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## **Press Release**

### **Reliance Life Sciences launches India's first portal for Breast Cancer Genomics**

**Mumbai, October 10, 2008:** The Molecular Medicine Group of Reliance Life Sciences has developed a portal (<http://relibrca.rellife.com>), to help the medical fraternity predict familial and/or early on-set Breast Cancer in Indian women. Breast Cancer constitutes 18.5 percent of the total new cancer cases in Indian women today. The ReliBRCA portal aims to make data generated by the scientific community easily accessible to doctors and oncologists, to help identify hotspots and targets for easy intervention for 'Predictive Diagnosis' and possibly in 'Prognosis and Therapy'.

The portal will include 'published data' and 'to be published data' defining 'Mutations' and 'Single Nucleotide Polymorphisms' (variations called SNPs) on BRCA1/BRCA2 genes, associated with increased susceptibility to Breast Cancer. This initiative is the first BRCA1/BRCA2 Mutation/SNP database in Indian women. The portal is launched with an initial report of 500 alterations. It is interactive and accessible to all, enabling submission and accrual of global inputs on BRCA1/BRCA2 mutations/SNPs in Indian women.

Breast Cancer is the most common malignancy affecting women worldwide. The peak occurrence of breast cancer in developed countries is above the age of 50 years, as compared to India, where it occurs in a younger age group, about a decade earlier than their western counterparts. Approximately, 5-12 percent of all breast cancers result due to genetic predisposition owing to inheritance of the dominant susceptibility genes BRCA1/BRCA2. In 1990, DNA linkage studies on large families with the above characteristics, identified the first susceptibility gene associated with breast cancer, named 'Breast Cancer 1' or BRCA1, located on chromosome 17. Since it was clear that not all breast cancer families were linked to BRCA1, studies continued and in 1994, another gene called BRCA2, located on chromosome 13, was identified. Both BRCA1 and BRCA2 are tumor suppressor genes that function in control of cell growth and cell death. Mutations in breast cancer susceptibility genes - BRCA1 and BRCA2, predispose women to breast and ovarian cancers. Besides, indicating an increased risk in development of breast cancer, most women with BRCA1 or BRCA2 mutations, develop early onset breast cancer at the relatively younger age of 25 - 40 years.

Mutations in the gene are transmitted in an autosomal dominant pattern in a family. The lifetime risk of developing breast cancer in BRCA1/BRCA2 mutation carriers is 85 percent, and ovarian cancers is 40 percent, as compared to lifetime risks of 12 percent in breast cancer and one percent in ovarian cancer in women, with no mutations in BRCA1 and BRCA2 genes. Hence, a

need for a comprehensive set of data for all mutations and single nucleotide polymorphisms (SNPs) in these genes.

The National Institutes of Health (NIH), USA, has a database of about 200 mutations, which have been reported and recorded, associated with either high risk, moderate risk, or an invariant mutation with no clear link to increased risk in breast cancer. Thus, the defining of the BRCA1/BRCA2 mutations and association with increased risk of breast and ovarian cancer would provide an important clinical base for risk assessment of early onset of breast cancer. While the NIH database primarily provides such data in the global context, it has minimal data in Indian women. The ReliBRCA database developed by the Molecular Medicine Group of Reliance Life Sciences is an effort to bridge this gap.

At Reliance Life Sciences, the Molecular Medicine Group offers a diagnostic assay to predict high risk, moderate risk or risk same as reported in Indians, using the global protocol of defining the mutations by sequencing the entire BRCA1 and BRCA2 gene. The laboratory is accredited by the National Accreditation Board for Laboratory and Calibration testing, New Delhi, as per ISO 15189: 2007, and the College of American Pathologists, USA, with the BRCA1/BRCA2 test approved by the national and international accreditation boards. The test using the international gold standard, available for the first time in India, is enabling predictive diagnosis for breast cancer and is of immense use in high risk families and families with reported early onset breast cancer. The test is highly sensitive and specific, with a turn around time of fifteen days. The test is further supported by genetic counseling for the patients and their family members.

### **About Reliance Life Sciences**

Reliance Life Sciences, incorporated in the year 2001, is a new millennium initiative of the Reliance Group of companies. Reliance Life Sciences is developing business opportunities in the domains of medical, plant and industrial biotechnology. From a domain perspective, these opportunities cover Biopharmaceuticals, Pharmaceuticals, Clinical Research Services, Regenerative Medicine, Molecular Medicine, Novel Therapeutics, BioFuels, Plant Tissue Culture, Plant Metabolic Engineering and Industrial Biotechnology. From an integration perspective, these opportunities encompass Repositories, Research, Process Development, Pre-clinical Studies, Human Clinical Trials, Commercial-scale Manufacture and Marketing, all of which are carried out in-house.

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