



good chemistry.™

OPXBIO is “good chemistry.” Our biochemistry is leading edge. We apply our science and technology to create bio-based products that are a good value for our customers and good for the value of our company. Good chemistry characterizes our strategic partnerships, as well as the culture of our high-performing team. And we are inspired to create a more sustainable bio-based economy for the good of our environment.

## OPX Biotechnologies, Inc.

OPXBIO is a Colorado-based company using its proprietary, leading EDGE™ (Efficiency Directed Genome Engineering) technology to manufacture renewable bio-based chemicals and fuels that are lower cost, higher return and more sustainable than existing petroleum-based products.

With unprecedented speed and capital efficiency, in just 18 months OPXBIO developed and piloted the microbe and bioprocess that will produce its first renewable chemical product—BioAcrylic—at 25 percent lower cost than petro-acrylic and with a 75 percent reduction in greenhouse gas emissions. Today’s petro-acrylic has an \$8 billion global market in applications such as paints, adhesives, diapers and detergents. In 2011, OPXBIO began collaborating with The Dow Chemical Company to develop an industrial-scale process for producing BioAcrylic. OPXBIO anticipates full commercialization within three to five years.

The company’s second product is diesel fuel bio-processed from carbon dioxide and hydrogen. The U.S. Department of Energy has awarded OPXBIO \$6 million to support this development.

OPXBIO was founded in 2007. Investors supporting the company include Mohr Davidow Ventures, Braemar Energy Ventures, Altira Group and X/Seed Capital.

## Contact Us

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## Dow and OPXBIO Collaborating on Renewable Route to Acrylic Acid

*Companies Focus on Commercial Viability of Production Process Using Renewable Feed Stocks*

## Management Team

**Charles R. (Chas) Eggert**

**President and CEO**

Chas is applying more than 30 years of experience in the global specialty-chemical industry to the leadership of OPXBIO. Prior to joining OPXBIO in September 2008, Chas was president of the Specialty Polymers Group, a \$500 million revenue division of Akzo Nobel. Earlier, he held top management responsibility for the Food Ingredients - Europe and global Personal Care business units of ICI prior to the acquisition of ICI by Akzo Nobel. While at ICI, he was a board director of the American Chemistry Council. Chas began his career with Monsanto Company, progressing through roles in technology, manufacturing, business development, marketing, and general management. His work at Monsanto included an assignment as vice president of Monsanto Venture Capital. Chas is a board director of the Biotechnology Industry Organization (BIO), as well as a founding director and vice chairman of the Colorado Cleantech Industry Association. Chas earned an MBA in marketing and finance from Washington University in St. Louis and an M.S. in biochemical engineering from the University of Minnesota. He also holds a B.S. in chemical engineering from Washington University.

**Michael D. (Mike) Lynch, M.D., Ph.D.**

**Chief Scientific Officer and Co-Founder**

Mike received an A.B. in anthropology as well as a B.S. and M.S. in biomedical engineering from Washington University in St. Louis, followed by a Ph.D. in chemical and biological engineering from the University of Colorado in 2005 and an M.D. from the University of Colorado Health Sciences Center in 2007. Mike has nearly a decade of research experience in the life sciences, including the fields of molecular biology, protein thermodynamics, microbiology, and metabolic engineering, and is the primary inventor behind OPXBIO's platform technologies.

**Daniel W. (Dan) Muehl**

**Chief Financial Officer**

Dan joined OPXBIO in June 2010 with more than 25 years of financial management experience including CFO roles at four publicly traded technology growth companies. At OPXBIO he is applying his expertise in finance and operations management, strategic partnering, financing, investor relations, compliance, and mergers and acquisitions to accelerate the company's progress toward commercialization of bio-based chemicals. Prior to joining OPXBIO, Dan was vice president of finance at the bio-pharmaceutical company Pharmion. Dan served as CFO at the biotechnology company Repligen Corporation from 2006 to 2007 and as CFO at the medical device manufacturer Physiometrix Inc. from 1998 to 2005. From 1995 to 1998 Dan was CFO and chief operating officer at computer graphics design and manufacturing company Number Nine Visual Technology. Dan began his career in public accounting at Ernst & Young and Laventhol & Horwath. He holds a B.S. in accounting from the University of Massachusetts-Amherst and received his CPA certification in 1990.

**Michael J. (Mike) Rosenberg**

**Vice President, Business Development**

Mike joined OPXBIO in December 2009 with more than 24 years of experience in the energy, alternative energy, and environmental industries. Most recently, Mike was vice president - business development at Evergreen Energy, a cleaner coal technology company. From 1998 to 2008, he held senior management positions at the leading hydrogen fuel cell company, Ballard Power Systems, including director - corporate development and strategy, director - business development, and business director - material handling. While at Ballard, he helped form Chrysalix Energy Limited Partnership, a leading venture capital firm in the cleantech industry. Prior to Ballard, Mike was senior treasury manager with Genentech, Inc., and held various positions in finance, environmental project management, and engineering with McKesson Corporation and ExxonMobil Company USA. Mike earned an MBA degree from the Haas School of Business at the University of California, Berkeley, and he holds a B.S. degree in chemical and petroleum refining engineering from the Colorado School of Mines.

**Stephen P. (Steve) Toon, Ph.D.**

**Vice President, Engineering and Operations**

Steve joined OPXBIO in February 2009 with more than 20 years of experience in industrial bioprocess development, commercialization, and operations. From 2006 to 2008, Steve was vice president - manufacturing and engineering, at cellulosic-ethanol and enzyme producer Verenium. Prior to joining Verenium, he worked for 10 years at Cargill as the principal scientist responsible for process development and commercialization of three bioproducts: erythritol, lysine, and polylactic acid polymer. Steve was a scientist and fellow focused on bioproduction of renewable fuels from algae and cellulose at the National Renewable Energy Lab from 1987 to 1996, during which time he also completed a Ph.D. in biology at the University of Denver. Steve earned M.S. and B.S. degrees in botany and microbiology from the University of Arkansas.

