

Diagnostic Kit For Functional Disorders

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Technology description

Tech Summary

A simple PCR-based diagnostic test for functional disorders.

Background

Functional disorders (migraines, depression, chronic fatigue syndrome, irritable-bowel syndrome, chronic abdominal pain, sudden infant death syndrome, cyclic vomiting syndrome, etc.) are the most common reasons for medical visits worldwide.

It has been known for centuries that individuals who suffer from one functional disorder often suffer from several of the disorders, as do their relatives. Currently, there are no tests or biomarkers for these functional disorders. A simple, low-cost PCR-based DNA test will be useful in patients with chronic functional complaints. The test could determine whether their symptoms are functional in nature or have another cause that requires a more invasive intervention.

Technology Description

Preliminary data demonstrate that a small number of mitochondrial single nucleotide polymorphisms (SNPs) confer substantial risk for multiple functional disorders.

The presence of such SNPs confers odds ratios ranging from three to 17. These odds ratios are likely to increase substantially as additional disease-associated SNPs are identified.

This testing specifically can be useful in determining which patients should undergo costly and/or invasive testing for "organic" disease instead of conservative treatment of symptoms with follow-up. For example, in a patient with chronic abdominal pain, a test result indicating a low risk for functional disorders would suggest starting with a work-up for organic disease, such as endoscopy and GI radiological series. A test result indicating a high risk would suggest starting with a trial of functional-disorder targeted therapy with re-evaluation.

Application area

Diagnostic test kit for functional disorders

Advantages

Simple

Inexpensive

Easy to perform

No current testing exists

Institution

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