# euglena

**CORPORATE PROFILE** 



# The Future We Aim For

In order to realize a future where sustainability is the norm, we are committed to creating a healthier future for both people and our planet.

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<sup>\*1:</sup> Okinawan (Ishigakijima Island) dialect, literally "thank you"

<sup>\*2:</sup> Okinawan (Ishigakijima Island) dialect, literally "wellness with food and nature"

**Our Philosophy** 

# **Sustainability First**

**Purpose** 

Make People and the Earth Healthy

**Our Logo Tagline** 

Live, Enjoy and Make Life Sustainable.

# History of Euglena Co.

Let's take a look at the development of Euglena Co. in various fields.

**August** 

Foundation of Euglena Co., Ltd.

#### **December**

The world's first success in outdoor mass cultivation of edible microalgae Euglena in Ishiqaki island, Okinawa.

Outdoor mass cultivation of Euglena was difficult because it is rich in nutrients and serves as the food source for other organisms at the bottom of the food chain. Therefore, thinking from a different angle, we researched and developed an environment in which only Euglena could survive and succeeded in its outdoor mass cultivation and commercialization. We have continued the cultivation in Ishigaki island, Okinawa, since then.



## April

#### Launch of "Euglena GENKI Program"

Started to distribute Euglena cookies to children in Bangladesh who are suffering from malnutrition.

#### June

#### Signed a collaborative research contract with Isuzu Motors Ltd.

Started the Deusel® Project for the practical applications of renewable diesel fuels.

2012

2009

2014



1998

2005

## **Summer**

#### **Determination to start a business**

Mitsuru Izumo, the founder of Euglena Co, was extremely shocked by the malnutrition problem in Bangladesh. He decided to tackle the social problem through business development.

## **November**

### Sold Midorimushi (=Euglena) cookies at the National Museum of Emerging Science and Innovation (Miraikan)

Midorimushi cookies containing the microalgae Euglena were sold at the "Food of the Future" zone of the exhibition "It's a Tasty World" held at the Miraikan.

## **December**

### Listed on the Mothers market of the Tokyo Stock Exchange

Changed to the Prime Market of the Tokyo Stock Exchange in December 2014.

# **February**

## First company in Japan to establish a collaborative initiative with the United Nations World Food Programme(WFP)

Through the mung bean cultivation project, we pushed forward food-related assistance in Bangladesh in the form of small-scale agricultural support and food assistance for Rohingya refugees. Thanks to the huge success of the program, we were accepted by the WFP as the first official partner from Japan.

#### **October**

# Establishment of the CFO (Chief Future Officer) position

We believe that the next generation, the leaders of the future, should participate in management discussions, therefore, selected the CFO and Future Summit members for the further development of our company and our society.



2021

2020

2018

2019





## **August**

# Renewed Corporate Identity as "Sustainability First"

We renewed our corporate identity (CI) on our 15th anniversary and set "Sustainability First" as our corporate philosophy.

## June

# First flight using our Sustainable Aviation Fuel (SAF), SUSTEO

Our SAF, SUSTEO, was used as the energy supply of MLIT Flight Inspection Aircraft, which was the very first usage of made-in-Japan SAF for governmental aircraft in Japan. SUSTEO was also supplied to private jets "Honda Jet Elite", which was the first flight using SUSTEO for civil aviation.

## October

## Constructed Japan's first demonstration plant to manufacture Sustainable Aviation Fuel (SAF) and renewable diesel fuel

Completed the construction of the demonstration plant to manufacture SUSTEO, renewable fuels to facilitate the shift from fossil fuels for the realization of a sustainable society. The plant has been in full operation since spring 2019.



# August

# A full revision of our articles of incorporation reflecting the 17 SDGs

To enhance the effectiveness (including legal) of Euglena Philosophy "Sustainability First", we comprehensively revised our articles of incorporation, commonly recognized as company constitutions, so as to include "aiming at the realization of a sustainable society" in our mission, reflecting the 17 SDGs.

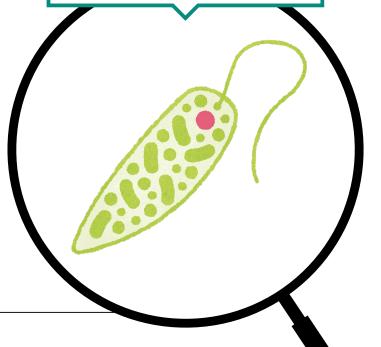
# What is the "Microalgae *Euglena*"?

Utilizing biotechnologies, including innovative cultivation methods of the microalgae *Euglena*, we continue to engage in research for achieving "Sustainability First". Now, let's take a closer look at "*Euglena*", closely linked with the origin of our company.

# A unique specie with both the characteristics of animals and plants

The *Euglena* families are said to evolve in the ancient times, around 500 million years ago. They are a form of algae, very much like seaweed or kelp. *Euglena* are primitive organisms performing photosynthesis and moving around in search of light. It has both the characteristics of animals and plants and thus it is biologically unique. As they grow through photosynthesis, they can be cultivated anywhere as long as there are water and CO<sub>2</sub>. They are known to thrive even in environments with CO<sub>2</sub> concentrations 1,000 times higher than in the atmosphere.

Euglena was named from "beautiful" (eu) and "eye" (glena) in Greek. They have a body length of only 0.05 to 0.1 mm and move using flagella.



# The 5Fs of the biomass for utilizing *Euglena*

Biomass, a biological resource, is featured with its five different usages-food, fiber, feed, fertilizer, and fuel (in descending order of price per weight). We have been improving and developing *Euglena* cultivation technologies, as well as expanding our business according to their price per weight. Through our activities, we would like to promote the potential of biomass and continue to commercialize it.



# Ishigaki *Euglena*

Ishigaki *Euglena* is cultivated in Ishigaki island, Okinawa. It is expected to be a healthy ingredient that will contribute to solving problems of nutritional deficiencies and imbalances in modern times. We have attained various certifications so as to ensure the usage of our productions is safe and secure.



# Rich Nutrients in Euglena

The rich nutrients in the microalgae *Euglena* can help approach the problems faced by people today, such as malnutrition, fatigue, and weakened immune system — thereby aiming toward a world where everyone can enjoy healthy lives.

01

# 59 kinds of nutrients

Ishigaki *Euglena* contains 59 kinds of nutrients, including vitamins, minerals, amino acids, and unsaturated fatty acids such as DHA and EPA.



\*Nutrients contained in Ishigaki Euglena

02

# Efficient nutrient absorbing rate - 93.1%

Humans do not have the enzymes to break down cell walls, so they remain as the barrier for the absorption of nutrients. Since *Euglena* has no cell wall, nutrients can be absorbed at an extremely high rate of 93.1%. (\*)



Nutrients can be absorbed and digested efficiently as there are no cell walls to block absorption.

(\*) Source- Japan Society for Bioscience, Biotechnology, and Agrochemistry newsletter, Vol. 51, issue 85, pp. 483 - 488 (1977) Euglena gracilis (nutritional value determination based on artificial digestion experiments of protein, as well as experiments on mice.

03

# Unique ingredient-Paramylon

Euglena contains large amounts of paramylon, a unique ingredient not found in other organisms. Paramylon is a  $\beta$ -1,3 glucan, a polysaccharide storing energy for Euglena. Research has proved that it has numerous desirable functions related to our health.



Photo provided by Professor Shinichi Fukuoka, Aoyama Gakuin University

04

# World's first ASC-MSC seaweed (algae) certification

ASC-MSC seaweed (algae) certification is issued by the ASC (Aquaculture Stewardship Council) for aquatic products that are produced responsibly using environmental-friendly and socially responsible aquaculture methods and the MSC (Marine Stewardship Council) for fishery products obtained in environmentally friendly and sustainable fishing methods. "Ishigaki Euglena" is the first in the world to have attained the ASC-MSC seaweed (algae) certification in January 2019.

## Halal/Kosher certification

Ishigaki *Euglena* has been certified as both Halal (following a string of specified production instructions of the Islamic religion) and Kosher (meeting the food-related requirements of the Jewish religion).

# Uses of Euglena

We are conducting a wide variety of R&D focusing on the 5Fs of the biomass.

01

## Health foods utilizing its rich nutrients

We develop health foods with *Euglena*, which is rich in nutrients. *Euglena* works to treat or prevent malnutrition, fatigue, and weakened immune systems.



# Cosmetic products for healthy and beautiful skin from the inside

We utilize the features of Euglena in the R&D on its applications in cosmetics. Euglena extract is highly moisturizing, and it helps to bring out the true elasticity and glossiness of skin to get glowing and shiny skin.



### Resources to generate renewable fuels

We are pioneers in the R&D of biofuels in Japan. In April 2020, we completed the creation of "SUSTEO", a biofuel from used cooking oil and algae such as Euglena; and in 2021, we launched the first flight using SUSTEO as a sustainable aviation fuel. We are now conducting further research on Euglena as a biofuel feedstock.



## **Utilization as feed**

As Euglena has as many as 59 kinds of nutrients, we utilize it as agricultural foodstuffs for domesticated livestock and cultured fish. It is reported that the use of Euglena fodders helps to pull out the authentic savoriness (Umami) in pork, poultry, and fish.



# Organic fertilizer made from the byproducts of *Euglena* renewable fuels

We utilize the residue (by-products) produced in the process of extracting lipids (a feedstock for renewable fuels) from *Euglena* for liquid organic fertilizers. If the residue of *Euglena* lipid extraction (by-products) can be sold as valuable resources, it will contribute to reducing the total production costs for manufacturing renewable fuels.



# **Development of biomass plastics**

We have developed *Euglena* plastics containing 50% biomass by mixing the residue (by-products) in the process of extracting lipids (a feedstock for renewable fuels) from *Euglena*. We also have a collaborative research project on Pararesin®, the production of biomass plastic utilizing a unique ingredient in *Euglena* called "Paramylon".

# **Our Four Business Domains**

In order to make people and the earth healthy, we are working on developing a great future with the philosophy of "Sustainability First," wherein one's own happiness continues to co-exist with the happiness of others.

# **01** Healthcare

# Realizing "lifelong wellbeing"

We support "well-being" and contribute to energize human body from both the inside and outside by utilizing our technologies and materials such as the microalgae *Euglena* with 59 kinds of nutrients.



# **Q2** Renewable Fuels

# Achieving a carbonneutral society

The development of SUSTEO is based on the question "what we can do for the future of our planet?" We always aim at the creation of the era of renewable fuels so the energy we consume is not a burden on our planet.



# Other Business

#### **Social Business**

The story of our corporate started when Mr. Mitsuru Izumo, our founder and president, visited Bangladesh when he was a student and witnessed children suffering from chronic malnutrition.

We would love to continue to contribute to enhancing global health.

#### **Bioinformatics Business**

We provide personal genetic analysis utilizing innovative biotechnologies. Based on the genetic data, we emphasize the importance of medical checkups to make our future safe, sound, and healthy.

# Agritech (Agriculture Technology) Business

We have successfully developed a fertilizer business using algae materials based on our continuous research. Leveraging our strength in biotechnology, we would like to realize an "agricultural recycling model utilizing unused resources."



Promote "lifelong well-being", focusing on the foundation of our health.

## **Our Brand Products**

We produce our own foods, supplements, and cosmetics with unique ingredients such as microalgae *Euglena*. We also strike to develop multiple distribution channels for our products so as to extend healthy life expectancy and support physical and mental health through beauty and food.



# **Overseas Development**

We do global sales of the microalgae *Euglena* and *Chlorella* as food ingredients. We acquired the FSSC22000 certification from the International Organization for Standardization, which establishes international regulations for product and food safety, and export highquality functional ingredients to more than 20 countries.



### **OEM Business**

We manufacture products utilizing Ishigaki Euglena, Yaeyama Chlorella, Kalahari watermelon, and Euglena malted rice on commission. We collaborate with excellent business partners to create innovative and highvalue-added products aiming at contribution to society.



# Innovative Products of Our Group Companies

We also distribute products of our group companies for the realization of the concept "Sustainability First". We will definitely continue to focus on strengthening group synergies.



# **Other Ingredient Products**

(Refer to page 6 for details of Euglena.)



# Yaeyama Chlorella

Similar to Euglena, Chlorella is a kind of microalgae. Yaeyama Chlorella can also be cultivated in the natural environment of Ishigaki Island. It has a balanced profile of all nine essential amino acids, which in turns enable the efficient intake of amino acids and other additional nutrients. Besides, it is ASC-MSC seaweed (algae), and Halal certified.



#### Kalahari watermelon

Kalahari watermelon originated from the Kalahari desert in southern Africa. Its unique features include its high moisture retention power and non-perishable nature. It is, thus, called the "miracle watermelon". We cultivate this watermelon and process the ingredients in Japan and develop related products such as supplements and cosmetics so as to maximize the potential of the watermelon.



# Euglena koji (malted rice)

Euglena malted rice is a natural material developed from the microalgae Euglena and koji (rice malt), which has been designated as a "national fungus" of Japan. We have also attained a patent for this novel innovative material.

It is featured by its strong enzyme activity when compared with standard rice malt and high concentrations of ergothioneine. Undoubtedly, it has great potential as a new functional food ingredient.

# **R&D for Our Healthcare Business**

We conduct a string of researches focusing on the different factors of health issues in modern life, especially malnutrition, fatigue (including stress and undesirable quality of sleep), and weakened immune systems, which may interact in a vicious cycle to weaken our body. Recent research showed that *Euglena* gracilis-derived Paramylon (as  $\beta$ -1,3 glucan), which is a unique ingredient of the microalgae *Euglena*, actually has two functionalities- relieving temporary stress (nervousness) and improving sleep quality. The "Foods with Functional Claims" application for *Euglena* gracilis-derived Paramylon was submitted to the Consumer Affairs Agency, which was then approved and published on August 17, 2021. The indication of two great functions "relieving stress and nervousness" and "improving sleep quality" brought about by "*Euglena*-gracilis-derived Paramylon" as a functional substance can appear on our product package.



# Research Column

We have conducted research with the vision of "making impossible possible with biotechnology." We also strive to expand the scope of our biotechnology continuously and participate proactively in R&D for social implementation.

# Research system leading biotechnology

Since the world's first success in outdoor mass cultivation of edible microalgae *Euglena* in 2005, we have been participating proactively in various R&D activities to contribute to biotechnology development in Japan. While building a network of collaboration with universities, governmental ministries, agencies, and private corporates, we are taking on the challenges of pursuing the potential of *Euglena* (and other algae) for the implementation of new technologies in society. To solve problems of humanity and our earth, such as climate change, food crises, depleted resources, and natural disasters, we continue to apply the know-how from our research to pioneer a great future under the philosophy of "Sustainability First". In addition, we have already started researching on "the age of living in space," which has become increasingly realistic in recent years. We continue to explore channels to contribute to the future of people and our habitat based on sustainable values.

# **Cultivation technology**

After establishing the outdoor mass cultivation technology for the microal-gae *Euglena*, we also built up a system capable of producing 160t annually in 2017. Currently, we are paying tremendous efforts in R&D not only for a better production capacity but also for more efficient production of *Euglena* 

with a better taste. Furthermore, we built the world's first single-unit, 1,000 m²+ ridged pool for the cultivation of microalgae in Taki Town, Mie Prefecture, in 2017 and are conducting research including the development of a culture technology utilizing CO<sub>2</sub> in order to reduce the cost of producing algae-based renewable fuels.



# **Advanced Technology Research**

# Agritech (Agriculture Technology)

In April 2021, we constructed a Sustainable Tech Farm in Saga (Kyushu, Japan) for agricultural research. Since developing *Euglena* liquid fertilizer and compost manufactured from the microalgae *Euglena*, we have been aiming at the realization of "resource-recycling" agriculture. We hope to achieve this by utilizing *Euglena* as fertilizer for raising agricultural crops based on collaborative research with Saga city on *Euglena* cultivation using unused sewage resources.

### **Feed**

We are also engaged in R&D on the utilization of unused natural resources and feeds using the microalgae *Euglena* as a protein source. Currently, the main protein source for aquaculture feed is fishmeal, but for sustainable development of the aquaculture industry, its dependence on fishmeal for feed must be reduced and there is an urgent need for an alternate protein source that does not depend on aquatic resources. In March 2019, we succeeded in developing an aquaculture feed that contains *Euglena* and uses less fishmeal than standard feed. The salmon farmed on land in Taki Town, Mie Prefecture using this feed contain high levels of umami ingredients and are expected to contribute to sustainable aquaculture with low environmental impact.

# **Biomass plastic**

We have developed *Euglena* plastics containing 50% biomass by mixing the residue (by-products) in the process of extracting lipids (a feedstock for renewable fuels) from the microalgae *Euglena*. We also have joint research on Pararesin®, a biomass plastic that utilizes Paramylon, a  $\beta$ -1,3 glucan and unique ingredient in *Euglena* and can contain biomass up to 100%.

# Renewable Fuels

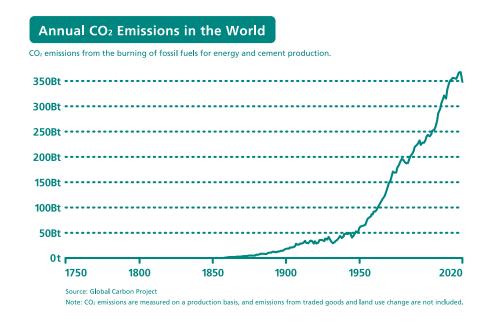
To tackle global issues like global warming and climate change stemming from the increase in greenhouse gas emissions, we are committed to different research, development, and production of renewable fuels as a source of energy to protect the future of our children and the future generations.

# **Confronting climate change**

The atmospheric concentrations of CO<sub>2</sub>, the cause of global warming, have reached an unprecedented level in the past 800,000 years.

Temperature rise due to global warming has caused climate changes such as droughts, heavy rains, and floods, resulting in major damage on a global scale, such as insufficient water and crops and thus food shortages, along with death and illness due to heatwaves, as well as impacts on biodiversity.

Greenhouse gasses must be reduced to solve the problem of global warming, and one of the solutions is the use of biofuels.



## SUSTEO, our renewable fuel

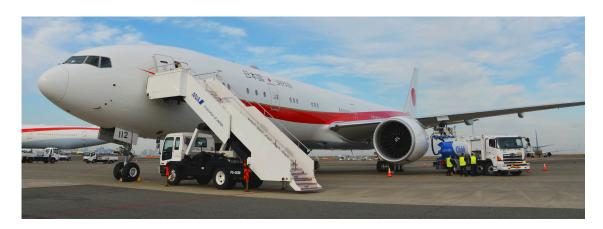
We manufacture, procure, and manage the sales of SUSTEO, a biofuel made from used cooking oil and algae such as microalgae Euglena. Many different types of biomass can be used as the feedstock for renewable fuels, but plants (such as sugarcane and corn) could compete with food production and cause problems such as deforestation due to over-cultivation. We continue to produce SUSTEO by selecting the best among available sustainable biomass feedstocks in a flexible manner.

# **SUSTEO** = Sustainable Oil

The renewable fuel "SUSTEO" can be used as an alternative to fossil fuels. When burned, it emits CO<sub>2</sub> just like fossil fuels. Yet, plants (feedstock of cooking oil) and microalgae *Euglena* absorb CO<sub>2</sub> through photosynthesis during their growth. This means, as a result, CO<sub>2</sub> emissions stemming from the use of the fuel are substantially zero. Therefore, it is expected to contribute to the creation of a carbon neutral society.

## **SUSTEO** aviation fuel

SUSTEO aviation fuel is a Sustainable Aviation Fuel (SAF) complying with ASTM D7566 Annex 6 standards for bio-based feedstocks set by the American Society for Testing and Materials (ASTM), the regulatory body for international standards. Our demonstration plant to manufacture renewable fuels utilizes a proprietary Biofuels ISOCONVERSION process. SUSTEO is the world's first renewable fuel that is certified by the ASTM standard the technology complies with and can be blended up to 50% with existing fossil-based jet fuels.



### SUSTEO diesel fuel

SUSTEO diesel fuel is a Renewable Diesel Fuel, used for various transportation means, including buses and marine vessels. It can be used in place of fossil-based diesel fuels since it has the same molecular structure as fossil-based fuels. Another advantage is that existing infrastructure can be used without any modifications to the vehicles and equipment.



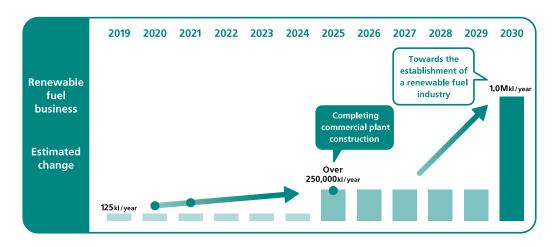
# **Efforts for commercialization**

Since the completion of Japan's first demonstration plant to manufac ture Sustainable Aviation Fuel (SAF) and renewable diesel fuel in Yokohama, Kanagawa Prefecture in October 2018, we have been running the production with the aim of making Japan the leader in renewable fuel production.

In 2022, Euglena Co., PETRONAS, and Eni started working together on a collaborative project for the construction and operation of a biofuel production plant in Malaysia.

The project aims at the completion of a large-scale commercial plant in 2025 to create a future in which we can understand more and thus utilize renewable fuels.

We continue to move forward, step by step, for the establishment of renewable fuel production in Japan.



# **Social Business**

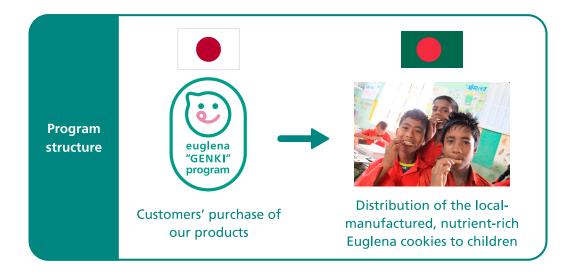
Euglena Co was founded by Mitsuru Izumo after he visited Bangladesh and saw children suffering from malnutrition while he was a student and decided to solve the malnutrition problem. This decision serves as the foundation for our ongoing efforts today.

# The Euglena GENKI Program

A portion of our profits is used to provide Euglena cookies to children in Bangladesh so as to tackle the malnutrition issue.

The Euglena GENKI Program is an initiative where a portion of our profits is used for the distribution of nutrient-rich Euglena cookies to children in Bangladesh. The funds for this program are made up of the profits from all products of Euglena Co and subsidies, as well as designated products from our partner companies. 15 million packs of Euglena cookies have been distributed by the end of December 2022. The cookies are basically distributed to the children as their school lunch on a daily basis, and we also flexibly responded to requests for additional assistance. In December 2017 when the number of Rohingya

refugees from Myanmar started to increase, our group members demonstrated proactive determination that prompted us to deliver 200,000 Euglena cookies with customized specifications to a Rohingya refugee camp. In addition, in response to the difficulties for slum residents to access food due to the shortages and rising prices attributed to the COVID-19 lockdowns, we distributed 400,000 Euglena cookies free of charge. The Euglena GENKI Program will continue to go on flexibly in various situation- we would like to try our best to solve the malnutrition issue in Bangladesh.

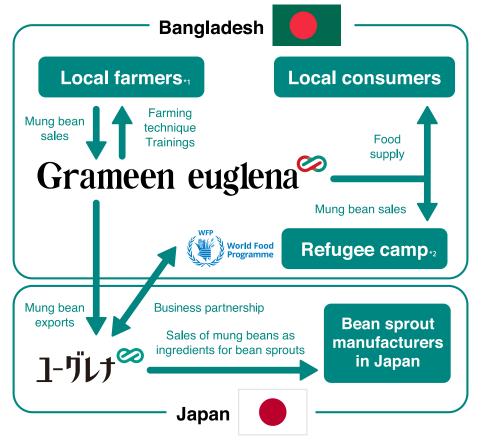




# Grameen euglena

# Aiming at sustainable development for both people and our earth

Grameen euglena is a joint enterprise comprised of the Grameen Group led by Dr. Muhammad Yunus- the first Bangladeshi Nobel Peace Prize winner, and Euglena Co. in Bangladesh. It aims to increase income and improve the quality of life in agricultural areas suffering from poverty.



<sup>\*1</sup> The Mungbean is supplied to refugees through the supply chain of the venders contracted with WFP. \*2 Grameen Euglena gets supports from WFP to strengthen capacity of registered farmers WFP does not endorse any products or services.

# The mung bean project

# Sustainable social business based on a win-win relationship

Grameen euglena started its journey toward social business from the Mung Bean Project. By working with local farmers for mung bean cultivation, we provided benefits for the farmers, including technical guidance and higher sales prices. Mung bean is a vitally important ingredient in dal soup, a widely-consumed local food; and it is also the source of bean sprouts, the food ingredient widely consumed in Japan. This project aims to eradicate poverty and stabilize the food supply by providing Bangladeshi farmers with advanced Japanese agricultural techniques for mung bean cultivation and supplying high-quality mung beans in both countries. In 2023, the number of small-scale farming businesses in this project is going to exceed 6,000. The project was a huge success, and in 2019, Euglena Co. became the first Japanese corporate with a business tie-up with the United Nations World Food Programme (UN WFP). Furthermore, we signed the second business collaboration agreement with WFP in 2022. We will continue to work on this area for the better.



# **CFO** (Chief Future Officer)

"It doesn't carry any meaning if we do not get the leader of the future generations in the decision making process" We established the position of CFO (Chief Future Officer) in 2019 for those under 18 as we believe that the younger generations- the leaders of our future-should participate in corporate management to realize a sustainable future.

The CFO is a person with top responsibility for the creation of a sustainable future, and its role is to enforce our corporate philosophy "Sustainability First" in corporate management.

# **2022-**Midori Watabe, the 3rd CFO



# **2019-2020**

# **Kyoko Ozawa**

# **Proposal**

Aiming to build a system to enable customers to be kind to our environment in an unconscious wayno matter they are highly aware or unaware of environmental issues.



- •Aim at a 50% reduction of fossil-based plastics in the production of our products by 2021. Also achieved the abolishment of existing plastic bottle products for beverages in 2019.
- •Change the containers of all-in-one cream in our skincare brand "one" in 2021, so as to reduce fossil-based plastics by 90% .(\*1)
- •Utilize 100% renewable energy to power the algae production/verification research facility in Taki Town, Mie (Algae Energy Research Institute) in November 2020.

(\*1) Achieved through lightweight packaging and blend of 30% sugarcane-based resin.

# 2020-2022

# Rena Kawasaki

# **Proposal**

Aiming to build up a company culture in which ideas and projects thrive so that the organization can contribute to solve social issues continuously



- •Focus on the awareness and growth among company members, which are rooted in her belief that positive company growth helps to encourage positive change among stakeholders.
- •Set the theme of "well-being innovation" to motivate company members in their daily work and new challenges.
- •Promote multi-pronged efforts including improvement of meeting methods, an HR policy with onboarding support, and more internal communication such as workshops related to diversity.

# Community Involvement in Yaeyama Islands

As we set up a production base on Ishigaki Island, the Yaeyama region is an indispensable location for us. Through our business initiatives, our goal is to contribute to the revitalization of the Yaeyama region through multi-faceted development of the local economy, promotion of tourism in the region, and creation of employment.

# The "Mi-fai-yu" Project

# Community revitalization on Ishigaki Island, Okinawa

The "Mi-fai-yu (literally "thank you" in the Yae-yama dialect) project supports local development on the Ishigaki Island, including science experiment classes in elementary, junior high, and high schools for environmental education; as well as official support for the professional basketball team the "Ryukyu Golden Kings". In addition, we support community development initiatives through the acquisition of the naming rights for Japan's southernmost shopping street, as well as the outer island terminal that serves as the gateway to the Yaeyama Islands.



# **Euglena Garden (Café)**

# The first zero-waste certification in Okinawa

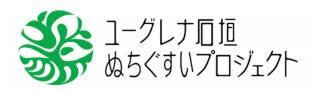
The Euglena Garden is a café under Euglena Co.'s direct management. Through cuisine made with Ishigaki *Euglena* and other local ingredients from the Yaeyama Islands, it aims to deepen people's understanding of the magnificent local nature. Additionally, based on our CFO's policy of "building a system to enable customers to be kind to our environment in an unconscious way- no matter they are highly aware or unaware of environmental issues," it became the first business location in Okinawa with the zero-waste certification for waste reduction.



# The Euglena Ishigaki "Nuchigusui" Project

# Energize our body and souls through foods

We promote the Euglena Ishigaki "Nuchigusui" Project so as to make the island "the healthiest in the world." In Okinawan (Ishigakijima Island) dialect, "Nuchigusui" means "energizing our body and souls experience with food and nature." With Ishigaki Island as our source, we hope to create healthy bodies and souls through foods and to contribute further to the community development in Okinawa. We also aim to promote Ishigaki *Euglena* and other Okinawan specialties by developing food products with Ishigaki *Euglena*.





# "We'd love to create a society in which our happiness continues to co-exist with that of others."

# Founder and President Mitsuru IZUMO

The story of Euglena Co. started as my wish to solve the malnutrition issues in Bangladesh I witnessed when I was a first-year student in university. At the same time, our organization is also based on our determination to solve the energy shortage problem in Japan, a country with very limited natural resources. I have been focusing on these two goals to make people and our earth healthy.

Since being listed on the First Section of the Tokyo Stock Exchange in 2014, we began distributing nutrient-rich Euglena cookies to children in Bangladesh, exceeded 12 million packs of cookies in 2021. And after more than a decade with trials and errors, we also succeeded in the first flight using SUSTEO (a sustainable aviation fuel [SAF]), which was said to be impossible.

Today, our environment is changing at a rapid rate- it has become much more complicated, and we are now living in an era with unpredictable events coming one after another. It is, in fact, very difficult to predict what comes next. I have been thinking "what I have to do to



make our people and our earth healthier?", and I came upon our cooperate philosophy- "Sustainability First."

When it comes to tackling social issues, solving certain problems for a certain group is not true, real sustainability. It is merely capitalism. The world based upon capitalist societies since the postwar period should finally come to an end by 2025 because the generations Y and Z, who are highly aware of social issues, will comprise more than half of the working-age population in Japan.

They are already the majority in Europe and the U.S. indeed. And their intentions have become the most important.

Our concept of sustainability is precisely "our own happiness continues to co-exist with that of others", which is also the goal we are striving for.

For this goal, we are going to proactively and concretely create a "Sustainability First" society in various ways, utilizing not only *Euglena* but also the professionalism of our partners and other members of our business network.

# Transform the social structure for the realization of "Sustainability First"

# Director and CEO Akihiko NAGATA

I strongly believe that the mission of a venture company is to confront uncertainties in an unknown path toward the future and to take greater risks than anyone else until the very end. Hence, passion and integrity are crucial. Mitsuru (our founder & president) and I are very much determined to achieve these goals.

We dove into the deep ocean by launching our business amidst an established industry and society already worth trillions of Japanese yen; and then raised funds and made investments, as well as took on the challenge of revolutionizing the social structure.

For a venture company to revolutionize established social structures, a certain kind of insanity and unusually strong belief are required. We believe that this passion, insanity, and abnormality means that even a venture company with no solid background support has the potential to arouse social changes; and that we can, in fact, create the world of "Sustainability First" we envisioned.

Intrinsic value often comes with a time lag, and the best examples of



this are deep technology and social business.

We will further speed up our business development to arouse innovations in the field where the gap between the intrinsic and social value remains the greatest.

Also, it is our "people" who form the foundation that embodies our corporate belief. When we have people, we have new technologies, capital, culture, and new approach strategies. That is why we are constantly looking for working partners.

We believe that the expansion of our business will have a direct impact in terms of the reduction of various social issues. For this reason, we would like to express our ideas and determination to our stakeholders not only in words but through our actions and our decisions. No matter what the issues are, how long they might take, and even if all the ups and downs are continuously changing or leaving us unexpected challenges along our way, we are ready, well prepared, and equipped to make our dreams come true.

# **Subsidiaries**

## Yaeyama Shokusan Co., Ltd.

Production, processing, and sales of *Euglena*, *Chlorella*, and other algae

#### Genequest Inc.

Provision of genome analysis services

## Daikyo Fertilizer Co., Ltd.

Manufacture and sale of organic compound fertilizer

#### Hako Co.

Comprehensive support services for corporate marketing activities.

# **Locations**

#### Headquarters

G-BASE 2F, 5-29-11, Shiba Minato-ku Tokyo, Japan 108-0014

# Resource Circular Technology Research Institute

Algae Cultivation Facility in Saga City Sewage Treatment Center 2667 Takataro, Nishiyoga-cho, Saga City, Saga 840-0036

## Real Tech Holdings Co., Ltd.

Discovery and development of deep technologies, promotion of collaborations between Euglena Co and companies involved in deep technology development, etc.

#### MEJ Inc.

Sale of supplements, health food products, etc.

### Frembassy Co.

Management of EC sites and media, sales of food products, etc.

## Advanced Science Laboratory, Lifescience Research Institute

Yokohama Bio-Industry Center 2F, 1-6 Suehiro-cho, Tsurumi-ku, Yokohama City, Kanagawa 230-0045, Japan

## **Euglena-UTM satellite lab(EUTM)**

Euglena-UTM satellite lab, MJIIT, UTM-KL Campus, Jalan Sultan Yahya Petra, 54100 Kuala Lumpur, Malaysia.

### **Epauler Co., Ltd.**

Sale of health food products containing Euglena and Chlorella

#### LIGUNA Inc.

Planning, development, and online sales of skin care and health food products, and miscellaneous goods.

### Grameen euglena

(Joint venture company: Euglena GG Ltd.)

Provision of instructions on the cultivation of mung beans to contract farmers in Bangladesh, as well as purchase, sale, and export of mung beans to Japan

# Euglena Taketomi Shrimp Aquaculture Co.,Ltd.

Cultivation and sale of Japanese tiger prawns

#### Q'sai Co.,Ltd.

Manufacture and sale of health food and skin care products, etc.

# Shanghai Euglena Biotechnology Co.,Ltd.

In-house and OEM sales in China of health food and cosmetics products containing *Euglena* 

# Production Technology Research Institute

287-14 Shiraho, Ishigaki City, Okinawa, 907-0242 Japan

#### **Fukuoka Distribution Center**

7/F, Yakuin Business Garden, 1-1-1, Yakuin, Chuo-ku, Fukuoka-shi, Fukuoka, Japan (810-8588)

# **Bangladesh Office**

Telecom Bhaban (Level-04), 53/1, Box Nagar, Zoo Road, Mirpur-1, Dhaka-1216, Bangladesh

# **Corporate History**

| 2005 Aug.       | Establishment of Euglena Co., Ltd.  |
|-----------------|---|
| Dec.            | Achieved the world's first outdoor mass cultivation of edible microalgae Euglena  |
| <b>2010 May</b> | Began a joint development to manufacture Sustainable Aviation Fuel (SAF) from<br>Euglena lipids with other corporates                         |
| 2012 Dec.       | Listed on the Mothers Section of the Tokyo Stock Exchange (Securities code - 2931)  |
| 2013 Oct.       | Opened the first overseas office in the People's Republic of Bangladesh   |
| 2014 Dec.       | Changed to the First Section (current Prime Market) of the Tokyo Stock Exchange (TSE)   |
| 2015 Jan.       | Received the "Prime Minister's Award (Japan Venture Award)" at<br>the 1st Japan Venture Awards of the Ministry of Economy, Trade and Industry |
| <b>2016 May</b> | Succeeded in developing a method to selectively breed a variant of <i>Euglena</i> hat produces a large amount of lipids                       |
| Sept.           | Announced the construction of one of Japan's largest cultivation pools for fuel in Taki Town, Mie Prefecture                                  |
| 2017 Jan.       | Doubled annual cultivation capacity of Euglena to 160t  |
| 2018 Nov.       | Completed construction of Japan's first demonstration plant to manufacture<br>Sustainable Aviation Fuel (SAF) and renewable diesel fuel       |
| 2019 Feb.       | Concluded an agreement for project collaboration with the World Food Programme (WFP) as a Japanese private corporate                          |
| Oct.            | Appointed a teenage CFO (Chief Future Officer) for the first time as a company listed on the TSE Prime  |

|                 | standard for Sustainable Aviation Fuel (SAF) production technology  |
|-----------------|---|
| March           | Started the sales of SUSTEO renewable diesel fuel   |
|                 | Rebranded foods and supplements and launched a new brand  |
| April           | The Mung Bean Project implemented in the People's Republic of Bangladesh was selected for the Business Call to Action (BCtA) launched by the United Nations Development Programme (UNDP). |
| Aug.            | Succeeded in the development of biomass plastics from <i>Euglena</i> renewable fuel residue   |
| 2021 Jan.       | Obtained GRAS certification for food safety in the United States  |
| March           | Completed SUSTEO, Sustainable Aviation Fuel (SAF)   |
| June            | Succeeded in two aircraft flights using SUSTEO (SAF)  |
| Aug.            | Held Japan's first extraordinary virtual-only general shareholders meeting.<br>Changed the business objectives in the articles of incorporation to reflect SDGs                           |
| Nov.            | Mazda competition vehicle refueled with 100% SUSTEO renewable diesel fuel completed the Super Endurance race in three hours   |
| Dec.            | Received the "SDGs Promotion Headquarters (Prime Minister) Award" at the 5th Japan SDGs Awards  |
| <b>2022</b> May | Signed the second business collaboration agreement with the UN WFP  |
| Dec.            | The number of Euglena cookies distributed through the Euglena GENKI Program has exceeded 15 million.  |
| 2023 Feb.       | Established a Sustainability Committee  |
| June            | Selected as a constituent of "FTSE Blossom Japan Index" (a global ESG investment index) for the 1st time.   |

Acquired certification by the new standard ASTM D7566, an international

# **Company Overview**

#### **Foundation**

August 9, 2005

# **Capital**

JPY 15,818,060,000 (as of March 31st, 2023)

## **Description of Business**

- •R&D and production of microalgae, e.g., Euglena
- ·Manufacture/ sale of foods and cosmetics with Euglena and other microalgae

2020 Jan.

- •Development of renewable fuel technologies for microalgae, e.g., Euglena
- •Development of environment-related technologies
- •Business development and investment in biotechnology-related business, etc.

#### **Headquarters**

G-BASE 2F, 5-29-11, Shiba Minato-ku Tokyo, Japan (108-0014)