



CAMILO DE LA FUENTE-SANDOVAL

MD, PhD · INNN · Mexico City, Mexico

GLUTAMATE AS BIOMARKER OF TREATMENT RESPONSE IN EARLY-STAGE SCHIZOPHRENIA

2024
GLOBAL
SCHIZOPHRENIA
AWARD · SIRS

3,358+

CITATIONS
GOOGLE SCHOLAR

73+

PUBLICATIONS
PEER-REVIEWED

8%

FIRST-EPISEODE PATIENTS
WITH SECONDARY CAUSES

22M

METRO POPULATION
SERVED · FREE OF CHARGE

“We walked without looking for each other but knowing that we were walking to find each other.”

CAMILO DE LA FUENTE-SANDOVAL · INSTITUTO NACIONAL DE NEUROLOGÍA Y NEUROCIURGÍA (INNN), MEXICO CITY

01

Glutamate & Early Psychosis

TRANSLATIONAL NEUROSCIENCE

- Pioneer of MR spectroscopy in first-episode psychosis in Mexico, beginning in 2000
- Discovered elevated glutamate in the associative striatum of antipsychotic-naïve patients
- Demonstrated glutamate normalization following effective antipsychotic treatment
- Elevated striatal glutamate predicts conversion to psychosis in ultra-high-risk individuals
- First to link dopamine-glutamate interaction to early psychosis biomarkers in Latin America
- Findings published in *Neuropsychopharmacology*, opening new avenues for treatment prediction

02

The INNN Clinical Ecosystem

CLINICAL INNOVATION

- Founded Laboratory of Experimental Psychiatry at INNN in 2006
- Established Mexico's only ambulatory urgent-care clinic for early psychosis — free of charge
- Full workup within 24 hours: MRI, glutamate spectroscopy, neuropsychology, inflammation markers
- Treatment initiated same day — unique in Mexico
- Systematic screening identifies ~8% of patients with secondary causes (autoimmune, thyroid, structural)
- Serving a metropolitan area of 22 million with severely limited mental health resources

03

International Collaborations

GLOBAL PSYCHIATRY

- Leader in ENIGMA Clinical High Risk for Psychosis Working Group
- NIH-funded research, alongside Mexican agencies and UC MEXUS-CONACyT
- Co-author on landmark meta-analysis of glutamate variability in schizophrenia, *Molecular Psychiatry* 2023
- Positions Latin America as contributor to global schizophrenia research, not merely recipient
- Research on intracortical myelin and paliperidone palmitate in recent-onset schizophrenia
- Data informing precision psychiatry models applicable to low-resource settings worldwide

04

Science, Exile & Vision

SCIENCE & SOCIETY

- Born in Chillán, Chile; arrived in Mexico in 1973 as infant refugee from Pinochet coup
- Father was a deputy in Allende's government — scientific career cut short by exile
- Argues "schizophrenia" is an umbrella label for conditions medicine cannot yet separate
- Advocates for differential diagnosis and personalized treatment over trial-and-error antipsychotics
- Featured in *El País* (September 2025) as revolutionary force in psychosis care in Latin America
- Only Mexican scientist ever to receive the SIRS Global Schizophrenia Award (2024)

● GLUTAMATE PIONEER

● EXILE TO EXCELLENCE

● FREE CARE INNOVATOR

● GLOBAL SOUTH SCIENCE

● PRECISION PSYCHIATRY



GENOMIC PRESS INTERVIEWS
THE BRILLIANT MINDS BEHIND THE SCIENCE

Instituto Nacional de Neurología y Neurocirugía · Mexico City, Mexico · 2025
Source: [Genomic Press Interview](#) · Brain Medicine · 2025