

# Billion dollar baby

By Ken McConnellogue

Cooperation among faculty on CU's three campuses is not that unusual, but seldom is the result as dramatic as when drug maker Gilead bought CU biotech startup Myogen in October for \$2.5 billion in cash.

Gilead, maker of the world's best-selling AIDS medicine, will bring to market drug therapies that will improve and, in some cases, save the lives of hundreds of thousands of people around the world suffering from cardiovascular disease.

"The potential is huge," says Michael Bristow, Myogen's principal founder, chief science and medical officer and professor of medicine at CU's Health Sciences Center.

Myogen's potential first emerged from research and clinical trials by Bristow and CU-Boulder's Leslie Leinwand at the intercampus Colorado Cardiovascular Institute. They examined cardiopulmonary hypertension — abnormally high blood pressure in the arteries of the lungs that leads to damage of the heart's right ventricle. It affects an estimated 200,000 people worldwide (more women than men) and is growing at a rate of 5,000 new diagnoses annually.

When some of their work on drugs addressing heart disease showed potential for the marketplace, they formed a commercial arm of the institute, which became Myogen in 1996. They were successful in attracting venture capital to further develop three promising drug compounds.

"Discovery is like a tree falling in the forest," Bristow says. "You can't stay in the laboratory and discover for its own sake."

With initial venture capital in place and a solid management team led by William Freytag, Myogen continued with the painstaking process of drug development.

"You need to have multiple shots on goal and they need to be scoring opportunities, not blind shots from the blue line," Bristow told a radio interviewer. One drug was wide of the mark, but two others — Ambrisentan and Darusentan — showed significant promise in treating two versions of pulmonary hypertension during an aggressive drug development program. Ambrisentan treats

patients with pulmonary arterial hypertension and Darusentan treats patients with resistant hypertension.

According to the *Denver Post*, market-research firm Datamonitor expects global sales of drugs treating pulmonary arterial hypertension to grow from \$636 million in 2004 to \$2 billion by 2014. Combined sales of the drugs nurtured at Myogen, which Bristow says are a significant improvement over what's now on the market, could eventually top \$1 billion annually.

Leinwand, who holds a joint appointment in biology and cardiology at CU-Boulder and the Health Sciences Center, says part of the company's success traces back to the cross-fertilization between the campuses. "We benefit from multiple levels of expertise, and the distance is nothing," she says of the 30 miles between Boulder and Denver campuses.

In addition to the educational, economic and societal benefits, the state of Colorado also wins from the successes of companies such as Myogen, Leinwand says. The roughly 250 biotech companies in the state provide some \$415 million annually to Colorado's economy, employ thousands of people and contribute to improving health care and lifestyle. Westminster-based Myogen, now Gilead of Colorado, employs about 170 people.

"There's the huge value of the university as a creative economic engine," Bristow says. "Success like this is incentive for others to model."

And Myogen's success also changes perceptions of the university. Ranked 13th among the nation's universities in licensing income in 2005 (just behind Harvard), CU is now recognized as a biotech hub.

"There's a new respect across the country when you walk into a room," he says. "People realize you don't have to be in Boston or Silicon Valley to be successful." 🐻

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