Repligen, once a strongly focused therapeutics firm, has transformed itself into a bioprocess products company in only a few years’ time. As the company’s former COO Tony J. Hunt takes the helm as president and CEO after the May retirement of Walter C. Herlihy, Ph.D., that transformation will continue with the introduction of new products and new geographies.

The growth of the affinity ligand market has been central to Repligen’s evolution. “The affinity ligand business has been very strong,” Dr. Herlihy says, citing double-digit growth in the legacy monoclonal antibodies (mAbs) market as well as a robust inventory of products likely to be approved this year and some 350 still in clinical trials. “We benefit from all that. It’s a very healthy market.”

The transformation was driven by a confluence of forces, according to Dr. Herlihy. “For over a decade, we had operated under a dual business model that included both drug development and Protein A production. In 2010, we were seeking sponsorship on Wall Street, and it was difficult to find analysts who understood both sides of the business. To unlock the value of our assets, we had to bet on one side of the house. At the time, it wasn’t clear which.”

Then, late in 2011, Repligen acquired the Swedish division of Novozymes Biopharma (renamed Repligen Sweden). While Repligen was a leading manufacturer of recombinant forms for Protein A, Novozymes was the leading manufacturer of native forms of the molecule. At about the same time, Repligen had submitted its first NDA for potential FDA approval of its lead drug candidate. Early in 2012, the FDA
asked for more pivotal clinical data, which would require additional Phase III trials and delay revenue for two to three years. The course of action became clear.

In August 2012, Repligen announced its decision to divest its therapeutic assets and zero in on building its bioprocess products business.

**Bioprocess Products**

Repligen has produced Protein A since the mid-1980s and has strong partners in chromatography media manufacturers, including GE Healthcare and Merck Millipore. “We make seven different Protein A ligands,” Dr. Herlihy says. Some are proprietary to Repligen, and others are made on behalf of clients.

Repligen has expanded its product portfolio to include a pre-packed chromatography line, OPUS® (the acronym for “open platform, user specified”), for use in downstream processing, as well as growth factors and a filtration system sold under the ATF brand in upstream applications.

In March, Repligen extended its OPUS line with a 60 cm diameter, pre-packed chromatography column. OPUS comes in a variety of internal diameter sizes, from 1.2 cm up to the 60 cm column. Customers may order OPUS pre-packed with their choice of media and any bed height.

The ATF (alternating tangential flow) system, which Repligen acquired in June 2014, reportedly dramatically improves upstream cell concentrations and product yields. “It’s used primarily in perfusion processes, but during the past few years has expanded into process intensification applications such as concentrated fed-batches and seed-train expansion,” Tony Hunt tells GEN. “We are selling the stainless steel ATF systems currently and plan to launch single-use ATF products during the second half of this year.”

Repligen also manufacturers LONG® R1 IGF-I growth factors to improve cell culture productivity and, when paired with the ATF System, to increase upstream yield. Its growth factor products are sold through a long-term distribution agreement with Sigma-Aldrich, which includes co-promotion rights for Repligen.

**Industry Transitions**

“The industry has changed tremendously in the past few years,” Hunt says. As bioprocessing systems become increasingly productive, manufacturers are considering new paradigms to leverage their investments and connect their operations.

For example, drug developers are investing in high-intensity manufacturing procedures that increase bioprocessing yields, thus maximizing existing facilities’ productivity. Many are adopting single-use bioprocessing systems to enable them to more easily change production lines. Within five to seven years, Hunt predicts, continuous processing will move from upstream applications to downstream implementation.

“These transitions to continuous manufacturing will happen slowly, over a number of years,” adds Dr. Herlihy. “There’s a large installed base of biomanufacturing facilities that cost hundreds of millions of dollars to build and that are fully depreciated. Customers are motivated to make the most of those investments.”

**Balancing the Portfolio**

Like the industry, “We’re on a journey,” Hunt says. “The transition that began with doubling our Protein A manufacturing in 2011 has continued with the addition of products sold directly to end users—OPUS, ATF, and growth factors—that allow us to have more direct connections with our customers. We are building a balanced portfolio upstream and downstream.”

To further the company’s growth, “We aim to balance our in-house product development with strategic acquisitions that will allow us to continue to capture a reasonable amount of our addressable market,” Hunt says. Repligen is open to acquiring products or companies “that fit our vision of where bioprocessing is going and that provide efficiency gains or the opportunity for geographic or market expansion.”

“We have a robust R&D effort with three product launches in 2015 and others on the drawing boards,” notes Dr. Herlihy.

**Expansion**

Repligen completed an 11,000 square foot manufacturing expansion earlier this year and previously had added 20,000 square feet of office and administration space. The additions integrate all ATF and OPUS manufacturing into the Massachusetts facility. The organization also expanded into Europe and, recently, entered China, India, and Korea. As Hunt says, “We have more feet on the street, more products, and more geographies than two years ago.”

That growth is reflected in its revenues, which have grown from about $17 million in 2011 to more than $60 million in 2014. This year’s figures are expected to be in the range of $75 to $78 million.