



SYSTEMS BIOLOGY & INTEGRATIVE THERAPEUTICS

Collaborative Drug Discovery Through Comprehensive Multi-discipline Scientific Experience



ACCELERATE PATIENT -DRIVEN INNOVATION

The pharmaceutical industry is undergoing major transformations to respond to innovation challenges it is facing. R&D productivity is under pressure as regulatory bodies and paying institutions are demanding more and more evidence that a new drug compound addresses an unmet medical need.

Among those evidences, in silico predictions and simulation results are rising as a new important piece of the regulatory submission file. This pressure combined with a new external economic environment and the growing market share of generic manufacturers are all taking a serious toll on the short- and long-term performance of pharmaceutical firms.

"The power of the digital world can help to fundamentally transform the industry's current practices."

- Christophe Thurieau, Ipsen Senior Vice President of Scientific Affairs and President of Ipsen Innovation

Dassault Systèmes, in collaboration with industry leaders of the BioIntelligence Consortium, have developed a comprehensive suite of BioPLM solutions to address these challenges and improve the efficiency and effectiveness of the drug discovery and development process. Through global scientific collaboration, scientific content federation and semantic search, and virtual modeling and predictive simulations, pharmaceutical researchers and their global ecosystem can quickly and more efficiently conduct new drug discovery strategies and improve the success rate of delivering new, better targeted therapeutic solutions.

BioKnowledge Discovery

Leverage a global knowledge compendium through an intuitive navigation experience and unique scientific referential integrating heterogeneous biological database content. Based on the 3DEXPERIENCE® platform, the collaborative environment enables multisite research project management and increases external ecosystem collaboration.



Leverage global scientific knowledge through an intuitive navigation experience and a unique enterprise-consistent scientific compendium.

BioSystems Drug Modeling

Collaborative modeling of biological systems (from pathways to cells to organs) enabling capitalization of proprietary biological hypotheses across drug discovery and development.

BioSystems Drug Simulation

Global solution for calibration, simulation and analysis of biological systems to identify the most appropriate therapeutic strategies; opening new frontiers in understanding complex diseases.



Make earlier and more informed Go/No-Go decisions on a lead compound thanks to mechanistic analysis and simulation.

Drug Efficacy

Predict drug efficacy by quantitatively simulating the evolution of biological endpoints based on systems biology to understand and leverage your experimental data. Model the physiologically based pharmacokinetics of your leading drug and help you design the clinical trial that will reveal the best efficacy.

Drug Safety

Predict drug efficacy by quantitatively simulating the evolution of biological endpoints based on systems biology to understand and leverage your experimental data. Model the physiologically based pharmacokinetics of your leading drug and help you design the clinical trial that will reveal the best efficacy.

Clinical Trial Simulation

Design more informative clinical trials through pharmacokinetics & pharmacodynamics simulations. An Intuitive and graphical pharmacokinetic and pharmacodynamics modeling experience enables drug efficacy-safety balance predictability at the population level to design of more effective clinical trials.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE**® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.





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