

FOR IMMEDIATE RELEASE

zuChem and Quianyan Alloy Materials Announce "NaturSweet Natural Products" Partnership for Production and Marketing of Bio-based Xylitol

July 17, 2018 (Chicago, IL) – zuChem Inc. and Quianyan Alloy Materials (QAM) announced today the formation of a strategic partnership combining zuChem's xylitol technology platform with QAM's expertise in process development and manufacturing of bio-based specialty products. Under the agreement, the combined expertise of the companies will produce a proprietary bio-sourced xylitol at a greenfield manufacturing facility in China. The construction of the facility was overseen by QAM.

The technology has been successfully scaled-up and the facility is expected to begin delivery of product to customers by Q4 2018. The xylitol produced at the facility will be sold and marketed as a natural food ingredient exclusively through the newly formed NaturSweet™ Natural Products LLC, a Joint Venture between the parties. The initial plan is to produce up to 20,000 MT of xylitol per year when the plant is at full capacity.

"Our partnership with zuChem enables us to combine zuChem's unique biotechnology with QAM's processes development skills and China's low capital and labor costs to introduce a new production source of xylitol with competitive economics and the quality, service and business practices of the west. We believe that we will become the leader in xylitol production," said Dr. Liqun Yu, President of QAM.

"We are thrilled to be creating NaturSweet and working with QAM to deliver this new natural xylitol product to the market" said David Demirjian, CEO of zuChem.

"The QAM team has an excellent track record of bringing new fermentation-based products to market. Dr. Yu and his team have been able to deliver a first-class manufacturing facility for production of xylitol."

The zuChem technology is being implemented at a time when the market demand for xylitol is at an all-time high. Xylitol is a naturally occurring sweetener, contributing about 30% fewer calories than sucrose. Xylitol is primarily used by the confectionary and dental hygiene industries, and is considered the sweetener of choice in sugar-free gums in Asia and Europe. It has been gaining in popularity in the US and North America, but is subject to availability issues and price variability due to shortages of the current raw material used for its manufacture by chemical hydrogenation. The new bioprocess combining zuChem and QAM's technologies and process development skills alleviates these constraints and will open the market for the development of new xylitol-containing products.

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About zuChem:

zuChem develops and commercializes innovative green, renewable manufacturing processes to produce unique carbohydrates and glycochemicals for human health and nutrition. The Company's proprietary technology platform allows it to produce a variety of specialty sweeteners, pharmaceutical intermediates, nutritional prebiotics and other industrial bioproducts using enzymatic, fermentation and synthetic biology technologies. zuChem is headquartered in Chicago, Illinois with research operations in Peoria, Illinois. For more information on zuChem's proprietary rare sugar manufacturing processes and the availability of other food ingredients, specialty chemicals and pharmaceutical intermediates, please visit www.zuchem.com.

The zuChem technology was developed in collaboration with researchers at the US Department of Agriculture and the University of Illinois. Funding for its development was provided in part by the Biotechnology Research and Development Corporation, the US Department of Energy, and the National Science Foundation.

About Quianyan Alloy Materials:

QAM is a specialty chemical and bioproduct producer that combines the low capital and labor costs of China with the quality, service and business practices of the west to provide economic, high quality, products to companies around the world.

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