

Metabasis Therapeutics speeds time to market for important disease therapies with dynamic CADD technology running on a powerful IBM supercomputer.

Overview

Metabasis Therapeutics, Inc.
San Diego, CA, United States
www.mbasis.com

Industry

- Life Sciences

Products and services

- IBM System p5 575 server
- IBM AIX V5.3 operating system



“Leveraging powerful IBM technology positions us to commercialize our unique solution, which will enhance and accelerate the drug-discovery process industrywide.”

—Metabasis Therapeutics, Inc.

Metabasis Therapeutics, Inc. (Metabasis), is a biopharmaceutical company that discovers, develops and commercializes drugs used to treat metabolic and liver diseases. The company centers its research on developing treatments for some of the most common and widespread diseases.

Challenge

Metabasis wanted to develop more accurate, easy-to-use computer-aided drug design (CADD) methods to accelerate the drug discovery process. The company developed accurate Free Energy Perturbation (FEP)-based CADD software, which improves the reliability of predictions on which drug design decisions are based—reducing the time it takes to find suitable drug candidates to evaluate in human clinical trials. But the company needed a high-performance computing environment for its FEP calculations.

Solution

Teaming with IBM, Metabasis deployed an IBM System p5[®] 575 supercomputer running the IBM AIX[®] V5.3 operating system to enhance throughput for its CADD solution and to perform numerical computations. The supercomputer’s 16 powerful processors can process certain stages of complex computations in parallel, further accelerating the drug discovery process. Metabasis has successfully used the CADD application running on the System p5 575 server to complete validation for ten structurally diverse sets of small organic molecules and for several inhibitors.

Benefits

Metabasis’s first-of-its-kind CADD solution significantly reduces drug-discovery time and costs by eliminating about 80 percent of the compounds to be synthesized and tested in the lab for a given drug target—enhancing the potential and speed of bringing the new drugs into the marketplace. With the solution, the company can facilitate better selections of candidate compounds to be synthesized and tested in the lab. Plus, Metabasis has positioned itself to commercialize the unique solution, which would enhance and accelerate the drug discovery process industrywide.



© Copyright IBM Corporation 2008

IBM Corporation
1 New Orchard Road
Armonk, NY 10504
U.S.A.

Produced in the United States of America
November 2008
All Rights Reserved

IBM, the IBM logo, ibm.com, AIX and System p5 are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at ibm.com/legal/copytrade.shtml

Other company, product and service names may be trademarks or service marks of others.

The information contained in this documentation is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this documentation, it is provided "as is" without warranty of any kind, express or implied. In addition, this information is based on IBM's current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this documentation or any other documentation. Nothing contained in this documentation is intended to, nor shall have the effect of, creating any warranties or representations from IBM (or its suppliers or licensors), or altering the terms and conditions of the applicable license agreement governing the use of IBM software.

This document illustrates how one organization uses IBM products. Many factors have contributed to the results and benefits described; IBM does not guarantee comparable results elsewhere.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.