Market Opportunity:

Non-Hodgkin’s Lymphoma (NHL) is one of the most common cancers in the United States and kills around 20,000 people each year. The presentation of primary breast NHL in women following breast implants is a relatively rare recent discovery with 900 cases reported annually. More research needs to be done to prevent or treat this type of cancer. However, no cell lines are currently available to conduct the required testing.

USC Solution:

USC scientists have derived four human T-cell lymphoma breast-1 (TLBR) cell lines from women who developed breast lymphomas after breast implantation and designated them TLBR-1, -2, -3, and -4. They characterized all four cell lines with respect to their morphology, phenotype, chromosome abnormalities, gene expression, and transplantation in mice. The cell lines recapitulate the phenotype and cytogenetics of the original tumor very well, and represent an important model for a new type of T-cell lymphoma.

Value Proposition

- Novel human T-cell lymphoma cell lines to study post-implantation breast cancers
- Only available cell lines that define this new type of cancer
- Recapitulate the phenotype and cytogenetics of original human tumors

Keywords:

Non-Hodgkin’s lymphoma, breast cancer, silicone implants, saline implants, cancer cell lines

Applications

- Research tool for developing therapeutics for primary breast Non-Hodgkin’s Lymphoma

Stage of Development

- Validated in vitro and in vivo using SCID mice
- Available for exclusive and non-exclusive license

Key Publication

"Breast Implant-Associated, ALK-Negative, T-Cell, Anaplastic, Large-Cell lymphoma: Establishment and characterization of a Model Cell Line (TLBR-1) for This Newly Emerging Clinical Entity." Cancer, 2011 DOI: 10.1002/cncr.25654

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