

Method and kit for diagnosing laryngopharyngeal reflux disease

■ KEYWORDS

Laryngopharyngeal reflux
Non-invasive diagnosis
Biomarkers
Saliva-based testing

■ PATENT

Title: Method and kit for diagnosing laryngopharyngeal reflux disease

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■ LICENSING

Exclusive, non-exclusive licences and research collaborations

■ INVENTORS

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■ PROBLEM

Laryngopharyngeal reflux (LPR) is an inflammatory condition affecting the upper aerodigestive tract due to gastroduodenal content reflux, causing mucosal changes. **Its diagnosis is challenging** due to non-specific symptoms (throat pain, dysphonia, cough,...). Even though this condition remains underdiagnosed, studies estimate that LPR affects between 10% and 30% of the global population.

Currently, the primary diagnostic tool is the **esophageal pH monitoring (HEMII-pH)** that allows to identify different types of reflux events. However, this diagnostic method **is invasive, uncomfortable, and often lacks specificity**. As LPR is associated with the presence of pepsin, an enzyme that breaks down proteins, in the laryngopharyngeal mucosa causing its inflammation, **Non-invasive Pepsin-based diagnostic methods are often used but also lack specificity**.

Non-invasive diagnostic methods are therefore still scarcely available on the market.

■ SOLUTION

The invention proposes a **non-invasive diagnostic kit for LPR**, based on the **detection and quantification of specific biomarkers** in a biological sample such as saliva.

The targeted biomarkers include:

- **Pancreatic elastase**
- **pH**
- **Bile acids**
- **Cholesterol**

These biomarkers are **compared to predefined threshold values** to determine the presence and severity of LPR.

■ INNOVATION

- Improved method and diagnostic kit :
 - **Higher specificity/sensitivity**
 - **Less expensive**
 - **Less invasive**

■ TECHNOLOGY STATUS

TRL 5

■ MARKETS

- Developers of in vitro diagnostic (IVD) kits.
- Clinical laboratories (biomarker analysis).
- ENT (Ear, nose and throat) and gastroenterology departments in hospitals.
- General practitioners (rapid diagnosis in clinic).

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