

Amfora Licenses Gene Editing Technology

SAN FRANCISCO—April 2, 2019— Today Amfora, a biotechnology company, announced it has reached a non-exclusive research and commercial license agreement with Corteva Agriscience™, the Agriculture Division of DowDuPont™, and the Broad Institute of MIT and Harvard. Through the agreement, Amfora will use intellectual property covering CRISPR-Cas9 and related gene editing tools to develop a portfolio of gene-edited crops with increased protein content.

Amfora is developing food and feed products with increased protein content to address growing consumer health and environmental concerns by improving crops most vital to global food security. This is crucial, because the world faces an increasingly significant shortfall in meeting the protein needs of its population due both to population growth and the increasing demand for foods high in protein including plant-based protein.

“The CRISPR-Cas9 patent estate is a proven technology that we can use to develop our products,” said Michael Lassner, Ph.D., Amfora's Chief Science Officer. “Securing this license will allow us to effectively use our proprietary technology.”

“Demand for plant-based protein is taking off and we are pleased to see our licenses support Amfora’s innovations in this exciting space,” said Neal Gutterson, Senior Vice President and Chief Technology Officer of Corteva Agriscience. “It’s another great example of CRISPR’s potential to contribute to foods that are healthier and more environmentally sustainable.”

One of the earliest opportunities Amfora is focused on is the development of high-protein feed for aquaculture. Aquaculture is unique in animal agriculture because plant feed protein is efficiently converted into an equivalent amount of fish protein. Today, fish meal is a widely-used source of feed for aquaculture, but it is unsustainable as demand for seafood continues to grow. Amfora expects to reduce the financial and environmental cost of feed for aquaculture by supplying to the aquaculture industry ultra-high protein soymeal that rivals the protein content of fish meal.

Amfora’s first food products will be high-protein wheat and high-protein rice. Wheat is a food staple grown on 530 million acres globally and rice, a staple that feeds a majority of the world’s population, is grown on 400 million acres globally. Desirable wheat baking and pasta qualities are dependent on their high protein content. In many growing regions, wheat varieties and cultural practices do not meet the protein content requirement of consumers and end users. The company’s technology increases the nutritional density of both crops. Increasing the protein content of crops, such as wheat and rice, reduces their starch content which not only provides a way to address the growing consumer demand for plant-based protein but may help control consumers’ blood sugar levels by reducing the glycemic response.

The U.S. Department of Agriculture (USDA) recently issued a statement providing clarification on plants produced through innovative new breeding techniques which include CRISPR-Cas9

genome editing techniques. Under its biotechnology regulations, USDA does not regulate or have any plans to regulate plants that could otherwise have been developed through traditional breeding techniques as long as they are not plant pests or developed using plant pests. Amfora intends to utilize this approach to optimize development costs and shorten commercialization timelines.

About Amfora

Amfora is a biotechnology company that is applying gene editing to sustainably nourish the planet. Its primary technology platform can increase the protein density of all crops. Increasing the protein density of feed crops significantly reduces the amount of feed required by livestock and farmed seafood. Increasing the protein density of food crops such as wheat and rice makes these staple crops a more complete source of nutrition. Amfora is a portfolio company of Spruce Capital Partners, a venture capital fund manager headquartered in San Francisco. More information can be found at www.amforainc.com