



September 11, 2015

DIC Group Opens DIC/Earthrise Algae Research Center in the United States

*—New facility will support active global market development efforts by
the Group, a pioneer in algae-related research —*

Tokyo, Japan— DIC Corporation today announced the opening of the DIC/Earthrise Algae Research Center, a leading edge facility that will capitalize on expertise accumulated through the production of Spirulina* for use in health foods to conduct comprehensive algae-related research in areas ranging from cultivation to practical application. Located on the site of Earthrise Nutritionals, LLC, the DIC Group's U.S. subsidiary for Spirulina production based in California, the DIC/Earthrise Algae Research Center was built with a total investment of approximately US\$1.7 million.

The world's first successful commercial producer of Spirulina, the DIC Group began cultivating the alga as a nutritional supplement began manufacturing *Linablue*^{®†}, a Spirulina-derived natural blue food coloring, in the 1970s. Since its beginning, the Group has leveraged its capabilities as a pioneer in this field to promote ongoing primary research, principally at DIC's Central Research Laboratories in Chiba Prefecture, Japan, and has worked tirelessly to build up formidable know-how in outdoor mass cultivation. Such efforts continue to underpin the Group's ability to provide high-quality food-grade Spirulina that helps ensure safety and quality for the products in which it is used and peace of mind for customers. The DIC Group has also established a two-pronged global Spirulina production configuration comprising Earthrise and a farm on Hainan Island, in the People's Republic of China, operated by Hainan DIC Microalgae Co., Ltd. The raceway ponds of the two farms together cover a total of 30 hectares, giving the Group an unmatched production capacity that has enabled it to maintain a stable supply of high-grade Spirulina for more than three decades.

In addition to the cutting edge analytical equipment, the DIC/Earthrise Algae Research Center boasts indoor and outdoor research-use raceway ponds and will conduct both elemental and applied research, with a focus that ranges from the development of algae extracts for use in health foods to the identification of efficient growing conditions for algae strains that offer promise as biofuels. Following the completion of a state-of-the-art extraction plant for *Linablue*[®], scheduled for August 2015, the facility will also conduct research aimed at improving the efficiency and enhancing the thermal stability of pigment extraction methods. The DIC/Earthrise Algae Research Center is staffed by Earthrise researchers, who boast extensive expertise in the area of mass cultivation technologies for algae, and scientists specializing in extraction technologies from DIC Japan, allowing it to benefit fully from the comprehensive capabilities of the global DIC Group.

Press Release



DIC Corporation

A multinational corporate group dedicated to providing solutions that bring color and comfort by chemistry to people's lives, the DIC Group has operations in 63 countries and territories. While it currently produces only blue natural food coloring, the Group plans to commercialize products based on other algae-derived pigments. The development of technologies for extracting the numerous other pigments that remain in the Spirulina biomass left after the blue pigment has been removed will thus position it to expand the scope of this business. The DIC/Earthrise Algae Research Center is also expected to accelerate collaboration with various external research organizations directed at commercializing algae-based biofuels and bioproducts

By maximizing the capabilities of its vanguard research facility, the DIC Group aims to reinforce its presence as a leader in the field of algae-related research, as well as its ability to provide Spirulina, *Linablue*[®] and other products that help ensure safety and quality of our food products and peace of mind for customers. Through these and other efforts, the Group will continue contributing to global sustainability.

* Packed with more than 50 vitamins and minerals, including calcium and iron, Spirulina is a nutrient-rich blue-green algae that grows naturally in lakes in Africa and Central and South America. DIC was the first company to succeed in cultivating Spirulina.

† *Linablue*[®] is a vivid blue food coloring made from phycocyanin, a blue pigment extracted from Spirulina. The U.S. Food and Drug Administration first approved the use of phycocyanin as a natural blue food coloring in 2013.

Profile of New Facility

Name: DIC/Earthrise Algae Research Center
Address: 113 E. Hooper Rd., Calipatria, California 92233, U.S.A.
Total investment: Approx. US\$1.7 million
Date of opening: June 2015

About Earthrise Nutritionals, LLC

A wholly owned subsidiary of DIC, Earthrise Nutritionals, headquartered in Irvine, California, is a Spirulina production and sales company with an annual yield of approximately 500 tons. The company's outdoor algae cultivation facility, which covers a total area of 180,000 square meters, is the world's largest. Earthrise is the only company in the continental United States to succeed in the mass cultivation of algae outdoors.

Press Release



DIC Corporation



New research facility



Outdoor research-use raceway pond

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For more information, please contact this website.

DIC Lifetec website: <http://www.dlt-spl.co.jp/business/en/spirulina/index.html>