and Brain Health Network (LBHN) integrate international multidisciplinary efforts to reveal linguistic markers of neurodegenerative diseases.

Methods: ReDLat is collecting genomic, neuroimaging, clinical, cognitive, and socioeconomic data from a first-in-class cohort anchored in six LAC (Argentina, Chile, Colombia, Brazil, Mexico, and Peru) and will compare these to US data (> 4200 participants, including 2100 controls, 1050 AD patients, and 1050 FTD patients). The 5-year project will develop innovative, harmonized, and cross-nation approaches on two of the most prevalent neurodegenerative diseases, Alzheimer's disease (AD) and Frontotemporal Dementia (FTD). The UL-BCRN currently links seven EEG labs from Colombia, Argentina, Chile, Brazil and the UK. The network's vision is to forge strong relationships between labs through which new methodologies, EEG plus multidimensional datasets, and experience will be developed and shared. The LBHN will analyze speech samples from massive AD, FTD, and control cohorts across LAC, Spain, and the US. This effort aims to identify low-cost disease-specific markers in diverse Latino and English-speaking patients.

Results: ReDLat will aims to reveal unique risk factors for AD and FTD in LAC compared to US populations. Data collection strategies have been adapted to face the challenges brought by the COVID-19 pandemic. The UL-BCRN has now standardised recording protocols across LAC and UK labs and is collecting data from longitudinal cohorts of patients at risk of dementia relying on novel culture-free cognitive paradigms. Preliminary LBHN data shows that, automated speech analyses can identify Latinos with AD and FTD, with good generalization across socio-biological profiles, dialects, and languages.

Conclusion: By broadening our understanding of dementia phenotypes, risk factors, and affordable diagnostic approaches in LAC, adding new evidence on variability across HIC and LMIC, the above networks will contribute unique knowledge that will help enhance future global dementia strategies.

Interpret barriers and addressing disparities in diverse populations at risk of dementia