# World ADME/Tox in Drug Development Markets

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**ADME/Tox Informatics Product Differentiation Innovation Award**

Award Description

The Frost & Sullivan Product Differentiation Innovation Award is presented each year to the company that has best demonstrated the ability to develop and/or advance products with more innovative capabilities than competing vendors and products. This award recognizes the company's successful adoption of new or existing technology that has become a part of its well-designed product family. Such innovation is expected to significantly contribute to the industry in terms of product performance and degree/rate of technical change.

Research Methodology

Before considering the recipient of this award, the analyst team tracks competing market participants' product differentiation strategies through ongoing research. This research consists of market participant interviews, end-user surveys, and extensive secondary research. The data compiled through this research is analyzed based upon specific measurement criteria for this market-engineering award. Participants are then ranked with respect to the measurement criteria. The award recipient is ranked number one in the industry.

Measurement Criteria

In addition to the methodology described above, there are specific criteria used in determining the final ranking of industry competitors. The recipient of this award has excelled based on one or more of the following criteria:

- Degree of differentiation innovation compared to other market participants
- Positive impact on sales directly related to product differentiation
- Time to market improvement based upon product differentiation strategy
- Benefit to end-users due to product differentiation
- Effect of product differentiation on ease of adaptability for new end-user applications
- Effect of product differentiation on market

Award Recipient: Bio-Rad Laboratories

The recipient of the Frost & Sullivan 2003 ADME/Tox Informatics Product Differentiation Innovation Award is Bio-Rad Laboratories. Bio-Rad Laboratories is a multinational manufacturer and distributor of life science research products. A number of divisions dedicated to various research areas provide Bio-Rad with a broad range of offerings in the life science market. The ADME/Tox edition of the Know-It-All system is a recently launched product from the informatics/Sadtler division.

The Know-It-All ADME/Tox Edition is a fully integrated suite of ADME/Tox informatics tools aimed at reducing the time and cost involved in drug discovery and development. This edition is a result of Bio-Rad's collaboration with ComGenex, Inc. and CompuDrug International, Inc. In addition to the ADME/Tox edition, Bio-Rad offers the Know-It-All Informatics System for spectroscopy (MS, NMR, IR, Raman, spectral data management) and cheminformatics.

A compound's ADME/Tox profile is one of the major factors contributing to failures in the development process and it is through the realization of the opportunity to provide models for the prediction of parameters that would reduce failures especially late stage failures that can be very costly. In an effort to reduce the costs and time spent on drug failures, as well as to sort through the increasing number of targets being generated, pharmaceutical and biotechnology companies are investing in predictive technologies that will enable them to screen and select those with the greatest potential for success.

The ADME/Tox edition provides a solution for predicting parameters such as $Log_P$, absorption, blood brain barrier passage, plasma protein binding affinity as well as the storing, manipulating and reporting of the parameters in an integrated informatics system. The first version was launched in February 2003, with future upgrades continuing to be developed and released. The current version of the Know-It-All ADME/Tox software holds one of the world's largest collections of ADME/Tox prediction tools in one informatics environment. A very important and exciting differentiating factor of the Know-It-All System involves the consensus model in which a number of models are used together to generate results, often more accurately than would be reached if only one model was used. The consensus modeling adds integrated validation to the ADME/Tox addition.

The ADME/Tox edition provides a very complete set of prediction models, with a wide range of predictors available. The continued addition of new models is planned for the future. The consensus modeling approach improves the models' performance and accuracy, something of great importance to those researchers working in the ADME/Tox area. This consensus modeling approach allows researchers to create cross-validated models in a greater reduced amount of time compared to manual experiments. Collectively these factors warrant Bio-Rad receiving Frost & Sullivan's 2003 ADME/Tox Informatics Product Differentiation Innovation Award.