

Expression of Interest (Eoi)

For technology transfer/joint development/commercialization from commercial firms with the capability to design/develop/commercialize following technology/knowhow

Biomarker Panel(s)/Diagnostic Kit(s) for Breast Cancer Diagnosis/Prognosis

The Council of Scientific and Industrial Research (CSIR) supported program 'Indian Breast cancer Genome Atlas' (CSIR-IBCGA) is an initiative dedicated to understanding the genetic basis of breast cancer in the Indian population. CSIR-IBCGA includes multi-omics profiling and correlation with clinico-pathological state of tumor for each patient. The program aims to create a comprehensive genomic database that will uncover unique genetic/genomic alterations, including gene expression profiles, from patients with newly diagnosed, previously untreated breast cancer of all subtypes.

As part of the program, apart from whole genome sequencing and transcriptome of several hundred breast cancer patients, multiple aspects of data analysis including the following are being conducted:

Characterization of genomic mutations/alterations and gene expression patterns

Multimic (genome, transcriptome, proteome, epigenome) characterization of breast tumors

Study and establish any emergent immune population(s) present at the tumor site/blood that are correlated with the progression of the disease

Circulating tumor DNA (ctDNA) analysis

To maximize benefits from the data generation/analysis for patients, partnership for co-development is envisaged with relevant commercial partner(s) with capability to design/develop/produce/market biomarker panels of clinical utility. Scope of the desired partnership includes the following.

Scope of work:

Joint development / commercialization of gene panel(s)/diagnostic kit(s) to be used for clinical diagnosis/prognosis of breast cancer. Biomarkers obtained the CSIR-IBCGA study using technologies that include, but not limited to, genomic, transcriptomic, proteomic, immune-markers, imaging-based and/or any related may be used.

Commercial partners are sought who can jointly work with CSIR-IBCGA for product(s)/assay(s)/panel(s) for:

- Optimized sensitivity and specificity for breast cancer prognosis from omics-based biomarkers obtained from a large number of patient samples
- Use in a clinical setting, including clinical interpretation of breast cancer panel data
- Integrated analysis and reporting, enabling prompt diagnosis

- Validation in patients for sensitivity and specificity
- State-of-the-art technologies (for example, genomics platform (sequencing, multiplex PCR, qPCR) and/or CRISPR and/or 3D printing, or other advanced technologies to detect single nucleotide changes in the target genes/gene products.
- Enabling high-end analytical methods including machine learning and artificial intelligence.
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The commercial firm shall have valid provisions for necessary infrastructure/ material/ manpower required for product development/ validation/ scale-up.

The commercial firm shall be responsible for obtaining all the regulatory approvals required for commercialization starting from R&D for product development to its commercialization.

Interested commercial firms may send Expression of Interest to the following:

The Director,

CSIR Institute of Genomics and Integrative Biology,

Attn: Head-Business Development

CSIR-IGIB, Sukdev Vihar,

Mathura Road, New Delhi 110 025, India.

Email: director@igib.res.in; headbdmg@igib.res.in

For more details, visit www.igib.res.in