Cuban Center for Neuroscience





Staff: 442 employees (40% in R&D)

Facilities: 10,000 m²

Number of R&D projects: 30

Commercial portfolio: 35 products & services

Exterior scheme for commercialization:

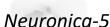




Main products, projects & services









Audix-5



INFANTIX



NeuroGer



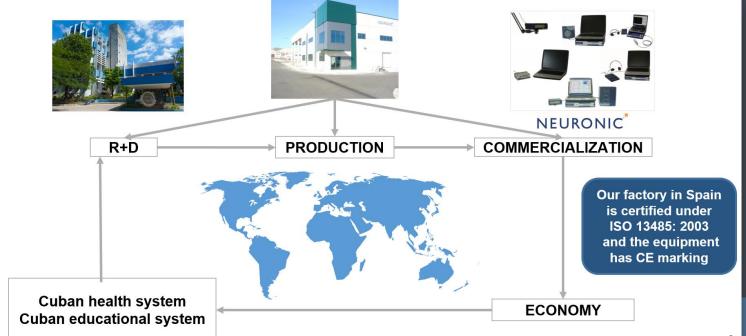






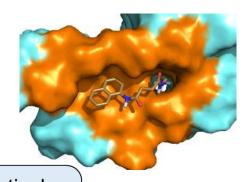


We are a High-Tech Company dedicated to conducting research, developing products, producing, marketing, importing and exporting medical equipment, computer applications, technologies, services and intangibles, as well as scientific-technical projects and services in the field of neuroscience and other related medical and social areas.





Search of novel biomarkers and diagnostic approaches for Alzheimer's disease



Development of medical devices in response to COVID-19

Search of therapeutical molecules for Alzheimer's disease

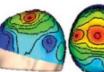
Areas of special interest

Development of neurostimulation devices for depression and other psychiatric disorders

Development of technologies for the management of aging, and neurodevelopmental disorders

Development of technologies for the management of hearing deficits

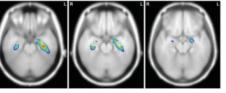
Development of neuroinformaticbased methods for the analysis of EEG and neuroimaging data



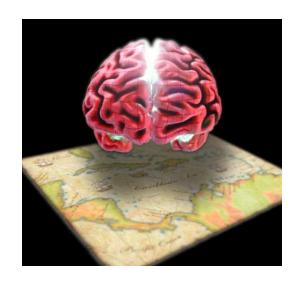






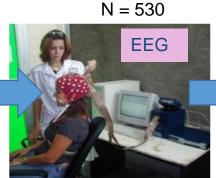


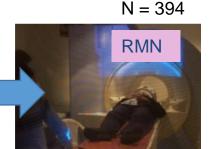
Cuban Brain Mapping Project















Article

Brain charts for the human lifespan

https://doi.org/10.1038/s41586-022-04554-y

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Open access

Check for updates

Over the past few decades, neuroimaging has become a ubiquitous tool in basic research and clinical studies of the human brain. However, no reference standards currently exist to quantify individual differences in neuroimaging metrics over time, in contrast to growth charts for anthropometric traits such as height and weight¹. Here we assemble an interactive open resource to benchmark brain morphology derived from any current or future sample of MRI data (http://www.brainchart.io/). With the goal of basing these reference charts on the largest and most inclusive

SCIENTIFIC DATA (1101)10 (1110)

OPEN The Cuban Human Brain Mapping DATA DESCRIPTOR Project, a young and middle age population-based EEG, MRI, and cognition dataset

> Pedro A. Valdes-Sosa 6 1,2,4 A, Lidice Galan-Garcia 2,4, Jorge Bosch-Bayard 1,2,3,4, Maria L. Bringas-Vega 1,2,4, Eduardo Aubert-Vazquez2,4, Iris Rodriguez-Gil2, Samir Das3, Cecile Madjar³, Trinidad Virues-Alba², Zia Mohades³, Leigh C. MacIntyre³, Christine Rogers³, V Shawn Brown3, Lourdes Valdes-Urrutia2, Alan C. Evans (6) 3,5 & Mitchell J. Valdes-Sosa 4,75 Configu

Attention to Hearing Disabilities

DETECTION



TREATMENT





Auditory and visual screening



INFANTIX Neonatal Screening System for the early auditory and visual screening









AUDIOMETRIC CHARACTERIZATION

Audiometric chamber



Clinical Electroaudiometer



AUDIX system: the first commercially available device with the auditory steady state technique



Digital manufacturing

- 3D scanner
- •3D printer









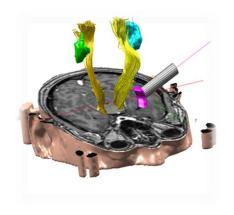
Cochlear implants (in development)

Other devices and softwares



Transcutaneous vagus nerve electrical stimulator for the treatment of epilepsy (open-loop).

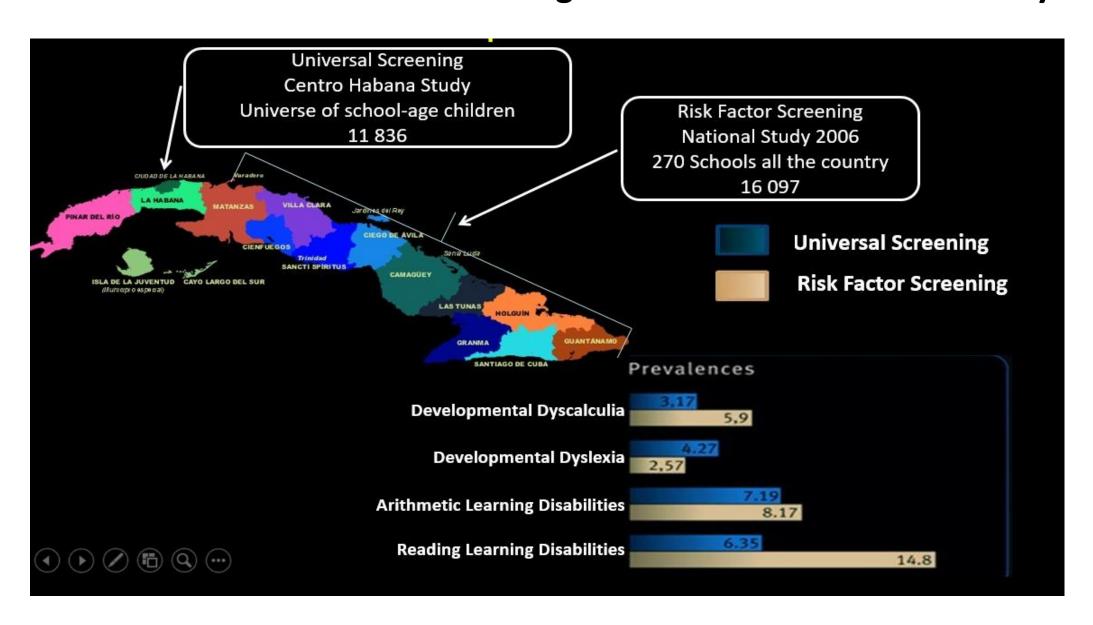
Closed-loop system under development to detect seizures early and apply preventive stimulation.



Neurointerventional platform (neuroplanus)

- Surgical planning
- Deep brain stimulation planning
- Transcranial magnetic stimulation planning

CNEURO has contributed to the screening of developmental disorders in Cuban children and has introduced technologies in the Cuban educational system

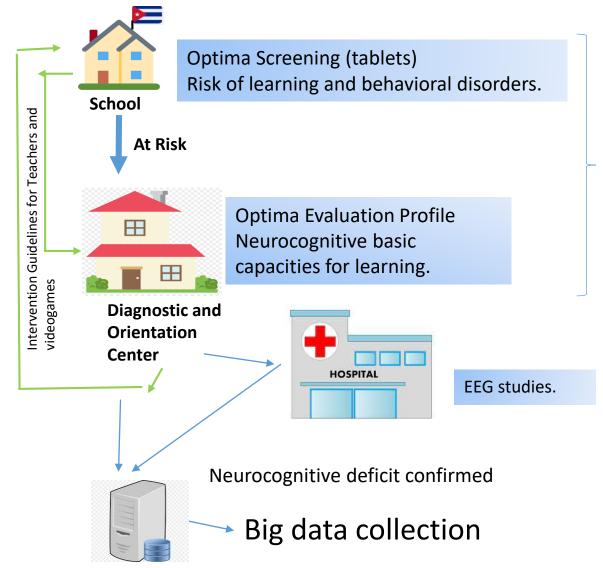


Joint Neuroscience – Education Projects

M E NEURO

Follow up study of neurocognitive profiles of all children at risk of learning and behavioral disorders along

the country.



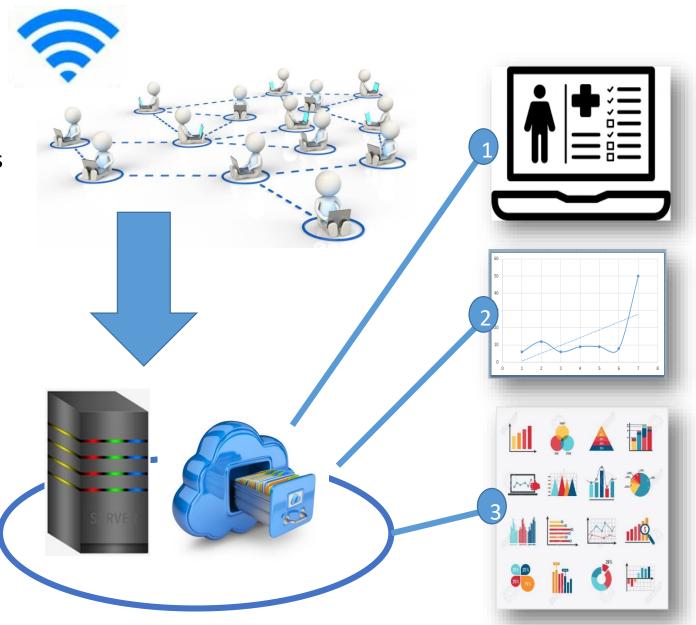
Rehabilitation of learning and behavioral disorders using video games (Clinical trials).





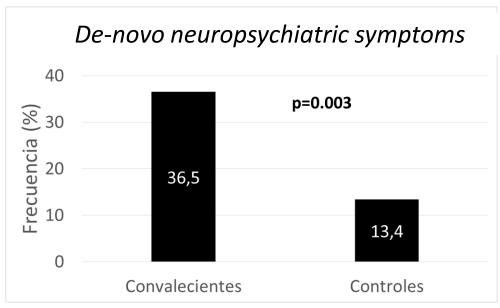
SYSTEM FOR THE CARE AND MONITORING OF CHILD DEVELOPMENT

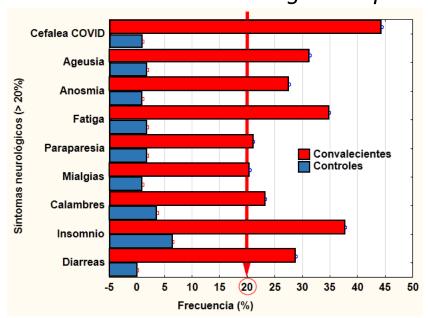
- Neonatology services
- Childcare consultations
- Biochemistry services
- Child psychiatry consultations
- Early childhood educational institutions



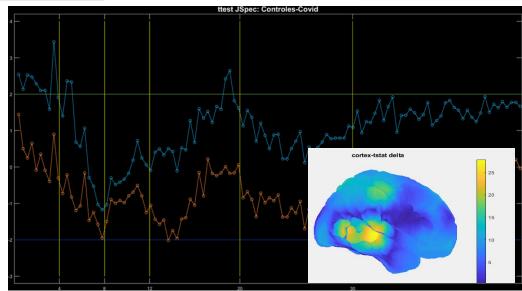
Evaluation of brain disorders caused by COVID-19







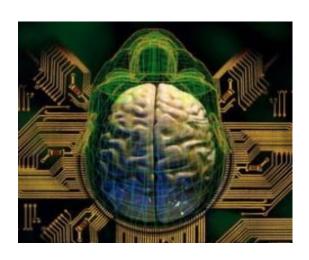
Electroencephalographic abnormalities (EEG)

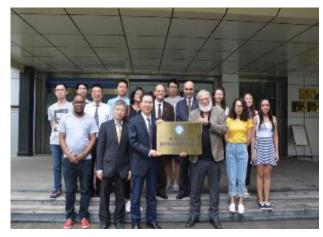


International projections of CNEURO

CNEURO is member of:

- Global Brain Consortium
- International Brain Initiative
- Cuba-China-Canada Brain Mapping Project





Joint China-Cuba Laboratory for Neurotechnology

International collaboration with:

- Maastricht University, Netherland
- Aachen University, Germany
- Oxford University, UK
- University College London, UK
- Quebec University, Canada
- Antioquia University, Colombia
- Queensland University, Australia
- UESTC, China