

Biomarkers for acute cardiovascular syndromes

Market Sectors: Diagnostics, Cardiovascular disorders, Inflammatory diseases

Type of Opportunity: Licensing

Researchers from Leiden University together with Leiden University Medical Centre have identified 3 chemokines that can serve as biomarkers for the identification of persons that have an increased risk for acute cardiovascular syndromes.

Acute cardiovascular syndromes (ACS) continue to be a major cause of death in western society, despite the success of current drug therapy and surgical intervention. In part this is due to the poor diagnosis of those patients that are at risk of imminent ACS, necessitating the development of more revealing imaging modalities and predictive biomarkers that can also serve as surrogate markers for the assessment of therapeutic efficacy.

Although measurement of lipid levels, stress testing, and coronary angiography are effective indicators of the extent and severity of the ACS, circulating markers that could be easily and noninvasively measured would be powerful tools to diagnose, monitor, and intervene in cardiovascular disease process.

Researchers from the Leiden University together with Leiden University Medical Centre have identified 3 chemokines that are raised during episodes of unstable angina pectoris, while peak levels of these chemokines are also indicative of refractory symptoms. Two of the three chemokines have not yet been implicated as markers for cardiovascular diseases while all three are new as markers for ACS.

The 3 biomarkers, either alone or in combination, can serve as biomarkers for the identification of persons that have an increased risk for ACS, for the identification of patients that have a poor clinical prospect and that could benefit from thorough monitoring and medical care, and for monitoring the therapeutic efficacy of drug treatment.



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Stage of development

The predictive values of the identified biomarkers have been established in a prospective cohort patients with Braunwald class IIIB unstable angina pectoris (n=54) and proved statistically significant. Collaboration is sought to establish the predictive values in a larger cohort (>250) and to develop high sensitivity assays for the 3 chemokines.

Key Benefits

- Predictive power of the three chemokines very high
- All three biomarkers can be routinely implemented in the patient anamnesis upon inclusion in the clinic

Applications

- Diagnostic tool for acute cardiovascular syndromes

Patent status

A patent application has been filed.

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