

New Discovery and Intellectual Property Outcomes: PROOF Centre, UBC, St. Paul's Hospital

Scientific and Business Goals

PROOF Centre brings unique strengths in clinical access, tissue banking and multi-platform, patient-centered data related to heart, lung and kidney disease. PROOF has a transformative scientific agenda, with data ranging from the research bench to the clinical bedside, focused initially on discovering and elucidating biomarkers for related inflammatory, immune and reparative disorders.

PROOF envisioned achieving its research and collaboration goals with support of uniquely powerful (Melissa) Informatics technology for PROOF and research partners.

Challenges

PROOF's traditional study-driven data integration methods were not efficient enough for the proposed growth in research and data sharing. Understanding and modeling connections between desired data sources was historically a blocker to progress and required significant specialized work for each study. This is a common scenario in leading research institutions today. Even more recent advanced scientific and translational research databases struggle with 'getting the data in' - that is, making the data clean, normalized, usefully integrated and ready for any application.

Additionally, work with Protected Health Information (PHI / Patient data) required a documented installation managed under PIPEDA, HIPAA, Safe Harbor and EMEA requirements for working with confidential patient data.

Company:
PROOF Centre, UBC
St. Paul's Hospital

Website:
<http://www.proofcentre.ca>

Industry:
Health Care

Customer Since:
2011

Team Size:
11-50 employees

Why Melissa Informatics?

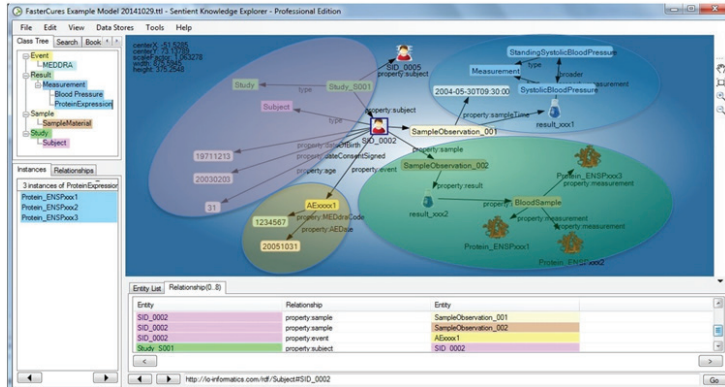
- Avoid surprises by working with comprehensive, deeply connected, standards-compliant data
- Realize strategic business goals through efficient use of newly accessible, research-quality data
- Realize new intellectual property and partnerships from the high quality data

“ [The] ability to consume and intuitively represent a wide variety of data-types - from images to quantitative data - and more importantly, display that data in ways that make the significant features immediately obvious to our biologist end-users, has allowed us to move to a completely new level of data analysis. ”

– Bruce McManus, M.D., Ph.D.,
CEO, PROOF Centre (UBC, St.
Paul's Hospital)

Solutions

Melissa Informatics deployed Sentient software and knowledge engineering services to deliver a global platform for integrated search and reporting, analytics, knowledge creation and sharing. This project integrated diseases, treatments, outcomes, tissue bank information, laboratory data, molecular data from blood (gene expression, proteins, metabolites) and published data.



Melissa Informatics "Sentient software – patients serve as the center of a semantic network that connects tissues, assessments (e.g., 'omics), endpoints and references

The PROOF relationship continues, next steps include integrating 3rd party statistical and analytical workflows (R and Knime applications), and refining and commercializing award-winning "ASK for PROOF" biomarker-based precision medicine applications.

Outcomes

For PROOF, these technologies have facilitated efficient, comprehensive discovery, understanding and promotion of biomarkers for precision medicine applications. For clinical practice, connecting blood-based signatures to integrated search and reporting systems improves access and interpretation and reduces response time. Resulting applications are peer-reviewed "Best Practices" Award Winners.

Perhaps most important, harmonizing and linking PROOF's clinical and molecular biology data resources has allowed PROOF to move to "a completely new level of data analysis", that resulted in new intellectual property. Sensitive and specific precision medicine based on biomarkers discovered and applied by PROOF represents new intellectual property, improved patient care, and new partnership and revenue opportunities for PROOF (See R. Stanley, et al: "Case Study: Applied Semantic Knowledgebase for Detection of Patients at Risk of Organ Failure through Immune Rejection". Joint Case Study of Melissa Informatics and University British Columbia (UBC), NCE CECR PROOF Centre of Excellence, James Hogg iCAPTURE Centre. Vancouver BC, Canada, March 29, 2011).

About Melissa Informatics

Melissa Informatics extends the capabilities of Melissa's global intelligence software and services to support world leaders in life sciences, biotechnology, pharmaceutical, and medical industries by harnessing the entire data lifecycle for business, pharmaceutical and clinical data. Our software and services bring data quality and machine reasoning together for insight and discovery by intelligently cleaning, connecting and harmonizing multiple sources to offer interoperable data. Melissa Informatics reduces time and cost to benefit from clean, richly connected data, and reveals deeper data relationships from complex, dynamic data through machine reasoning operations for reliable information in mission critical healthcare and life science informatics.

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