

# News Release

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May 22, 2018

Tavelmout Corporation  
Innovation Network Corporation of Japan  
Mitsubishi Corporation  
Chitose Group

**“INCJ and Mitsubishi Corporation to Invest in Microalgae Protein Maker Tavelmout”**  
***Venture aimed at meeting rising demand for protein through mass marketing of spirulina***

- Spirulina, a protein-rich algae containing over 60 types of nutrients, figures highly among the “big superfoods”
- Tavelmout to construct new factory in Brunei Darussalam
- Venture to contribute to the diversification of sustainable protein sources and help meet growing food demand

Innovation Network Corporation of Japan (INCJ) and Mitsubishi Corporation (MC) are pleased to announce their joint investment in Tavelmout Corporation (Tavelmout) through the acceptance of a third-party allocation of shares by Tavelmout. The total investment amounts to 1.7 billion yen, evenly split between INCJ and MC.

Tavelmout is a bio-venture company established by the Chitose Group in 2014. After this capital increase, INCJ and MC will join Tavelmout as new shareholders, each with 31.43% ownership of the company. Tavelmout plans to utilize the funds raised towards the construction of a new production site in Brunei.

Algae can grow by photosynthesis alone, and due to its high productivity per unit area, is attracting attention as a vital protein source. Spirulina, with a particularly high protein content (over 65% on a dry weight basis) and nutritional value, and rich in vitamins, minerals, and fibers, figures highly among those dubbed as the “big superfoods.”

As the global population grows and dietary habits change in accordance with economic development in emerging countries, worldwide protein demand is expected to increase substantially in the future. There are forecasts of growing food demand exceeding supply, with imbalances occurring as early as 2030.

Through their participation in Tavelmout, a company aiming for mass production and global popularization of Spirulina, MC and INCJ aim to contribute to the diversification of sustainable protein sources.

### 【What is “Spirulina”】



Spirulina is one of the oldest life forms on Earth originating about 3.5 billion years ago. It has been used as a valuable nutritious source since Maya civilization and has a long history of human consumption. Spirulina is incredibly nutritious containing more than 60 kinds of nutrients. It is characterized by its high protein content among microalgal species, which makes up 65% of its dry weight. Spirulina is typically used as health foods in the form of dry powder or tablet, and is widely known as "the king of superfoods" overseas.

### 【Technologies of Tavelmout Corp.】

In addition to technologies of strain development and mass cultivation accumulated by the Chitose Group for organisms including microbes, microalgal cells, and animal cells, Tavelmout Corp. has developed a technology to process spirulina biomass, and has succeeded in developing a “Raw Spirulina” product that makes full use of the characteristics of Spirulina — highly rich in protein and nutrients. As for cultivation, in addition to the open-pond system commonly used for cultivation of microalgae, a novel, economically feasible, and scalable closed flat panel photobioreactor (PBR, an apparatus to cultivate photosynthetic organisms including microalgae) system has been developed. Protein productivity using the present PBR system is about 20 times higher than that of soybeans\*.



PBR (Photo Bio Reactor)

\*Soybeans are said to be the crop of highest protein productivity in present-day agricultural production systems.

### <Reference Information>

#### **Tavelmout Corp.**

Established : July, 2014

Headquarters : Kawasaki, Kanagawa

Representative : Toshiya Sasaki, President and Managing Director

Business overview: a biotech company established in 2014 by Chitose Group (see below) to develop cultivation technologies and new applications of Spirulina for its commercial production and marketing.

Tavelmout Corp. is one business entity of a group of biotech companies, the “Chitose Group”. Tasteless and odorless raw Spirulina are produced and commercialized using the efficient cultivation technologies developed by Chitose Laboratory Corp., which is the research entity of Chitose Group. In addition, in order to use Spirulina as a protein source in various food products, original technologies have been developed and applied for product development, commercialization, and marketing.

### **Innovation Network Corporation of Japan (INCJ)**

Headquarters : Chiyoda-ku, Tokyo

Representative : Mikihide Katsumata, President and COO

INCJ was established in July 2009 as a public-private investment company that provides financial, technological and management support for next-generation businesses. INCJ specifically supports those projects that combine technologies and varied expertise across industries and materialize open innovation. INCJ has the capacity to invest up to JPY2 trillion (approx. US\$20 billion).

INCJ's management team is drawn from the private sector with diverse experience in investment, technologies and management. Through its Innovation Network Committee, INCJ assesses investment opportunities that contribute to industrial innovation in Japan in line with criteria set by the government.

### **Mitsubishi Corporation**

Established : July, 1954

Headquarters : 3-1, Marunouchi 2-Chome, Chiyoda-Ku, Tokyo 100-8086, Japan

Representative : Takehiko Kakiuchi, President and CEO

Main Business : MC is a global integrated business enterprise that develops and operates business across virtually every industry including industrial finance, energy, metals, machinery, chemicals, foods, and environmental business.

MC has been providing a stable supply, mainly to Japan, of LNG produced in Brunei since 1972.

### **Chitose Group**

Profile of "Chitose Bio Evolution Pte. Ltd." (the operating entity of Chitose Group)

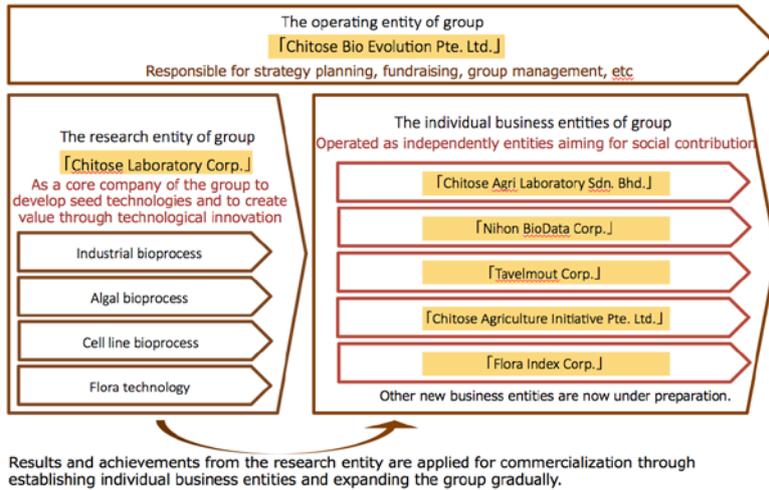
Established : October, 2011

Headquarters : Singapore

Representative : Tomohiro Fujita, Chief Executive Officer

Business overview: management supporting to group companies by providing R & D strategies, bio-related business development strategies, human resources development assistance, financial guidance and advise, and so on.

Chitose Group is a group of biotech companies devoted to leave next generations a sustainable environment where human can live abundantly up to thousands of years ahead. Our "biotechnologies to understand and manage living organisms for eliciting their maximum potentials" together with our "expertise in applying the accumulated biotechnologies for commercialization" create new values in the fields of agriculture, medical care, food, chemistry, energy and so on.



< **Inquiry Recipient** >

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## Overview of new investment decision

### **Target: Tavelmout Corporation**

**Established:** July 2014

**Headquarters:** Kawasaki, Kanagawa Prefecture

**Representative:** Toshiya Sasaki, President and Representative Director

**Business Outline:** Development of spirulina cultivation technology and its application, production and sales of spirulina related products

### **Overview of investment**

**Authorized Investment:** JPY850 million (maximum)

**Amount Invested:** JPY850 million

**Co-investors:** Mitsubishi Corporation

**Shareholding Ratio:** Chitose: 37.14%, INCJ: 31.43%, Mitsubishi Corporation: 31.43%

**Investment Structure Outline:** See Appendix

### **Significance of investment**

#### **Supporting social needs:**

- As the global population grows and dietary habits change in accordance with economic development in emerging countries, worldwide protein demand is expected to increase substantially in the future. There are forecasts of growing food demand exceeding supply, with imbalances occurring as early as 2030.
- Spirulina is protein-rich algae which has the most efficient protein production and ingestion method. By mass producing spirulina at low cost, the objective is to solve the problem of a protein shortage that faces the world in the near future.

#### **Growth potential:**

- Tavelmout has already commercialized and performed sales results of raw spirulina, a highly nutritious supplement containing an abundance of protein.
- For the future, Tavelmout aims to replace feed, fish meal and soybean with spirulina as a general purpose protein

#### **Innovation:**

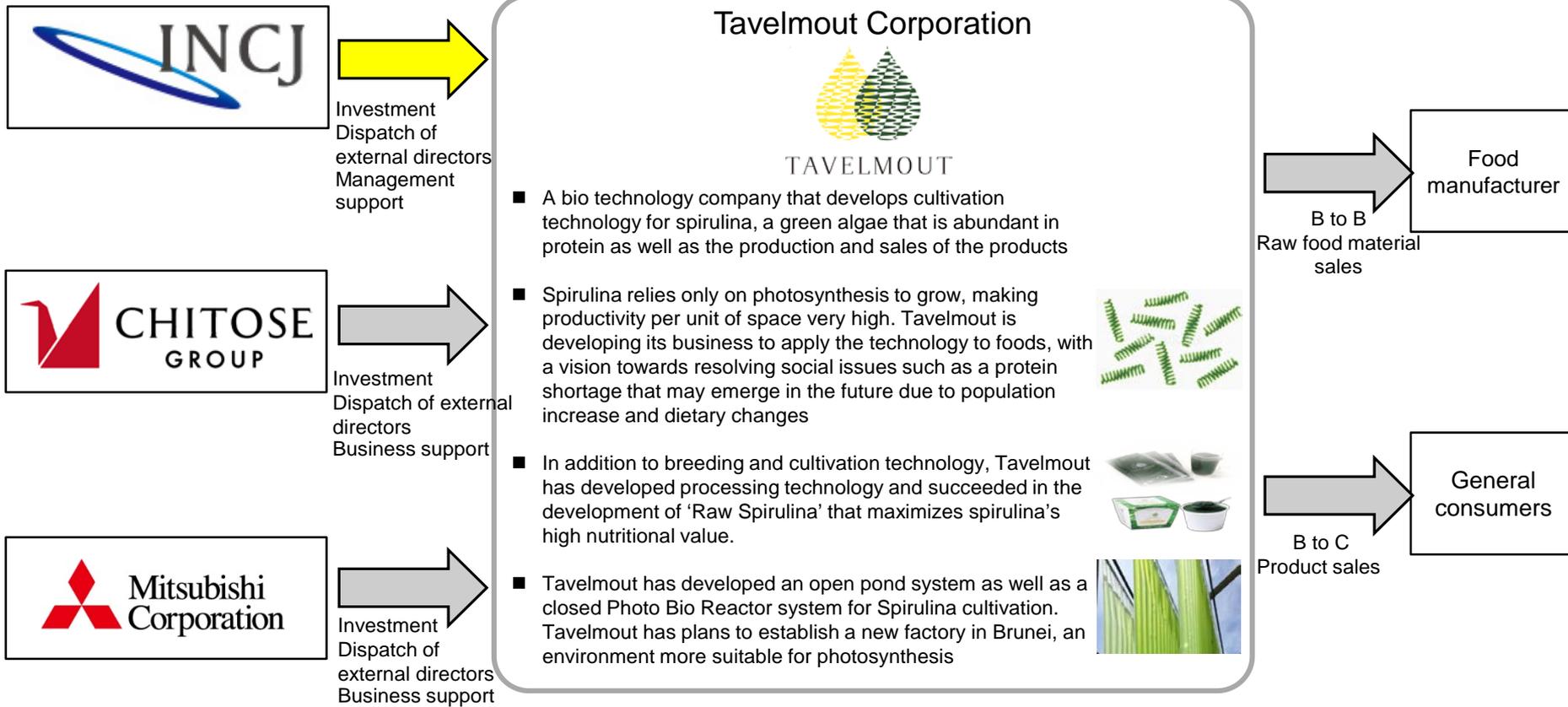
- Tavelmout has proprietary technology for breeding, cultivation and processing in the algae production process
- In terms of cultivation, Tavelmout does not use the commonly used open pond system for cultivating algae, but rather a closed Photo Bio Reactor in an environment most suited for photosynthesis, in order to achieve the highest cultivation rate
- For the processing stage, Tavelmout's discoloration and high concentration technology and algae masking technology removes both the taste and smell
- With these technologies, Tavelmout has produced raw spirulina which is easy to ingest at a high concentration for the first time in the world

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**Date of Announcement:** May 22, 2018



- Supporting the venture business growth model by accelerating open innovation between large companies and venture companies
- Contribute to resolving social issues of a protein shortage that may emerge in the future by mass producing and commercializing spirulina as a inexpensive source of protein