Internet-Linked System for Directory Protocol Based Data Storage

This patented invention is an internet-based laboratory data management system that can be used to create protocols, collect and organize data, archive long-term records, and facilitate scientific collaboration among researchers. This system uses a dynamic knowledge base which coordinates the components of the system and enhances its functionality. The system enables researchers with even minimal experience to input experimental parameters and quickly design protocols. Then it manages data collection to create a record that will guide data computation and interpretation. The protocols, data and the experimental context information can be easily shared with other researchers both locally and in distant labs. The system has been implemented for FACS (fluorescence activated cell sorting) studies and could also be applied to other scientific research methodologies.

Applications

- Data Management for:
 - Research- FACS, microarrays and other types of experiments
 - Bioinformatics

Advantages

- Allows easy data collection, annotation, storage, management, retrieval and analysis
- Multi-functional knowledge base:
 - contains information and relationship definitions to facilitate experiment planning and data collection
 - enables reagent inventory management

- Metadata for storage and retrieval the knowledge base includes ontologies to store and retrieve data in a meaningful way
- Dynamic the system may be updated and may generate new knowledge based on user input
- Internet-based facilitates collaboration among researchers

Patents

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