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**Contact:** Michelle DiMaio  
Tetramer Technologies  
864-646-6282 ext. 232  
michelle.dimaio@tetramer.com

**Tetramer Funded by United Soybean Board to Assess the Techno-Economic Viability of Oleic Acid derived from High Oleic Soybean Oil**

**Pendleton, SC. (December 10, 2020)** – U.S. soy farmers will better understand the market for a more profitable variety of soybeans as Tetramer Technologies launches new work under United Soybean Board (USB) funding. Tetramer will investigate the effectiveness of using oleic acids from high oleic soybean oil (HOSO) to replace oleic acid(s) currently sourced from tallow, palm oil, and tall oil. In addition, Tetramer will investigate the reduced costs and reduced environmental impact that would be associated with the adoption of this U.S. grown but underutilized raw material source.

Developed by the U.S. soy industry over the last decade, specialty high oleic soybeans provide improved functional and nutritional characteristics for both oil and protein. High oleic soybean oil from these new soybeans shows improved resistance to oxidation (extended shelf life), better performance in high-temperature applications (extended fry life), and provides less saturated fat over comparable conventional oils. This innovative U.S.-grown soy product is still being optimized for use in countless other industrial applications from motor oils to shoes and asphalt.

Beyond its use as a whole oil, HOSO can be split to obtain an unsaturated fatty acid called oleic acid. Oleic acid is used in industrial applications such as surfactants, detergents, coatings, lubricants, and sealants and in personal care and cosmetic applications. While oleic acid is currently sourced from tallow, palm oil, and tall oil, the alternative use of U.S.-grown HOSO-derived oleic acid could potentially reduce transportation costs and the associated environmental impact while bolstering U.S. soy profitability.

In this USB funded techno-economic study, the value of HOSO as a viable and valuable source of oleic acid will be quantified. Cost analysis and comparison for production of HOSO derived oleic acids versus current base stocks will be performed. De-risking the technical aspects of adopting this new raw material stream for oleic acid will aid in the adoption of this U.S. product. Study results will give end-users confidence that products utilizing HOSO oleic acid will perform as well as current oleic acids and will open the door of the profitable oleic acid market space to U.S. soy farmers.

With over 50 years of combined experience in seed oil and ester modification chemistry as well as experience in the modification of seed oils for functional soaps, cosmetics, personal care applications, and lubricants, Tetramer is uniquely suited to this work. Tetramer CEO, Jeff DiMaio, said, *"I am proud that Tetramer is able to work with the United Soybean Board in this important area. U.S. soybean farmers equipped to grow this crop are ready, and the technology*

*to derive oleic acid from HOSO is ready. This study will demonstrate the higher value HOSO derived oleic acid can provide for both the farmer and the country.”*

*“The United Soybean Board is pleased to be working with Tetramer as they evaluate high oleic soybean oil derived oleic acid,” said USB farmer-director and Maryland-based high oleic soybean farmer William Layton. “HOSO is a U.S. sourced, sustainable, and highly functional raw material, and Tetramer’s work will help to demonstrate and quantify these advantages for the oleic acid market, furthering demand for U.S. soybean oil.”*

**About Tetramer:** Located near Clemson, SC, Tetramer is a materials science company dedicated to the development of new, market driven materials and transitioning those materials from the lab to the market or battlefield. Tetramer Molecular Architects develop new molecules to provide customized solutions for industry, defense and energy sectors, and new ventures. Beyond designing molecules, Tetramer develops products and manufactures materials to enable new technologies. For more information about Tetramer, visit [tetramer.com](http://tetramer.com).

**About United Soybean Board:** United Soybean Board’s 78 volunteer farmer-directors work on behalf of all U.S. soybean farmers to achieve maximum value for their soy checkoff investments. These volunteers invest and leverage checkoff funds in programs and partnerships to drive soybean innovation beyond the bushel and increase preference for U.S. soy. That preference is based on U.S. soybean meal and oil quality and the sustainability of U.S. soybean farmers. As stipulated in the federal Soybean Promotion, Research and Consumer Information Act, the USDA Agricultural Marketing Service has oversight responsibilities for USB and the soy checkoff. For more information on the United Soybean Board, visit [unitedsoybean.org](http://unitedsoybean.org).

