



Renewable chemicals naturally designed and engineered to deliver the performance that adds value to everyday products

Jungbunzlauer and Green Biologics Partner on Bio-Based Plasticizers

Renewable Tributyl Citrate and Acetyl Tributyl Citrate is Focus of Collaboration

Ashland, Virginia and Abingdon, Oxfordshire U.K. (February 14, 2017) – [Green Biologics, Inc.](#), the U.S. subsidiary of Green Biologics Ltd., a U.K. industrial biotechnology and renewable chemicals company, announced today an exclusive collaboration with Jungbunzlauer Ladenburg GmbH, the German operating unit of [Jungbunzlauer Suisse AG](#) in Basel, Switzerland. In February 2017, Jungbunzlauer received its first shipment of 100 percent renewable BioPure™ n-butanol from Green Biologics' production facility in Little Falls, Minnesota. Jungbunzlauer aims to produce bio-based CITROFOL® BI (tributyl citrate) and bio-based CITROFOL® BII (acetyl tributyl citrate) for its customers with commercial shipments beginning next month.

"Jungbunzlauer is an outstanding collaboration partner for Green Biologics," said Timothy G. Staub, Global Vice President of Business Development for Green Biologics. "As the global leader in natural ingredients built off its core strengths in citric, lactic and gluconic acids, and xanthan gums, Jungbunzlauer has been committed to sustainability for 150 years. We are delighted to be working exclusively with Jungbunzlauer on the global introduction of bio-based citrate derivatives."

Green Biologics announced the start-up of its first commercial production facility for renewable n-butanol and acetone in December 2016, with its first bulk export shipment to Jungbunzlauer in mid-January.

"Our focus is to selectively move our renewable n-butanol and acetone into high value markets, and Jungbunzlauer is a superb technological and market-facing partner for Green Biologics, particularly in citric-based plasticizers, but in other bio-based esters as well," added Staub.

"Sustainability has been a key principle of Jungbunzlauer since our founding in 1867. With our mission "From nature to ingredients®," we believe that renewable products are essential for the future success of our customers in many evolving markets, including our CITROFOL® BI and CITROFOL® BII customers," said Hans-Peter Froschauer, Product Group Manager of Specialties at Jungbunzlauer Ladenburg GmbH. "The opportunity for bio-based plasticizers in personal care, healthcare, bio-polymers and many other industrial applications is immense and it is global. We look forward to a long and successful collaboration with Green Biologics."

Green Biologics is a member of the American Chemistry Council (ACC) and is building its new green solvents facility to meet Responsible Care™ standards. The company's n-butanol and acetone have received 100 percent bio-based, USDA BioPreferred® status.

About Green Biologics

Green Biologics Ltd (GBL) is a renewable specialty chemicals company based in Abingdon, England with a wholly owned U.S. operating company, Green Biologics Inc., based in Ashland, Virginia. GBL's *Clostridium* fermentation platform converts a wide range of sustainable feedstocks into high performance green chemicals such as n-butanol, acetone, and through chemical synthesis, derivatives of butanol and acetone used by a growing global consumer and industrial products customer base. The platform combines advanced high productivity fermentation with superior-performing proprietary *Clostridium* microbial biocatalysts and synthetic chemistry to produce a pipeline of high value green chemicals with optimal performance in downstream formulations.

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Green Biologics was named to the Global Cleantech 100 list of the top Cleantech companies in the world for 2017 and was recently named the best renewable chemical company in the U.K. in the 2016 Clean Energy Awards.

Green Biologics is transforming the global specialty chemicals market, providing its customers with products and technologies that are more sustainable and higher value than petroleum-based alternatives. For more information, visit www.greenbiologics.com.

About Jungbunzlauer

Jungbunzlauer is one of the world's leading producers of biodegradable ingredients of natural origin. We enable our customers to manufacture healthier, safer, tastier and more sustainable products. Due to continuous investments, state-of-the-art manufacturing processes and comprehensive quality management, we are able to assure outstanding product quality. Our mission "From nature to ingredients®" commits us to the protection of people and their environment.

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