



Successful partnering for fast diagnostic tools in neurodegenerative diseases and heart failure

BioTeZ and the German Heart Institute Berlin developed a unique and reliable diagnostics tool box to quantify the RNA-Binding Motif Protein 3 (RBM3) in patient samples. The results of this successful cooperation lead to a highly specific ELISA and lateral flow quick test.

It is known that the expression of RBM3 is upregulated upon cold shock (hypothermia) (Dresios et al., 2005). The therapeutic benefit a cold shock has been known for 60 years (Arrica & Bissonnette, 2007), and therapeutic hypothermia serves as a method in cardiac surgeries in new born children to lower the risk of organ damage as well as oxygen loss during birth (perinatale asphyxie) (Shankaran *et al.*, 2005).

In adults hypothermia is a standard of care for patients suffering from heart attacks (Bernard *et al.*, 2002) and the therapeutic benefits for ischemia/reperfusion and traumatic brain injuries are currently under investigation (Groysman *et al.*, 2011). Since the treatment indications for hypothermia are increasing, so will the demand by enlarged clinical studies to employ the evaluation of RBM3 as a possible biomarker.

“With this lateral flow test it now possible to quickly quantify the RBM3 level in the patient’s blood. With this important information the physician can plan more precisely the treatment”, says Uwe Ahnert, CEO at BioTeZ GmbH.

Furthermore, it was recently shown that RBM3 is involved in hypothermia induced neuroprotection (Chip *et al.*, 2011) and a protective effect of the RBM3 in neurodegenerative disorders was demonstrated (Peretti *et al.*, 2015). The now available RBM3-ELISA technology will support researcher in the field of Alzheimer, dementia, Parkinson, stroke, autoimmunity, depression, and neuronal hyperactivity.

“We are delighted to hold this RBM3 ELISA-kit in hand, which will allow the evaluation of this important biomarker in patients to prevent neurodegenerative disorders” says Dr. MD Katharina Schmitt from the German Heart Institute (Deutsches Herzzentrum Berlin).



Figure 1: New lateral flow quick test for RMB3; developed in a joint project by BioTeZ and the Deutsches Herzzentrum Berlin, the project was supported by ZIM and BMWi.

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About BioTeZ:

BioTeZ is a 1992 founded biotech company providing oligonucleotides, immun-chemistry and biochemistry services. BioTeZ has strong ambitions in the development of diagnostics tools for researcher institutes, hospitals and laboratories worldwide.

About German Heart Institute Berlin:

The German Heart Institute Berlin as a foundation focuses on the heart failure in newborns and adults with multiple research projects aim to elucidate the molecular mechanisms of therapeutic hypothermia, also referred to as Targeted Temperature Management.

Literature:

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