

Profiles of Excellence

SCIOS INC.

Scios Inc., a pioneer in developing therapeutics for patients with acutely decompensated heart failure, also is dedicated to bringing novel treatments to patients with serious unmet medical needs. The Fremont, California-based bio-pharmaceutical (a Johnson & Johnson company) is leading its industry in identifying a new generation of small molecule, protein kinase pharmaceuticals. Its R&D process is becoming more closely tightly integrated with the unique needs of patients around the world. Dr. George Schreiner, president, Scios Research & Development explains, "We are an unusual amalgam of research and product development."

Researchers at Scios were the first in the world to discover B-type natriuretic peptide (hBNP) and develop it into NATRECOR® (nesiritide) as an effective therapy for patients with acutely decompensated heart failure. In 2001, NATRECOR® became the first therapy since 1987 to be approved by the FDA for the treatment of patients with this debilitating cardiac condition. It has since become a leading treatment option and commercial success for patients with acute congestive heart failure. "As a result of our accomplishments with this product, Scios is the Johnson & Johnson cardiovascular center of excellence," explains Schreiner.

With the undeniable success of its unique, patient-centric R&D approach, Scios is searching for novel therapies for major disease targets such as inflammatory disease and cancer. "Consequently, we find ourselves at the forefront of several competitive areas of drug development."

Jim Mitchell, president, Scios Inc., proudly describes his firm's recent growth. "It's been phenomenal," he

exclaims. "In the midst of challenging economic times, we have been able to fill many positions during the past 12-18 months." About 700 of its 1,000 employees are based at its headquarters.



Art and Science: Fully Integrated Research and Development

The organization's *modus operandi* is "not to separate researchers and doctors into silos" based on their specialties. "We are fully integrated from square one," insists Schreiner. Currently, it is focusing on completing phase II trials for the largest clinical examination of p38 kinase, an emerging family of therapeutic targets functioning as control switches in a number of cellular capacities. This makes them especially promising candidates for novel therapeutics treating a broad array of diseases.

Relying on the latest advances in disease-based gene array, bioinformatics and computational chemistry, we have produced a "library" of kinase inhibitors. Starting with a target discovery and with validation, Scios exploits the latest in information technology in its high-speed screening system. This way, researchers can readily sift through two to three million molecules.

Schreiner says, "Our understanding of enzyme pockets is refined in an iterative process." "Computer-based

systems model accurately proteins of greatest potential value to us," Scientists closely examine "virtual proteins" and "focus on potential solutions with breathtaking speed" — thanks to sophisticated docking algorithms and associated robotics systems. For instance, robot-based high-throughput assays are instrumental in the discovery and refinement of their leading drug candidates. "We then create a real working proof of concept, modeling our results "in silica," and compare this against "virtual crystal," explains Schreiner. Finally, leading drug candidates are promoted into the drug development pipeline commencing with human clinical trials.

The firm's vision is to develop drugs with the potential to truly revolutionize global disease management, rather than for their commercial value in the U.S. Scios is working to further study NATRECOR® in heart failure patients outside of the U.S. It has the latitude to advance its own critical imperatives — quite unique in its industry. This approach offers the flexibility to efficiently advance new ideas — not just within the confines of their state-of-the-art labs. Clearly, the firm excels both in research and in doing whatever it takes to help people afflicted with critical diseases. ■

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