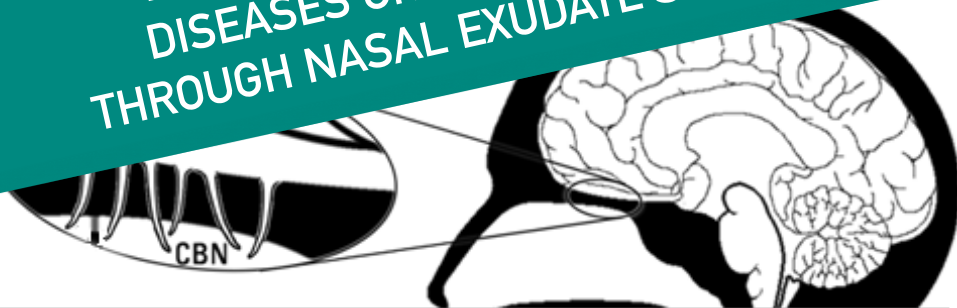




METHODS AND PANELS TO DIFFERENTIATE BETWEEN STROKE SUBTYPES, DISEASES OR BRAIN DAMAGES THROUGH NASAL EXUDATE SAMPLES

TECHNOLOGY OFFER



ABSTRACT

The current diagnostic evaluation of acute stroke depends largely on neuroimaging techniques, such as computed tomography (CT) and brain magnetic resonance imaging (MRI). Although neuroimaging provides valuable diagnostic information, it is not always available, it requires specific infrastructure, considerable resources and specialized personnel, and sometimes it is not possible to do it on time. Other current solutions involve complex, invasive and slow procedures on the patient.

Spanish researchers working in Analytical Chemistry and Neurology provide **new methods and panels to differentiate between stroke subtypes, diseases or brain damage** through biomarkers from the central nervous system (CNS), by analyzing **samples of nasal exudate**. The existence of a cerebral lymphatic drainage through the cribriform plate of the ethmoid bone could imply the presence in the nasal secretion of biomarkers that warn of the occurrence of certain cerebral episodes, neurological diseases or CNS events. It is also of great interest for the search for biomarkers that **allow the study of other diseases such as Alzheimer's or Parkinson's or processes such as aging**, closely related to failures in the drainage of proteins or other products of brain metabolism.

INNOVATIVE ASPECTS

- ✓ Nasal exudate is easy to obtain from a patient through quick, simple, painless and minimally invasive extraction processes. It is not necessary therefore that the subject is at the hospital. In addition, qualified personnel are not required for sampling (unlike what happens with, for example, a lumbar puncture to extract cerebrospinal fluid).
- ✓ The invention also allows rapid therapeutic and logistic decisions.
- ✓ It allows differentiating between ischemic and haemorrhagic strokes.
- ✓ Metals or proteins can be used as biomarkers. The use of metallic biomarkers avoids the use of biological reagents and the performance of immunoassays, which normally require a longer procedure.
- ✓ The invention provides techniques and technology that offer homogeneous and extraordinarily reliable results.

COMPETITIVE ADVANTAGES

- ✓ **Cost efficient.** The extraction of samples is carried out quickly, easily and without the need of qualified personnel. On the other hand, the analysis process is shorter and cheaper, since it does not require biological reagents or immunoassays.
- ✓ **Homogeneous and reliable results**, with extraordinarily good predictive levels.
- ✓ **Drastic reduction of discomfort for the patient**, since the extraction of samples is painless and non-invasive.
- ✓ **Increased speed in the decision making.**

PATENTS

ES patent applied.
In time to seek international protection.

TYPE OF COLLABORATION

Licence agreement.

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