In vitro establishment of AIDS-related lymphoma cell lines

Technology #2953

Lymphoma represents a major source of morbidity and mortality among AIDS patients. AIDS associated non-Hodgkins lymphomas (AIDS-NHL) are invariably B-cell derived. There are three main histological types documented, small non-cleaved cell lymphoma (SNCCL), large cell immunoblastic plasmacytoid lymphoma (LC-IBPL), and large cell lymphoma (LCL). This technology is the establishment of three in vitro cell lines from three AIDS-SNCCL patients (HBL-1, HBL-2, HBL-3). The cell lines originate from different tumor sites as well as from individuals with distinct risk factors for HIV infection. They are monoclonal populations of cells that have phenotypes consistent with SNCCL. These cell lines also display cell markers consistent with B-cells. Furthermore, one of the cell lines, HBL-1, has a monoclonal infection of Epstein-Barr virus.

Cell lines derived directly from AIDS-NHL patients provides biological platform to study lymphomagenesis

AIDS-NHL is distinct from NHL in the general population due to the widespread extent of disease at initial presentation, poor prognosis, and the frequent involvement of extranodal sites, such as the gastrointestinal tract, liver, and bone marrow. Therefore, having an accurate cell line that accurately displays the disease phenotypes is important for studying and understanding how pre-existing HIV infection alters the genesis of these lymphomas and dictates their developmental outcome. By describing cell lines derived directly from lymphoma patients, this technology offers a potential platform to study how biological, immunological, and viral factors alter AIDS-NHL lymphomagenesis.

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Applications:

- In vitro cell lines to study the biological, immunological, and viral factors involved in AIDS-associated lymphomagenesis.
- In vitro system to determine if lymphoma drugs currently on the market are equally efficacious against AIDS-associated lymphoma.
- In vitro system to establish if anti-viral treatment is an effective treatment strategy for AIDS-associated lymphoma.
**Advantage:**

- Derivation of these cell lines from three distinct patients and tumor locations allows the investigator to study the biological, immunological, or viral factors important for lymphomagenesis.
- Cell lines are derived from human AIDS-associated lymphoma patients and therefore are events that occur in the clinic, in contrast to cell lines made from transgenes or gene deletion.
- The researcher can compare and contrast the genetic lesions present in these cell lines to determine if certain types of genetic lesions are present in all tumors, or rather specific to certain types of environmental exposure.

**Licensing Status:**

Available for Sponsored Research Support

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