DATA SHEET

“Plug In Your Ontologies”: Signals One Now Offers Ontology Support

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Lab scientists and data managers have a growing need for ontology support that delivers standardized, scientific vocabulary across internal and external data sources, ensuring AI-ready and FAIR-compliant data. Yet they struggle with applications that make them contend with inconsistent terminology, the need for specialized expertise to integrate ontologies, and a reliance on static lists.

Not every organization has a dedicated data steward or ontology expert. Large pharma teams can invest in complex vocabulary management, but a 2–10-person biotech often can’t. Signals One removes that burden by enabling the plugin of standard ontologies and simple upload options so teams can get value immediately. Without needing to build or manage ontologies themselves.

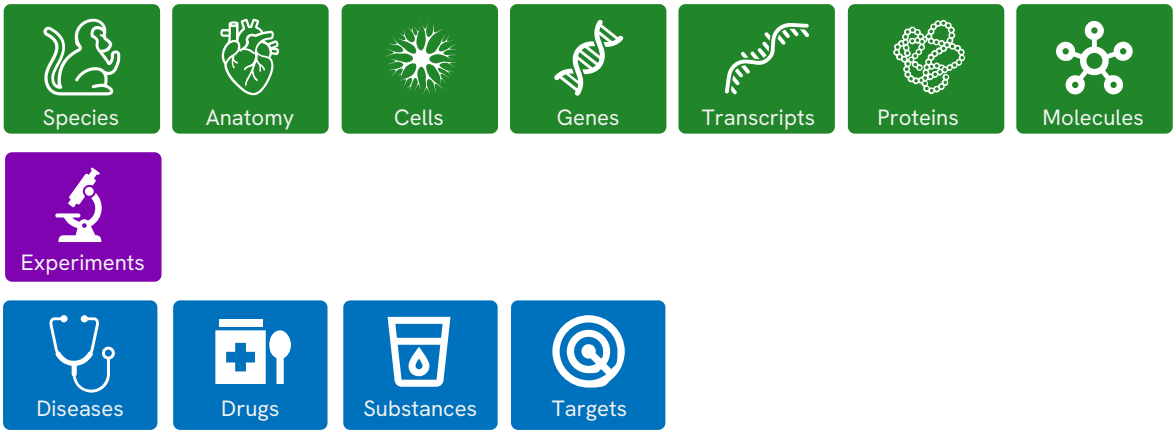
Example: Cross-Study Data Comparison[2]
A scientist wants to compare efficacy data from three studies, but each used different terms: “tumor volume,” “tumor size,” and “neoplasm mass.” Without ontology support, they would need to manually unify these terms or risk incomplete analysis. With Signals One, ontology services automatically recognize them as synonyms for the same concept. This enables instant cross-study comparisons, ensures consistent interpretation, and allows AI/ML models to treat them as a single standardized variable.

With Signals One ontology support, you have direct control of your scientific vocabulary without technical hurdles.

Plug in Your Ontologies

Ontologies define shared relationships between scientific terms, adding context and a consistent vocabulary so not only scientists from different labs across the world can communicate seamlessly but also software and machines. As AI-ready languages, they make domain context explicit, align scientists globally, and enable machines to understand meaning, relationships, and identifiers beyond simple controlled vocabularies and attribute lists.

For example, Life sciences are well covered with a handful of ontologies (in green and purple) and adding a few more will cover drug discovery (in blue)



Example: Cross-Study Data Comparison[2]

Ontology support In Signals One and Signals Notebook standardizes internal and external data, ensuring AI-ready and FAIR-compliant data. It eliminates IT dependence while enabling rapid ontology connections, full hierarchies, unique IDs, smart connectors, and curated, customizable lists.

- **Standardized, scientific vocabulary**: Terminology and synonyms are standardized and consistent across internal and external data sources
- **AI/ML-ready**: Built-in ontologies add a contextual layer to data that is important for training AI models.
- **Seamless integration with Signals One**: Embedded smart connectors allow you to connect your organization's custom ontologies without specialized technical skills.

Signals One: A Smarter Approach to Ontology Support

No dependence on IT

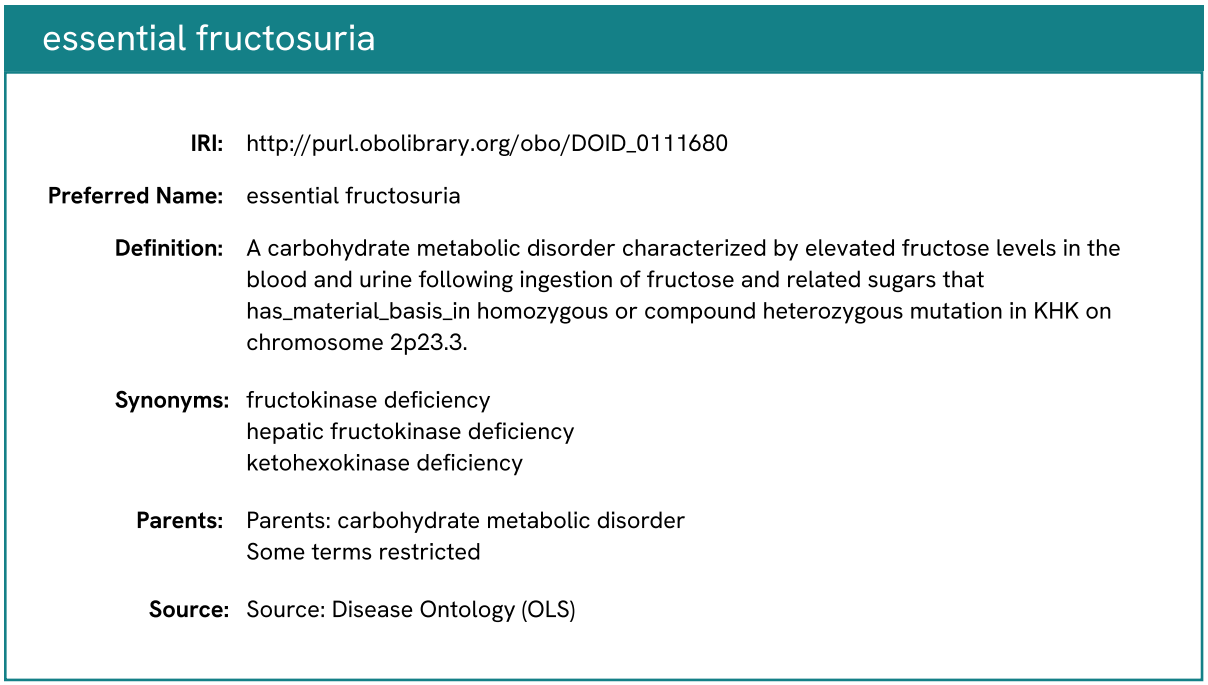
While competitors require IT intervention, Signals One empowers users to:

- Connect an ontology in minutes, not weeks.
- Configure and manage ontology connections without specialized expertise.
- Seamlessly integrate custom ontologies without service engagements.

Full hierarchical relationships

End users see a hierarchical list of terms, not a flat dropdown. This improves findability, context, and synonym handling. Each term has a unique identifier that exists within a public or proprietary ontology. That ID preserves term context in UI and exports, allowing machines to

reconstruct data, trace definitions, and rebuild relationships from source data.



Signals One: A Smarter Approach to Ontology Support

Smart connectors - "Bring your own ontology"

Competitors limit you to preloaded ontologies. The custom-built and preconfigured APIs within Signals One allow users with no technical knowledge to connect to any of the commonly used ontologies (BioPortal, OLS, and SciBite CENtree) in just three clicks.

Curated lists

While competitors provide only static lists or stripped-down term sets, Signals One offers multiple specialized lists from a single ontology source.

Quick Facts

Power AI-Ready, FAIR Data with Signals One ontology support

"Bring Your Own Ontology" enables standardized, scientific vocabulary and addresses the growing need for AI-ready and FAIR data.

Who is it for?

Ontology support is seamlessly integrated into the Signals One solution making it an ideal fit for current users of Signals One and Signals Notebook. It provides consistent terminology across internal and external data and metadata for lab scientists and data scientists. For administrators, ontology support connects ontologies without requiring specialized knowledge.

Highlights of Signals One ontology support

- **Direct control**: Connect ontologies and manage curated lists without IT or service engagements.
- **Speed and simplicity**: Configure ontology sources in minutes, not weeks, using smart connectors.
- **Flexibility**: Receive support for custom ontologies and curated lists.
- **AI/ML-ready data**: Access standardized vocabulary for FAIR data and advanced analytics.

To learn more about Signals One, visit: Signals One | Revvity Signals Software

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