

TECHNOLOGY OFFER

MOLECULAR MARKERS FOR THE IDENTIFICATION OF THE PATHOTYPE "ADHERENT-INVASIVE *ESCHERICHIA COLI* (AIEC)"

Crohn's disease is a chronic disorder that affects the bowel, present in up to 120,000 people only in Spain, representing an economic cost of more than 1,000 million euros. A little more than a decade ago, the pathotype adherent-invasive *E. coli* (AIEC) was discovered and associated with that disease and other intestinal disorders. Currently, the detection of this pathotype is laborious, involving high costs in time and resources.



TECHNOLOGY DESCRIPTION

The technology resulting from the research consists of the analysis of signature-sequences which identifies the adherent-invasive *E. coli* (AIEC), associated with Crohn's disease. In other words, it consists of the discovery of three punctual mutations (SNPs) that allows establishing whether or not an isolated *E.coli* is AIEC with an accuracy up to 84%.

APPLICATION AND TARGET MARKET

Currently, there is no method comparable in the market. The potential target markets may be biotechnological or pharmaceutical companies interested in developing molecular tools for the fast detection of these SNPs.

COMPETITIVE ADVANTAGES

- **Time Saving:** Currently it takes between 2 and 4 weeks to carry out the identification of the AIEC, whereas the identification by PCR could be done in few hours.
- **Costs saving:** The classic method based on screening through cell cultures costs approximately 7-8 euros per isolate, whereas by molecular method could cost 2-3 euros per isolate (by quantitative PCR).
- **Standardization:** This methodology would allow obtaining completely standardizable results between laboratories, unlike the methodology that currently exists.

TIME-TO-MARKET

The technology is tested at laboratory level.

DEAL SOUGHT

License agreement.
Co-development
Agreement.

RESEARCH GROUP

Clinical microbiology
and infectious
diseases.

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