Allotrope Foundation Releases the First Version of the Allotrope Ontologies

Washington, DC – Allotrope Foundation has released the first version of the Allotrope Foundation Ontology suite (AFO), which is publically available on the Allotrope Foundation web site (allotrope.org). Following the release of the Allotrope Data Format, the release of the ontologies in December 2017 takes another step towards revolutionizing the way we acquire, share and gain insights from scientific data, through a community and the framework for standardization and linked data.

The included taxonomies and ontologies establish the basis of a controlled vocabulary and relationships needed to describe and execute measurements in the lab on analytical instruments, and later interpret the data. Drawing from thought leaders across member companies and the Allotrope Partner Network (APN), the standard language for describing equipment, processes, materials, and results is being developed to cover a broad range of techniques and instruments, driven by real use cases, in an extensible design.   The Allotrope Ontology suite is made publically available for use by anyone under the Creative Commons Attribution License to contribute to the advancement of science through the creation of linked data that standardizes experimental parameters so we can remove human error and enhance scientific reproducibility.

James Roberts, Business Product Owner of the ontologies noted, "I'm really excited about this first AFO release because it provides freely available ontologies, the second foundational piece of the Allotrope Framework, that can transform the way capture, integrate and manage data. The ontologies establish the basis to create standardized and "semantically aware" scientific data, by providing standard metadata that unambiguously describes our experiments, results, and associated context, which can then be linked with other semantic content across the enterprise or with data in the public domain. The AFO also lays the foundation for future Allotrope Data Models, the third foundational piece of the Framework, that allows us to store standardized contextual metadata – the 'who, what, when, where, why, how' of an experiment – as a semantic graph in the ADF, alongside raw data recorded from our instruments – all in a vendor-neutral, accessible, open format." Summing it up, James adds "The digital transformation of our data starts with implementing the Allotrope Framework at the start of the data lifecycle – in the lab or manufacturing facility."

This release includes mature domain taxonomies and ontologies for chromatography, aligned with the Basic Formal Ontology (BFO). The mature ontologies provide a logically valid data structure and encode human knowledge in machine readable structure for machine learning, and enables aligning and integrating other domain ontologies that incorporate the BFO upper level ontology.

This release also contains domains and terms from over forty additional instrument ontologies under development, less thoroughly described than the Chromatography domain. The terminology for other techniques provide value in their current state by enabling indexing, tagging, annotation, controlled vocabularies that can be used in electronic lab notebook (ELN) and laboratory information management systems (LIMS).

Future development for support of additional instruments and workflows is prioritized of Allotrope Foundation and Partner Network member companies. To learn more about the Allotrope Foundation Ontologies and the other Framework Components please plan to attend our next public workshop hosted by Agilent in Waldbronn, Germany on April 25 - https://www.signmeup.com/124666. For more information visit https://www.allotrope.org/.

About the Allotrope Framework
The Framework is currently comprised of three components and is designed to evolve as science and technology evolves, maintaining access and interoperability with legacy data, while lowering the barriers to innovation by removing the dependencies of legacy data formats.

Allotrope Foundation is continuing to progress on its mission and deliverables. The first public release of the ADF and APIs (java and C#) was announced in July 2017 (http://www.prweb.com/releases/2017/07/prweb14516383.htm). The ADM will be released in 2018.

About the Allotrope Foundation
Allotrope Foundation is an international consortium of pharmaceutical, biopharmaceutical and other scientific research-intensive companies, and over 40 commercial and academic partners, with a common vision to rethink scientific data, and revolutionize the way we acquire, share and gain insights from scientific data throughout its complete lifecycle, with an initial focus on analytical chemistry. The Allotrope Framework enables cross-platform data transfer, facilitates data sharing, and vastly increases its ease of use, giving rise to a new generation of software applications built to leverage any data from any analytical instrument. This effort is fully funded by the members of Allotrope Foundation. For more information, please visit: https://www.allotrope.org/.

About the Allotrope Partner Network
The Allotrope Partner Network is a platform for Allotrope Foundation's collaboration with the vendor community and members of academia to exchange ideas, provide input and obtain the tools and information needed to support the Allotrope Framework in software, hardware and services. Members enjoy access to technical training materials, pre-release software, comprehensive educational tools, and access to the real-life business requirements and Subject Matter Experts from Allotrope Foundation.

Join Us
Allotrope Foundation thrives on the collaborative contributions of its members and provides many opportunities for participation including design direction, early access to software, and valuable insights gained through workshops, seminars, and regular internal communications. Allotrope Foundation and the Allotrope Partner Network welcome new members to take part in these collaborative efforts, and drive the roadmap of future domains and innovation.

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