BIOTECH CONSORTIUM INDIA LIMITED

PEPTIDE BASED ELISA DIAGNOSTIC KIT FOR DETECTION OF ENDOMETRIOSIS

TECHNOLOGY AVAILABLE FOR TRANSFER

BACKGROUND

The technology is based on noninvasive biomarker based diagnosis of endometriosis for early detection of the disease. The technology is developed at the National Institute for Research in Reproductive Health, Mumbai , India.

TECHNOLOGY

The ELISA diagnostic kit is based on peptide biomarkers expressed during the early stage of endometriosis and hence helps in early diagnosis. The biomarkers are synthetic peptides of Tropomyosin 3, Stomatin like Protein-2 and Tropomodulin 3. The peptide biomarkers are expressed in both early and late stage of endometriosis. The levels of TPM3, SLP2 and TMOD3 antibody were almost similar in early and advanced stages of endometriosis in comparison with levels of CA125 which is predominantly elevated only in advanced stages.

The anti-endometrial antibodies are detected in blood or serum samples.

STATE OF DEVELOPMENT

The biomarkers have been validated on the study population recruited at Seth G.S. Medical College & King Edward Memorial Hospital and Sanjeevani Diagnostic Center & Maternity Home, Mumbai, India. The biomarker validation studies were conducted on patients with endometriosis stages I-IV.

ADVANTAGES

- ***The sensitivity, specificity and diagnostic accuracy of TPM3, SLP2 and TMOD3 were superior to CA125 in early as well as advanced stages of endometriosis.***
- Detection at the early stage of disease
- Noninvasive
- High sensitivity and specificity
- Easy standardization and synthesis of synthetic peptides.
- Effective in monitoring the treatment

PATENT STATUS

Patent Pending

PUBLICATION

Gajbhiye R, Sonawani A, Khan S, Suryawanshi A, Kadam S, Warty N, Raut V, Khole V (2012) Identification and Validation of novel serum markers for early diagnosis of endometriosis. *Human Reproduction*. 27, 2, 408-417.

LICENSING OPPORTUNITY

The technology is available for license and BCIL is actively seeking partners for the licensing and commercial development of the kit.

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