



Abstract

Phase II SBIR Project The Sophic Cancer Biomarker KnowledgeBase (SCan-MarK)

To date, there is no single, well-maintained, up-to-date repository containing all clinically relevant cancer biomarker information. Researchers often face the daunting, tedious task of searching increasing numbers of databases that often provide inaccurate, incomplete, out-of-date, fragmented information. This directly results in wasted time and delays in finding cures for cancer. In Phase I, Sophic scientists developed a prototype central biomarker repository, the Sophic Cancer Biomarker KnowledgeBase (SCan-MarK) that can mitigate this problem. In Phase II Sophic will continue to collaborate with a scientific advisory team of respected cancer researchers who will provide recommendations and feedback on the project. The Advisors will help maintain the scientific integrity of the SCan-MarK in a cancer community that is in constant flux. Prototype Sophic Cancer Biomarker Objects (SCBOs) will be extended and enriched with biomarker related molecular information mined from target sources and curated by Sophic Scientists. The 2,116-biomarker genes mined from 18M Medline Abstracts and manually curated by PhD. scientists during the 5-year NCI Cancer Gene Index Project will be the foundation for the SCBOs. Enriched SCBOs will be centralized and made available in SCan-MarK which will provide scientists with detailed molecular information on Individual biomarker genes and panels of genes. A powerful, easy to use Knowledge Management System will be configured allow non-technical researchers to mine, explore and graphically display complex networks of biomarker, disease and scientific element relationships. The aims of the project are to improve the accuracy of disease diagnosis, increase the effectiveness of treatments and accelerate the discovery of drugs to cure cancer.