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INTERVIEW

Season's Greetings from JETRO Geneva



Ginzan Onsen in Yamagata Prefecture / ©JNTO

Dear readers,

We would like to thank you for following us.

Our office will be closed on December 25th and 26th
and from December 30th to January 5th.

We wish you a lovely holiday season!

Kind regards,

JETRO Geneva's team

Twenty Green: More sustainability thanks to probiotics

Interview with Prof. Duncan Sutherland, CEO and Founder of Twenty Green

This month we are happy to introduce Twenty Green to our readers. This innovative young company contributes to making aquaculture more sustainable. Dr. Duncan Sutherland, the CEO and Founder, will be one of our next speakers. He kindly answered our questions about his company and its business in Japan.

Could you please introduce your professional background to our readers?

I studied immunology in Australia and went to Japan for a post-doc position in the Riken Lab. Riken was, and still is, a leading research center in the field of immunology. The Lab is for instance related to Mr. Tasuku Honjo, the 2018 Nobel Prize laureate. It was a great oppor-

tunity for me to work in Japan. Over the last 5 to 10 years, research in the field of microbiota has been very intense. We have about 1 kg of bacteria in our intestine and they play a vital role regarding our immune system. It is a fascinating field.

How did you come up with the idea of creating Twenty Green?

I continued my research on intestinal immune system with another post doc position in the EPFL. The Riken Lab and the EPFL are close partners.

One day, I read this article on water-waste management. It was not directly related to my field, but the article was referring to specific microbes. I looked closer to this particular group of microbes and I had the idea that they could help animals

to digest fiber. The role of those microbes was pretty much unexplored, even if they represent about 10% in the great intestine. A research on humans showed that those microbes are related to obesity. Gaining weight might be a problem for humans, but for animal farming it is precisely the point.

The EPFL financed our research on those microbes. The result was that crustaceans grew faster with less feed. The microbes also improved the immune system. We identified a strong commercial potential and submitted a patent. I decided to leave the academic world to found a company. Twenty Green has an exclusive license from the EPFL.

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INTERVIEW

Twenty Green: More sustainability thanks to probiotics



Dr. Sutherland and Sharky, the most adorable interviewee we had at JETRO

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Why did I call the company Twenty Green? Green because we are aiming to increase sustainability and twenty because there are a lot of goals set for 2020, 2030, 2050. We might be close to 10 billion human beings on the planet by 2050 and will have to feed everyone. So, I combined the two words and named the company Twenty Green.

What is the added value of your product(s)?

It is a micro ingredient that is added to feed. It interacts with the internal system of the animal and improves its immune system allowing it to increase its natural defenses. The immune system has a strong energy cost for an organism. By improving the immune system, we decrease the energy required by the animal to defend against diseases and therefore reduce the quantity of feed necessary to bring them to a certain weight.

A key parameter in animal farming

is the Feed Conversion Ratio (FCR); how much feed do I need to produce a certain tonnage of fish or meat. Our product improves the FCR by reducing the total amount of feed by 10%. Considering that feed represents 70% to 80% of the total cost of animal farming, the benefit is considerable.

What is especially interesting with the microbes we work with, is that they are quite resistant to heat and mechanical stresses. This becomes really important for farming, because when we make animal feed pallets, they go into a machine called an extruder. They get squished at high temperatures. Most of the products on the market suffer from this process. The group of bacteria we work with don't.

Why is your product sustainable and eco-friendly?

Aside from the economic benefit, our products contribute to a more sustainable agriculture. Animal farming represent 15% of CO2 emissions mostly because of the feed. By reducing the quantity of

food for animals, we help the industry to reduce its environmental footprint.

The industry is also reaching some limits that are difficult to overcome. Salmon for instance have to be fed with smaller fish. But the amount of fish to feed the salmon is limited. The growth of this industry could be held back because of the lack of fish-meal for the salmon. This is why they are trying to shift to a plant-based diet. Unfortunately, a plant-based diet causes inflation in salmon's intestines. Our product has been proven to help animals to adapt to this new diet. This is another way to increase the sustainability of the industry.

Healthier animals could also mean healthier humans?

Yes, probably to some extent. However, the main contribution is indirect. We are facing a growing crisis because of antibiotic-resistant microbes. Today, antibiotics are massively used in the industry and unfortunately, microbes are becoming more resistant. This resistance is transmitted by genes and can therefore easily spread. Having a natural alternative could curb the use of antibiotics. This is one of our company's goals. By reducing the need for antibiotics, we lower the risk of antibiotic-resistant reservoirs. A scarring study pointed out that by 2050, antibiotic-resistant microbes could kill more than cancers. Additionally, some diseases that affect animals can evolve and threaten humans. This is true for pigs, for instance. More resistant pigs could reduce this risk.

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Twenty Green: More sustainability thanks to probiotics

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Why Japan?

First, I did my post doc in Japan and was quite aware of the high level of science there. I also was aware of the aquaculture in Japan. So, we were looking for a test market, but also for synergies with technology and Japan ticked both of those boxes. We wanted to plant our seed in Japan and chose Fukuoka because it is known to be good for startups. We started to develop our network and implement the first tests.

Could you tell us more about your business in Japan?

In addition to our probiotics, which are produced in Switzerland, we were looking for the algae industry because we wanted to combine our probiotics with carrying products based on algae. We approached a company producing nori for human consumption. Part of their production could not be used because of an unpleas-

ant smell. Nevertheless, the nutritional value of the algae was unaltered. They were very interested in finding a commercial application for this “waste” and happily jumped in. We started to develop prototypes of a new product combining algae and our probiotics. Tests are highly encouraging. I will fly to Japan tomorrow and we will present the products to our potential customer. We expect to process one ton of nori by March of 2020. Currently, we've processed 100kg. So, we will scale up by 10, which is very exciting. We aim to start the distribution of this new product during Summer 2020.

Are you competing with existing animal feed producers?

No, they are actually our customers. What we do is what we call a pre-mix. An immune booster that will be mixed with regular food during the most sensitive step of the life-cycle of the fish. We have exclusive contracts with some feed producers and therefore help them

to gain new market share because of customers wishing to benefit from our products.

What are the next steps for Twenty Green?

In short, we have two priorities: Keeping our R&D pipeline busy and finding investors to support our development. The potential is great, for fish farms obviously, but we are also conducting tests on piglets. So far, they have been very conclusive. Another interesting market for us could be pet care. It is a completely different market, but certainly interesting. As a pet owner myself, I really care about their health.



Twenty Green's lab in Lucerne

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INTERVIEW

A CHF 118 billion stimulus package to support Japanese economy

Japanese Prime Minister Shinzo Abe presented an economic stimulus package called “Comprehensive Economic Measures to Create a Future with Security and Growth.” More than CHF 118 billion (¥ 13.2 trillion) will be invested by central and local governments. The amount will be shared between the current fiscal year (FY19) and the next one (FY20). The amount will be allocated to three pillars: 1. Nat-

ural disasters security measures, 2. Support companies to overcome economic downside risks and 3. Support innovation and new technologies.

The government expects this plan to directly boost the real GDP amount by 1.4%. The effect is presumed to be realized around FY2021.

If included the related investment that will be made by private com-

panies, the amount will double.

The Japanese economy is recovering at a moderate pace and there is a risk that the uncertain international context could affect it.

The appropriate mix between government's fiscal policy and the Bank of Japan's monetary policy should be a powerful tool to support the Japanese economy.

Source: [Cabinet Office](#)

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TREND

JETRO Invest Japan Report 2019: Focus on Innovation

革新

INNOVATION

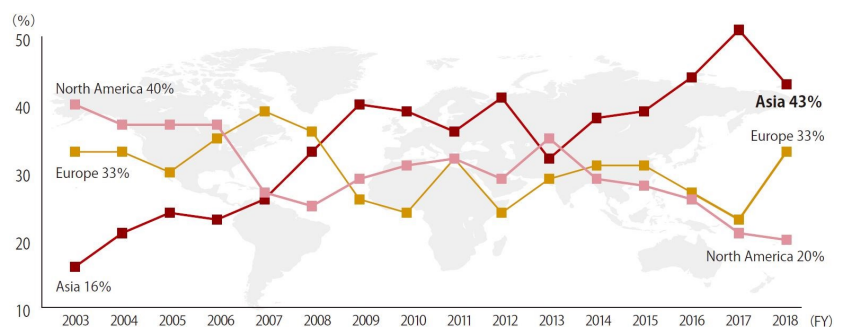
Inward Foreign Direct Investment (FDI) reached 2.9 trillion yen (+24.5%) in 2018. This is the second best year after 2016. Swiss companies continue to be among the largest investors in Japan. Switzerland ranked 7th, with an investment stock worth 1.4 trillion yen (4.7% of total FDI stock). In recent years, in addition to quantitative expansion, the trend in attracting inward FDI in recent years has been shifting to more qualitative contributions, with concepts such as “creating innovation” and “revitalization of local economies” as keywords. The ultimate goal is to shape Society 5.0; a future society in which humans are at the center and social issues are solved by technology such IoT and AI. Innovation has no border and this

is why JETRO and its global network has a central role to play. Since the introduction of the “Invest Japan” program back in 2003, JETRO has supported nearly 20,000 foreign companies. Among them, 2,000 have successfully established offices in Japan. Since the current fiscal year, JETRO’s priority is to support innovative companies. Among other

things, JETRO extends its support to promising start-ups. Twenty Green is a very good example of this shift and we are honored to support them.

Swiss and European companies certainly have good opportunities in Japan. In FY2018, Europe represented 33% of the total, after Asia (43%) but before North America (20%).

Chart 4-3 Changes in ratio of JETRO-attracted investments by region



Source: [JETRO Invest Japan Report 2019](#)

Agenda

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AGENDA

- ✓ The next JETRO seminar will take place on February. 20, 8 to 10am. at the CCIG in Geneva. More details to follow
- ✓ Introductory Sake Professional (ISP) Course
The beginner’s level Introductory Sake Professional takes place in Switzerland for the first time on Feb. 24 2020 in Bad Ragaz (SG) . This is a “Sake Sommelier Association” course provided by Dr. Charly Iten. More information on this [page](#). For registration please follow this [link](#)

JETRO is a government-related organization that works to promote mutual trade and investment between Japan and the rest of the world. Originally established in 1958 to promote Japanese exports abroad, JETRO’s core focus in the 21st century has shifted toward promoting foreign direct investment into Japan and helping small to medium size Japanese firms maximize their global export potential.

The JETRO Switzerland Newsletter can also be viewed and/or downloaded online:
<http://www.jetro.go.jp/switzerland/newsletter>

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