



SELECTED OPPORTUNITIES IN CARDIOVASCULAR DISEASES

Predicting the survival time of patients suffering of Myocardial Infarction or its recurrence (BIO13036)

PREDICTING THE SURVIVAL TIME OF PATIENTS SUFFERING OF MYOCARDIAL INFARCTION OR ITS RECURRENCE (BIO13036)

Stage:
Pre-Analytic
Validation

Product factsheet

▶ Biomarker:

- ◆ BAFF

▶ Technology:

- ◆ ELISA, IHC, Flow Cytometry

▶ Information:

- ◆ Prognosis

▶ Sample:

- ◆ Blood

▶ Scientific and Clinical Rationale:

- ◆ Mature B lymphocytes are recruited to the ischemic tissue after myocardial infarction. B lymphocyte depletion prevents adverse ventricular remodeling and improves cardiac function after acute MI, reduces both systemic and local pro-inflammatory responses after acute MI, impairs monocyte mobilization.
- ◆ The cytokine BAFF is expressed in myeloid and lymphoid B cell lineage cells, and acts as a potent B cell activator and plays an important role in the proliferation and differentiation of B cells.

▶ POC:

- ◆ POC in human (1000 patients admitted for acute MI) and animal models
- ◆ In a cohort of 1000 patients admitted for acute myocardial infarction, the circulating level of BAFF is elevated and is associated with adverse cardiovascular outcome.

▶ Selling points:

◆ Patent:

- ◆ EP13 305 299.3 on 2013/03/15
- ◆ PCT/EP2014/055059 on 2014/03/14
- ◆ Granted: US

◆ Scientific Publication(s):

- ◆ [Nat Med](#), 2013 October, *Zouggari Y. et al.*, doi: 10.1038/nm.3284
- ◆ [Sci Rep](#), 2017 Jun 23, *Ponnuswamy P. et al.*, doi: 10.1038/s41598-017-04438-6

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Proof of concept

► **Pre-Analytic Validation:** Circulating level of BAFF at the acute phase of MI are associated with cardiovascular outcomes

- ◆ The probability of outcome events (death or recurrent MI) as a function of baseline circulating BAFF level in patients with acute MI (n=1000).
- ◆ Detectable high level of BAFF at the admission for acute MI were independently predictive of death and recurrent MI after two years of follow-up. HR= Hazard ratio.

