

ICIS Innovation Award Winners, Renmatix and Virent, Announce Collaboration On Bio-based Packaging

New Routes in Sustainable Chemistry Aim to Deliver Broader Supplies of Affordable Bioplastics

LONDON—[December 6, 2013](#)—ICIS Innovation Awards—At today’s ICIS Innovation Awards in London, winners Renmatix and Virent announced a strategic collaboration to convert affordable cellulosic sugars to renewable chemicals and bio-based packaging materials.

Under the terms of the multi-phase development project, Renmatix’s Plantrose™ platform will be evaluated and potentially optimized to provide an affordable sugar stream for Virent’s Bioforming® process for the large-scale production of bio-based paraxylene. Paraxylene is a basic raw material used in the manufacture of purified terephthalic acid (PTA), an important chemical in the production of plastic bottles and fibers made from polyethylene terephthalate (PET). Integrating local feedstock processing with on-site commercial production will lower costs and increase the viability of using renewable chemicals in bio-based packaging and plastics for industrial and consumer goods.

Selected by ICIS as the Best Innovation by a small to mid-sized enterprise, Renmatix’s Plantrose™ process produces affordable cellulosic sugars as the bridge between upstream biomass and downstream plant-based chemicals. An alternative to current petro-based materials, Renmatix’s C5 (xylose) and C6 (glucose) Plantro® sugars are produced by an advanced water-based method known as supercritical hydrolysis. In lieu of more expensive chemical and enzymatic routes to cellulosic sugar that are still in use today, Plantrose leverages supercritical hydrolysis to economically convert a range of renewable global feedstocks into the bio-based building blocks that can be used in everyday products like paints, diapers, laundry detergent, or bottles and other types of plastic packaging.

“Products derived from renewable resources are in great demand and that demand is driving significant change across conventional value chains. This recognition from ICIS reinforces that sustainable technologies, which were once the seed of a meaningful shift have grown to become an industry mandate,” said Mike Hamilton, CEO of Renmatix. “Working with the right partners, like Virent, on the common goal of providing scalable solutions with affordable economics, we are pioneering the bio-based value chains that can meet those needs.”

Virent’s bio-based paraxylene product, trademarked BioFormPX™, won this year’s ICIS award for Best Innovation for Sustainability. Virent’s BioFormPX is chemically identical to paraxylene made from petroleum and allows manufacturers to offer customers 100% bio-based PET packaging, fibers and films. Virent and The Coca-Cola Company entered into a strategic partnership in 2011 to accelerate the commercialization of 100% renewable, recyclable PlantBottle® packaging.

"Our focus is on helping to advance breakthrough bio-plastic technologies we believe can be scaled and sustained," said Scott Vitters, General Manager, PlantBottle Packaging Innovation Platform, The Coca-Cola Company. "The potential of combining Renmatix’s innovative

cellulosic feedstock technology with Virent’s bio-based paraxylene process offers a promising pathway for further realizing our PlantBottle packaging goals.”

“The market growth for sustainable products will be met by innovative technologies working in partnership with the world’s leading brands” said Lee Edwards, CEO of Virent. “The joint collaboration announced today between Virent and Renmatix in support of Coca-Cola’s PlantBottle goals demonstrates the promise of this vision. Together we aim to accelerate delivery of commercial volumes of renewable chemicals by integrating our world class technologies to achieve lower costs and higher efficiency from sustainable biomass based feedstocks. We are delighted and proud to be recognized by ICIS, along with Renmatix, in this years’ awards.”

About Renmatix

Renmatix is the leading technology licensor for the conversion of biomass into cellulosic sugar, an enabling feedstock for petroleum alternatives used in the global biochemical and biofuels markets. The company's proprietary Plantrose™ process challenges conventional sugar economics by cheaply converting cellulosic biomass – from wood waste to agricultural residue – into useful, cost-effective sugars. Renmatix's supercritical hydrolysis technology deconstructs non-food biomass an order of magnitude faster than other processes and enhances its cost advantage by using no significant consumables. Renmatix is privately held, with operations in Georgia (USA) currently capable of converting three dry tons of cellulosic biomass to Plantro® sugar per day, and a world-class technical center in Pennsylvania (USA). For more information, visit www.renmatix.com.

About Virent

Virent is replacing crude oil by creating the chemicals and fuels the world demands using a wide range of naturally-occurring, renewable resources. Its patented technology features catalytic chemistry to convert plant-based materials into a full range of products identical to those made from petroleum, including gasoline, diesel, jet fuel, and chemicals for plastics and fibers. The products are drop-in replacements that enable full utilization of existing logistics infrastructure without blending limitations. The development of Virent’s BioForming® technology platform is supported through strategic partners including Cargill, The Coca-Cola Company, Honda and Shell, as well as 80 employees based in Madison, Wisconsin. The company has received several grants from the U.S. Departments of Commerce, Energy and Agriculture and has been recognized with many honors, including the World Economic Forum Technology Pioneer award and the EPA’s Presidential Green Chemistry Challenge Award. Please learn more at www.Virent.com.

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