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Iogen's CEO Brian Foody Receives Raphael Katzen Award at 39th Symposium on Biotechnology for Fuels and Chemicals

Ottawa, ON – Iogen Corporation CEO, Brian Foody, was honoured on Thursday at the 39th Symposium on Biotechnology for Fuels and Chemicals in San Francisco, with the 2017 Raphael Katzen Award. Leading Iogen for more than 30 years, Brian Foody maintained a focus on cellulosic biofuels, driving ground-breaking innovation, forging partnerships, and building profitable related businesses. He has navigated through the risky business of developing and commercializing second-generation advanced biofuels, building and operating the world's first integrated cellulosic ethanol demonstration plant, and ultimately implementing the technology with Raizen Energia in Brazil in a 10 million gallon per year facility that is now successfully producing cellulosic ethanol from bagasse – the waste from sugar cane processing.

He is the second Foody to be so honoured and the only second generation honouree. Patrick Foody Sr., an original cellulosic ethanol pioneer, received the Raphael Katzen Award in 2011 for his lifetime achievement in the commercialization of biofuels.

“My father was a visionary entrepreneur with a tenacious drive to do great things”, said Brian Foody. “I am honoured to be celebrated by industry peers with the same award he received.”

“Brian Foody has been at the forefront of the cellulosic biofuel industry for decades. It is a monumental task to develop and commercially implement a new energy technology, yet it is also a vital one given the major potential impact on greenhouse gas emissions. I've seen first-hand Brian's creativity, determination, and leadership, and I am thrilled to see he is being recognized for his achievements in this important field”, said Clive Mather, former President & CEO of Shell Canada, and chairman of Iogen.

Beyond its success in cellulosic ethanol, Iogen developed a successful specialty enzyme business making the key catalysts used in its cellulosic ethanol process. After more than 20 years of profitable operations, in 2013, Iogen sold that business to Novozymes, the largest enzyme company in the world. Recently, Iogen developed a new cellulosic biofuel process which converts biogas into renewable content in conventional gasoline and diesel using existing refineries. Biogas is produced from landfills, waste treatment plants, and cellulosic ethanol facilities. Iogen is now a significant player in the biogas-to-fuels business, its second cellulosic biofuels business.

About the Raphael Katzen Award

Initiated in 2008, the Raphael Katzen Award recognizes individuals who have made distinguished contributions to enable and further the deployment and commercialization of biotechnology to produce fuels and chemicals from renewable resources. This award is named in honor of Dr. Raphael Katzen, a pioneer in scaling up and commercializing technologies for converting renewable feedstocks into fuels and chemicals. Since the 1940s, when he first began working on converting wood waste to ethanol, Dr. Katzen played a



major role in developing and improving corn dry milling technologies and in continuing to advance commercialization of lignocellulose conversion technologies.

The Raphael Katzen Award is presented at the Symposium on Biotechnology for Fuels and Chemicals. The nominee must have made substantial contributions to the development of commercial biotechnology for the production of fuels and chemicals from renewable resources. These contributions should be of exceptional merit, reflecting significant advancements in technology or commercial practices leading toward implementation. Activities such as fundamental research, publications, journal editing, organizing and chairing conferences, and serving scientific societies in official capacities may be considered, but the most important factor in selecting an awardee will be accomplishments in commercialization. The recipient of the Raphael Katzen Award will receive a plaque and complimentary registration for three successive annual meetings of the Symposium.

About Iogen Corporation

Iogen is a leader in developing technology to make clean burning, renewable cellulosic biofuels from the non-food portion of plants. These fuels could replace over 30% of U.S. petroleum, developing domestic jobs, and reducing greenhouse gas emissions by up to 90% compared to gasoline. Iogen has been active in the field for over 35 years; invested roughly \$500 million in research, development and demonstration; and have over 300 issued and pending patents. In partnership with Raizen Energia in Brazil, the company built and successfully started up a fully commercial cellulosic ethanol facility. Iogen recently developed a new approach to convert biogas into renewable content in conventional gasoline and diesel fuel. This new approach has tremendous potential as a “drop-in” cellulosic biofuel.