Quantitative brain imaging

Generation of healthy PET brain images from injured brains.

The quantitative analysis of PET images in clinical studies represents an enormous challenge to improve the characterization of brain metabolism, since this type of studies cannot be performed on healthy subjects due to radiation exposure and its possible consequences. There are currently no technically rigorous methods that allow accurate quantitative analysis to accurately locate neurological lesions. The development of a tool of this type is key to consolidating the pre-surgical clinical diagnosis of pathological alterations such as epilepsy.

THE TECHNOLOGY

Method that allows the identification of brain lesions through quantification on a database of virtually healthy brains, in order to make objective decisions regarding the surgical intervention, which is adaptive to process brain images that can support pre-surgical decisions. It is possible to automate the analysis in the identification of brain lesions (such as epilepsy) using artificial intelligence based on statistical models. It provides a specific database of brain metabolism for different groups of individuals.

LEVEL OF DEVELOPMENT

TRL: 5. The method has been validated in a partially relevant environment with positive results

MAIN RESEARCHER

Francisco Zamorano Mendieta, PhD.

INTELLECTUAL PROPERTY

Patent pending

MAIN ADVANTAGES OR BENEFITS

- Tool with high degree of precision to identify the affected area to operate.
- The time to make surgical decisions can be reduced.
- Tool that improves its performance as more number of patients are treated.

USES/APPLICATIONS

- Health: pre-surgical or diagnostic decisions.
- Identification of brain abnormalities.
- Pre-surgical planning (Anesthesia, tissue to be removed).
- Medical device software.

BUSSINES OPPORTUNTIY

- Technology available for licensing.

CONTRACT

Catalina Astorga – Tech Manager
Email: castorga@udd.cl, icono@udd.cl
Tel: (56-2) 23279216/23279612