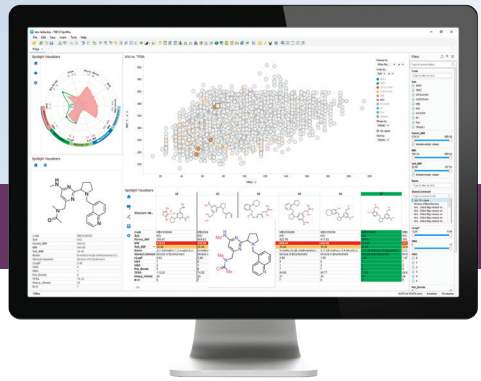
PerkinElmer Signals Lead Discovery



Focus on Science, Not Software

The search for compounds with activity against a specific target is challenging, and researchers need flexible informatics tools to quickly and reliably screen and analyze hits. Applications used in lead discovery must enhance, not hamper, gathering data, identifying trends, and driving to insight. Informatics solutions that let researchers flexibly aggregate, interrogate, and visually analyze data of interest are key to success in lead discovery.

Time to Think

Many scientists today have too little time for ideation and innovation, and spend too much valuable time preparing data or learning data exploration tools. Difficulties in aggregating *ad hoc* data can overwhelm time spent on analysis, while queries run through overly rigid solutions can fail to match the flexibility required for on-the-fly data exploration. All too often, the query returns too much, too little, or the wrong data. Rather than wrestling with tools, scientists want more time for the critical thinking and analysis that leads to discovery.

Focus on Science

PerkinElmer Signals™ Lead Discovery lets researchers focus on science, not software. Powered by TIBCO Spotfire® analytics and visualization software, Signals Lead Discovery frees researchers and scientists to explore the data they want, when they want, how they want. A guided search and analytics experience leads to faster insight and decision making. Instant feedback on the availability and quantity of data reduces the time spent running queries, while the guided analysis workflow leverages industry best practices for discovery and insight. The intuitiveness of Signals Lead Discovery means more time for critical thinking.

- **Guided Search** - Get real-time feedback for immediate access to the right data. Signals Lead Discovery provides a guided experience for search and query with the flexibility researchers need to include or exclude data on the fly. They can drill down to the data of interest — whether suddenly needing to monitor hERG or add a new toxicology model. Predicted and experimental data are combined with chemical structure queries for faster access to the right data.

At a Glance

Organizations and individuals can quickly gain new insights into chemical and biomolecular research data with PerkinElmer Signals Lead Discovery. Featuring guided search and analysis workflows and dynamic data visualizations for on-the-fly exploration, the platform is intuitive — letting researchers focus on their science, not on software.

Speed to Insight: Gain faster access to the data you need, when you need it. The agile guided search and query experience anticipates needs and provides the flexibility required.

Work that Flows: Bypass a steep learning curve with guided analysis workflows that really work for you.

Access More Data: Data is normalized, staged, and ready to explore. Mash up internal and external data without having to traverse internal data warehouses and *ad hoc* content from external partners.

Scalability: The horizontally scalable search platform provides your organization the search experience you demand, regardless of data volume and complexity.

PerkinElmer®
For the Better

- **Guided Workflow** - Immediately analyze scientifically relevant data, using guided workflows, without needing skills to build dashboards. The visual analytics yield immediate insight into data patterns, trends, and signals that simply can't be achieved by looking at tabular views and spreadsheets. Signals Lead Discovery flattens the learning curve with intuitive workflows that anticipate the researchers' needs and guides them to flexible means of incorporating myriad data types.
- **Data Staging** - Don't choose between governed data or *ad hoc*; get both. Increasing externalization of research has forced organizations to incorporate *ad hoc* data from contract research organizations, other partners, and even internal secondary analysis with data from more governed, structured internal data stores. PerkinElmer Signals Lead Discovery normalizes and stages the data, allowing for seamless blending of internal and external content, to facilitate the user query and analysis experience. Secondary analysis, created *in situ* within the application can also be persisted to facilitate future analysis.
- **Scientific Relevance** - Access to data is not enough. To gain insight from the data requires scientifically relevant processes and workflows that include specific visualizations for chemical and biomolecular research. Signals Lead Discovery expands understanding using a range of scientific analytical methods, including R-group decomposition, chemical clustering, matched molecular pair analysis, maximum chemical substructure, BLAST search, and sequence alignment.
- **Fully Scalable** - To address even the most demanding environments, Signals Lead Discovery is built from a horizontally scalable architecture that can match the search performance scientists demand.

Feature	For Chemistry	For Biologics
Data publication		
Publish data from disparate data sources	•	•
Store assay and annotation data of all types	•	•
Integrate structured and non-structured data	•	•
Data discovery		
Dynamic feedback of the intersection between candidate drugs and assay results.	•	•
Push-button data refresh.	•	•
Shared collaboration space.	•	•
Chemical SAR analysis		
Point-and-click SAR table configuration	•	
Integrated ChemDraw small molecule display	•	
Dynamic charting and robust statistical analysis	•	
Chemical series analysis and comparison	•	
Chemical search results in seconds over millions of compounds	•	
Biological SAR analysis		
BLAST search internal and external databases		•
Display aligned and unaligned biological sequences		•
Highlight sequence differences vs. selected reference		•
Zoom from sequence annotations to nucleotides / amino acids		•
Relate sequence differences with ADMET / Efficacy results		•

About PerkinElmer Signals: Signals Lead Discovery is one of several applications of PerkinElmer Signals, a scalable platform that makes everyday data mining more efficient and easy. Scientists uncover unexpected insights hidden in data, advance collaborations, unify data across multiple sources, and scale up independent of any IT overhead and resources. PerkinElmer Signals, powered by TIBCO Spotfire® analytics and visualization software, supports a broad spectrum of business and technical users in a wide range of use cases, from Translational research to content analytics.

To learn more about how PerkinElmer Signals Lead Discovery frees researchers to focus on science, not software, visit http://www.perkinelmer.com/product/signals-lead-discovery-sld.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com

PerkinElmer®

For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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