Pistoia Alliance

Collaborate to Innovate

The Power of Collaboration

The Pistoia Alliance is a global, not-for-profit members' organization collaborating to lower barriers to innovation in life science and healthcare R&D. Now more than ever, the world needs our industry to work together to solve common challenges and achieve scientific advances and breakthroughs. The fruits of our collaborative innovation can be seen across our portfolio of member-driven global projects, made possible through our legal framework for pre-competitive collaboration that enables companies to share resources, data, expertise and best practices.

PROJECT OPPORTUNITY TO DELIVER VALUE THROUGH PRE-COMPETITIVE COLLABORATION

The Semantic Enrichment of Electronic Lab Notebook Data Project

This project will enable a FAIR (Findable, Accessible, Interoperable, Reusable) aligned, comprehensive, semantic capture and translation of data across ELN (Electronic Lab Notebook) providers at the point of entry. Computer-readable, standardized data will increase the capacity for provenance and attribute connection for better insights and analysis by researchers. This will result in higher quality experiments, reduced rework, and better decision-making.

Project Supporters

AstraZeneca, ChemAxon, CSL Behring Biotherapies for Life™, Elucidata, eppendorf, eurofins, GSK, MERCK, orbis labsystems ltd., Pfizer, SANOFI, SciBite an ELSEVIER company, Takeda

UPCOMING EVENTS

Don't miss these opportunities to connect with other advocates for life sciences innovation.

Explore more of our educational webinar series at www.pistoiaalliance.org/events

PROJECT RESOURCES

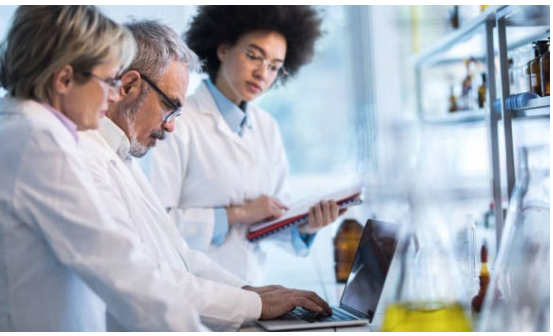
Pistoia Alliance Seed Project Unlocks Value of Data in Electronic Lab Notebooks (ELN) Using Data Standards and Semantic Enrichment

The FAIR Toolkit for Life Science Industry

Webinar On-Demand: ELN Or LIMS? Disappearing Boundaries in Life Sciences

"The driving motivation behind the initiation of the SEED project is to create a set of open standards for structuring ELN data across Pharma and the life sciences. Delivery of Pharmacokinetic-Pharmacodynamic (PK/PD) and Drug safety assay standards has been a tremendous start and of exceptional benefit across the many partners involved, as well as for those yet to join."

*– **Steve Penn**, SEED Project Champion and Medicinal Sciences Information Strategy Lead, Pfizer*



Why is this project important to the life science R&D industry?

There is an enormous amount of unstructured, scientific research data and that is growing exponentially. As a result, researchers waste a lot of time trying to find documents, search data, understand it and interpret how to use it. Because the data is "un-FAIR", researchers need to repeat experiments due to poor quality results, causing managers to make poor decisions. Semantic enrichment technology has advanced significantly in recent years and by applying this to text captured as part of an experiment, we will increase the value and use of the data.

By using standardized terms with additional parameters to map relationships between terms, the data captured is enriched, more easily searched and interoperable (FAIR). This will significantly increase researcher productivity by reducing rework (rerun experiments) and analysis time. High quality results will provide improved insights and conclusions, enabling more effective decision making.

What will this project achieve?

> **Phase 1 — Successfully Completed**

- A new standard assay Ontology (ADME PD) now available in the Bioassay public ontology (BAO)
- A working exemplar of ADME and PD workflow to semantically tag unstructured text
- An active community that supported Phase 1 and are sharing ideas for Phase II

> **Phase 2 — Successfully Completed**

- A new standard assay ontology for Drug Safety now available in the Bioassay ontology. This will enable Assay/Study type ontology coverage for all of eCTD Module 4 of NDA (New Drug Application) submission
- Building on the foundation of text annotation in Phase 1, delivered relationship maps to provide a more detailed knowledge from the experimental terms collected

> **Phase 3 — Ongoing**

- X Pharma SEED Project Team working to prioritize new scientific domains of interest not well covered in public ontologies
- Developed a data model for Experiment to use as a scaffold for use cases
- Developing standards for use cases, Location, Equipment & Instrumentation, Materials to be shared in a public ontology
- Working with ELN vendors to use SEED deliveries to FAIRify ELN content

Project Focus/Goals

> Propose and adopt use cases (decided by stakeholders)

> List of target ontologies and the key gaps

> List of terms and relationships for standardization

> Agree on data model for this phase

> Plan detailing how to align with ELN vendors for maximum value

Project Benefits

> Easy and fast access to projects, samples, procedures/ methods and results enabling researchers to get to conclusions faster

> Collaboration leading to standard terminology that can be used across the industry reducing duplication of effort

> Informing the ELN vendor community of key required features and providing them the agreed standard terminology so they can preload the key assays and other information into their software solutions eliminating steps for the user

> Higher quality experiments, reduced rework and better decision making

Be a part of that future by joining one of these developing projects!

Reach out to us at ProjectInquiries@PistoiaAlliance.org to learn more or join the next member meeting.