

## Novel marker for chronic heart disease

Reference Number: TO 01-00374

### Challenge

Heart failure is a serious condition affecting more than 5 million Americans and 10 million Europeans and is the leading cause of hospitalization in people older than 65. Sudden cardiac death (SCD) as a result of arrhythmias is one of the most prominent causes of death in industrialized countries.

Mendelian cardiomyopathies and arrhythmias are highly genetically heterogenous. In patients with a confirmed clinical diagnoses, current genetic knowledge allows the identification of disease causing mutations in about 8% of DCM cases, 30% of ARVC cases, 50% of HCM cases, 70% of LQT cases, 5% of diLQT cases and about 15% of Brugada Syndrome cases.

### Technology

The novel marker for heart diseases was identified by quantitative trait locus (QTL) analysis of more than 700 patients with arrhythmias and heart failure resulting in the identification of 12 non-synonymous mutations. About 2% of the analysed patients showed mutations in this gene. The phenotype was confirmed by knock-down experiments in zebrafish resulting in highly abnormal electro-physiological parameters. The generation of mouse models is in progress to confirm the observed zebrafish results and to demonstrate clinical relevance.

This novel marker is a secreted glycoprotein. In addition to diagnostic applications (genetic testing, ELISA) this might also provide new therapeutic avenues for the treatment of affected patients.

### Commercial Opportunity

In-licensing or collaboration partnership for further development.

### Patent Situation

An US patent application (US 60/973,395) was filed in September 2007 followed by a PCT application in 2008.

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