Stay Connected

INVISTA™

Language | Suppliers | Careers | Newsroom | Contact Us | Search

Inside INVISTA   Products   Sustainability

▼ **News Releases**

Growth

Innovation & New Products

Environment, Health and Safety

Community and Events

Downloads & Links

Leadership

Media Contacts

► INVISTA in the News

INVISTA and LanzaTech make breakthrough for bio-derived butadiene production

Share

WICHITA, Kan. - Dec. 1, 2015 - INVISTA and LanzaTech have developed a metabolic 'toolkit' that has been successfully applied to generate novel metabolic pathways to bio-derived butadiene and key precursors, such as 1,3 butanediol and 2,3 butanediol, resulting in new direct and 2-step processes for butadiene utilizing gas-fermentation technology.

A metabolic toolkit integrates detailed knowledge about a bacterium's genetic configuration with the tools to precisely customize that configuration in order to make a particular product, together with a model to accurately predict the performance of the bacterium. This work is in an early stage of development with an aim to commercialize within the next several years.

Butadiene, a key intermediate chemical used in the production of synthetic rubber and various plastics, is used by INVISTA in its proprietary, butadiene-based adiponitrile (ADN) production technologies. ADN is a critical intermediate chemical used in the manufacture of nylon 6,6.

"This development underscores the progress made on butadiene production via gas-fermentation technology as a result of INVISTA's collaboration with LanzaTech," said Bill Greenfield, president of INVISTA's Intermediates business. "While we are still early in the process, we are encouraged by this breakthrough. Our ongoing collaboration will continue to leverage the strong biotechnology capabilities of both LanzaTech and INVISTA."

This breakthrough highlights the value a metabolic toolkit can bring in developing new pathways for bio-based and bio-derived chemical production. According to Jennifer Holmgren, CEO of LanzaTech, "The work with INVISTA represents a significant step in integrating the chemicals supply chain into a circular economy model. By utilizing waste

carbon resources, we are decoupling the production of butadiene from today's commodity feedstocks."

INVISTA believes biotechnology has the potential to significantly improve the cost and availability of several chemicals and raw materials that are used to produce its current products. It views gas fermentation as a key enabling technology that will allow the use of potentially advantaged gas feedstocks, such as waste industrial gases including carbon monoxide and carbon dioxide.

INVISTA and LanzaTech first announced their gas fermentation collaboration efforts in 2012.

About LanzaTech

LanzaTech's proprietary gas fermentation technology provides an economic route to fuels and high-value chemicals by recycling waste carbon streams. LanzaTech's solutions mitigate carbon emissions while displacing fossil resources needed for fuel and chemical production. Founded in New Zealand, LanzaTech has raised more than US$200 million from investors including Khosla Ventures, K1W1, Qiming Venture Partners, Malaysian Life Sciences Capital Fund, Petronas, Mitsui, Primetals, China International Capital Corp, Suncor and the New Zealand Superannuation Fund. For more information about LanzaTech please visit: http://www.lanzatech.com.

About INVISTA

With leading brands including LYCRA®, COOLMAX®, CORDURA®, STAINMASTER® and ANTRON®, INVISTA is one of the world's largest integrated producers of chemical intermediates, polymers and fibers. The company's advantaged technologies for nylon, spandex and polyester are used to produce clothing, carpet, car parts and countless other everyday products. Headquartered in the United States, INVISTA operates in more than 20 countries and has about 10,000 employees. For more information, visit INVISTA.com, Facebook.com/INVISTAglobal and Twitter.com/INVISTA.

Kim Conlee	Freya Burton
INVISTA	LanzaTech
+1 316-828-1647	+1 630-347-8054
Kim.Conlee@INVISTA.com	Freya@LanzaTech.com