

## In vitro method for the diagnosis, prognosis and treatment response of migraine (MIGRATX)



Business area

*Diagnostics/Prognosis*

Market sector

*Neurology*

### Research goal

The present invention refers to the medical field. Particularly, the present invention refers to *in vitro* methods based on the level of expression of autotaxin (ATX), or of the gene ENPP2, for the diagnosis and/or prognosis of migraine, for the prognosis of pain intensity or pain duration in patients suffering from migraine, and/or for assessing whether a patient suffering from migraine will respond to a treatment, preferably a preventive treatment such as botulinum toxin.

### Problem to solve

It is estimated that 2.5% of patients with episodic migraines develop chronic migraines, a process commonly known as migraine transformation. Several studies have been focused on identifying factors and /or biomarkers associated with this process. Our invention has found significantly different ATX values between chronic and episodic migraine patients, as well as much higher than in healthy patients. In this sense, ATX can be used to determine between patients suffering from chronic migraine and patients suffering from episodic migraine, for the prognosis of pain intensity or pain duration in patients suffering from migraine, and/or for assessing whether a patient suffering from migraine will respond to treatment with botulinum toxin, preferably a preventive treatment such as botulinum toxin. In addition, to determine the possibility that a patient with episodic migraine will evolve into chronic migraine.

### Innovation

The lack of reliable biomarkers constitutes one of the main barriers to the precision diagnosis and prognosis of migraine. In recent years, several efforts have been made to identify reliable biomarker(s) useful to monitor disease activity and ascertain the response to a specific treatment. Several circulating biomarkers have been proposed as diagnostic or therapeutic tools in migraine, mostly related to migraine's inflammatory pathophysiological aspects. Nonetheless, their detection is still challenging for the scientific community, reflecting, at least in part, disease complexity and clinical diagnostic limitations. In this sense, we have determined a new biomarker that had not been previously observed in migraine.

### Market opportunity

Our discovery may contribute to the development of diagnostic kits based on ATX. Finally, the present invention also refers to a computer program or a computer-readable media containing means for carrying out a method as herein defined.

### Research team

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### Intellectual property

European patent **EP23382969** "IN VITRO METHOD FOR THE DIAGNOSIS, PROGNOSIS AND TREATMENT RESPONSE OF MIGRAINE"

### Development stage:



Available for: *Licensing, co-development*