



THE PEREZ-GUERRERO TRUST FUND FOR SOUTH-SOUTH COOPERATION

FINAL REPORT

The Demonstration and Promotion of
High-yield & High-quality Cultivation and
Deep Processing Technology of *Ganoderma
lucidum* in Developing Countries.

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I . Project Overview

1.Type of project: The Demonstration and Promotion of High-yield & High-quality Cultivation and Deep Processing Technology of Ganoderma lucidum in Developing Countries.

2.Abstract: Ganoderma lucidum and its active ingredient have been proved to have extensive pharmacological effects, which can be used for the prevention and treatment of chronic bronchitis, neurasthenia, hyperlipidemia, coronary heart disease, hepatitis, cancer and other diseases. Nowadays, many developing regions and countries in Southeast Asia and Africa have witnessed the upsurge and challenge in the cultivation of ganoderma lucidum. But they are incapable of promotion on a large scale, due to lack of cultivation and processing technologies. This project aims to share such experience and technologies as high-quality cultivation and deep processing of ganoderma lucidum with developing countries, to offer advanced technologies, train excellent talents and establish ganoderma lucidum industry with sustainable development.

3.Situation Analysis: Traditionally, ganoderma lucidum is widely distributed in Asia, Australia, Africa and tropical, subtropical, and temperate regions in the Americas. With extensive pharmacological effects, its active ingredients can be used for the prevention and treatment of chronic bronchitis, neurasthenia, hyperlipidemia, coronary heart disease, hepatitis, leukopenia, cancer and other diseases. At present,

ganoderma lucidum is in great demand with more attention paid to its healthy efficacy. Although Japan, Europe and the United States and other developed countries have relatively short history for cultivation and utilization of ganoderma lucidum, by virtue of their advanced medical and agricultural technologies, they have already broken through the geographical restrictions of origin and overtaken other countries in terms of ganoderma lucidum cultivation and deep processing technologies, which not only brings good economic benefits, but improves the physical quality of their people. However, many developing countries are still plagued with the diseases, with low physical quality of people, and the situation cannot improve dramatically due to the unfavorable economic conditions. In light of the medicinal value of ganoderma lucidum, if cultivation and deep processing technologies of ganoderma lucidum can be promoted in these developing countries, it can bring huge economic benefits, and effectively improve the physical quality of people as well.

Currently, although these developing countries are in great demand of ganoderma lucidum, since still at its initial stage, the cultivation cannot be widely promoted owing to the limited geographical conditions, and a large volume of wood is required for the cultivation, resulting in low yield and serious destruction of the forest resources. And for the deep processing stage of ganoderma lucidum, the crude extraction proves to be a great waste of ganoderma lucidum, which is incompatible with the principle of sustainable development of the modern economy. However, it is costly for them to purchase the advanced cultivation and deep processing

technologies from developed countries, which is beyond the capacity of many developing countries. Therefore, it requires the developing countries should make great efforts to improve their cultivation and deep processing technologies, properly handle the relationship between industrial development of ganoderma lucidum and protection of natural resources, and seek a way of sustainable development.

As the world's largest developing country, China has been trying to seek collaboration with the Group of 77 (G-77), and offer assistance to developing countries. China is the first to discover and use ganoderma lucidum, with a history of more than 5000 years. In recent years, along with the extensive and in-depth research on ganoderma lucidum, China has possessed fairly complete cognition and definite theoretical basis, and witnessed rapid development of its cultivation and processing technologies, which make it capable of providing developing countries with comprehensive technological assistance for better economic benefits.

II. Implementation

1. Strategy: Based on the economic benefits and healthcare function of ganoderma lucidum, it is necessary for a country to take ganoderma lucidum cultivation and deep processing industry as an important supplement for national agriculture. But at present, most developing countries cultivate the ganoderma lucidum at the cost of overexploiting natural resources, with low yield and great waste of resources due to the insufficient deep processing technology. Therefore, it is imperative to seek a high-efficient, ecological and sustainable development mode of ganoderma lucidum

industry, and promote in the developing countries to meet their demand. This project attempts to propose a series of high-yield, high-quality and sustainable cultivation technologies and the deep processing technologies to effectively increase the utilization rate of ganoderma lucidum, showcasing and promoting them in developing countries. The ultimate goal is to establish the ganoderma lucidum industry as the white modern agriculture in developing countries, in line with the development of low carbon economy, which adheres to the principle of “no competing for food with humans, no competing for land with food, no competing for water with land, no polluting the environment and no competing for resources with other industries” and makes it a competitive industry with low energy consumption and sustainable development, boosting the agriculture growth and farmers’ incomes in developing countries.

2. Implementation Phase: This project can be divided into five phases, of which the first four phases need financial support from PEREZ-GUERRERO TRUST FUND, within the scope of this project, and the final phase aims at comprehensive promotion of ganoderma lucidum industry in developing countries, improving their economic benefits of agriculture as well as people’s physical quality.

Phase 1: Organize experts to study and research ganoderma lucidum industry in China, which consists of two parts: 1) the status quo of ganoderma lucidum cultivation and deep processing; 2) the distribution of ganoderma lucidum industry, geographical and climatic conditions for cultivation. Through the analysis of

research results, experts propose the methods to improve the yield and quality of ganoderma lucidum cultivation and the utilization rate of deep processing;

Phase 2: On the basis of Phase 1, organize seminars on the development of ganoderma lucidum industry, and share cultivation, processing experience and advanced technologies with related members from developing countries; organize exchange activities for the health care efficacy and health maintenance culture of ganoderma lucidum, to lay a foundation for promoting ganoderma lucidum in developing countries at the next phase.

Phase 3: According to the research and exchanges of the first two phases, put forward a series of environmentally-friendly and high-efficient development modes of ganoderma lucidum industry, including the material selection and temperature control for ganoderma lucidum cultivation in different regions, processing method for diversified ganoderma lucidum and high utilization and recycle of materials after cultivation, etc. The above development modes will firstly be tested in China to verify the feasibility in time.

Phase 4: Visit the developing countries participating in the project to study the status quo of ganoderma lucidum industry, geographical and climatic conditions for cultivation, etc. Based on the successful development mode in China, local demonstrative cultivation and technical training on the related personnel will be carried out accordingly for ganoderma lucidum cultivation and deep processing. Through field cultivation, processing and market analysis, modes suitable for local development of ganoderma lucidum will be further improved.

Phase 5: Based on the above four phases, cultivation and processing of ganoderma lucidum will be vigorously promoted in developing countries, spreading the health maintenance culture of ganoderma lucidum, collaborating with developing countries with a more in-depth perspective, improving their economic benefits of agriculture, and making more people in developing countries benefit from ganoderma lucidum.

3. Beneficiaries:

Direct beneficiary: participants from departments, organizations and enterprises of countries involved in the project (such as personnel participating in research, seminars and trainings).

Indirect beneficiary: through this project, practitioners from different countries involved in high-yield, high-quality cultivation and deep processing technology for ganoderma lucidum and people from the participating countries who benefit from healthy efficacy of ganoderma lucidum.

III. Project activities

Activity 1: “The 12th Convention of Traditional Chinese Medicine (TCM)”

Time: September 24, 2015

Place: Spain

Participants: more than 1000 TCM workers from more than 30 countries and areas

Events: “The 12th convention of TCM” opened on September 24, 2015, and more than 1000 TCM workers from more than 30 countries and areas attended the convention. The theme of the convention was “The ancient TCM system will contribute to the health services of modern society”. The discussion covered the basic theory research of TCM, TCM clinical practice, the international standardization and informatization of TCM, the development of TCM all over the world, protection of TCM culture and intangible cultural heritage, etc. As the first brand of ganoderma industry, Xianzhilou was invited by the organizing committee to the “The 12th convention of TCM” in Barcelona, Spain with thousands of TCM experts.

Effects: At the convention, vice president of Xianzhilou---Xiaoyu Lee introduced the magic effects of ganoderma, the ganoderma products of Xianzhilou and the modern product development of ganoderma. Ganoderma products were showed to delegates after the opening at the exhibition. More than 300 delegates were attracted to come to consult and negotiate, and 5 merchants had the cooperation intention. The latest and the most professional information of ganoderma industry were shared in this convention, and

Xianzhilou organic ganoderma brand was also promoted effectively through this convention. It enhance Xianzhilou's brand popularity and develop the overseas markets.

Pictures:



Activity 2: Japan Exhibition of Health Products Materials (HI JAPAN 2015)

Time: October 7-9, 2015

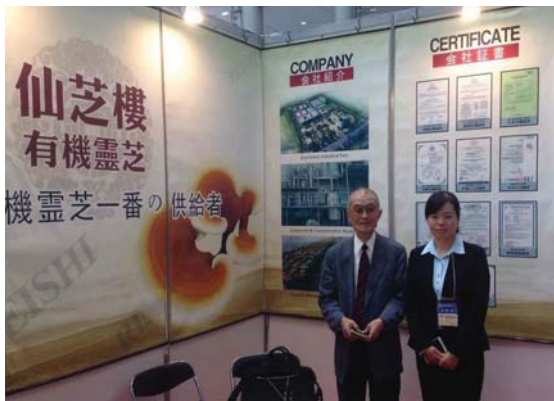
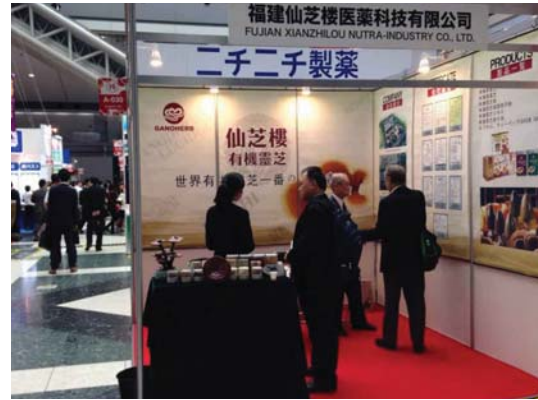
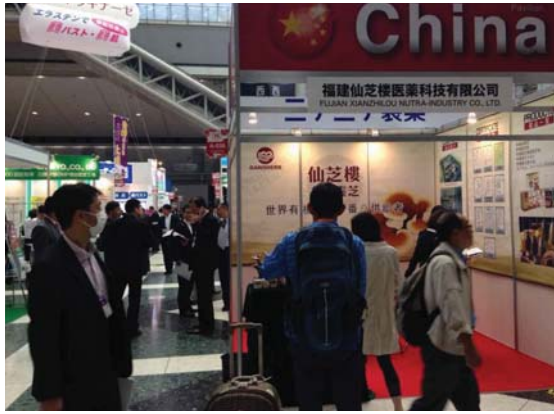
Place: Japan

Participants: Exhibitors from 59 countries and areas USA, Canada, China, Korea, etc.

Events: we attended the HI JAPAN on October 7-9, 2015, which was sponsored by the Japan Bowen Co. Ltd. The exhibition was a professional fair on natural food additives and health food ingredients. Japan was the most important consumer market of health food, and exhibitors from 59 countries and areas were attached to attend, such as USA, Canada, China, Korea, etc.

Effects: As the magic herb from orient, ganoderma has attracted much attention. Xianzhilou, the first brand of organic ganoderma of China, also attracted much attention. Ganoderma products, such as Ganoderma extract material, ganoderma coffee, ganoderma tea, etc., attracted more than 100 exhibitors to consult and negotiate, and 5 merchants had the cooperation intention. Xianzhilou organic ganoderma brand was promoted effectively through this convention, and it was beneficial to develop the overseas markets.

Pictures:



Activity 3: 2016 Western United States Natural Organic Foods Exhibition

Time: March 10-12, 2016

Place: USA

Participants: more than 56000 insiders and 1900 exhibitors from 28 countries, throughout America, Europe, Asia, South America, Africa, etc.

Events: From March 10 to 12 of 2016, we attended the” 2016 Western United States Natural Organic Foods Exhibition” sponsored by the American Health Food Association at Anaheim Convention Center of Los Angeles. The exhibition gathered 56000 insiders and 1900 exhibitors of the world, and merchants from 28 countries, throughout America, Europe, Asia, South America, Africa, went to visit and negotiate.

Effects: With the form of video showing, samples displaying, tasting, sales on the spot, Xianzhilou attracted much attention of merchants around the world. They stopped at the booth, tasted ganoderma coffee, ganoderma tea, and learned the effects of ganoderma. Xianzhilou ganoderma products obtained the customers’ affirmation and faith. We developed overseas markets though this exhibition. Statistically, Xianzhilou has negotiated with more than 50 merchants, and 2 foreign merchants signaled willingness to cooperate with us after learning the scientific research ability of Xianzhilou. This exhibition has raised the awareness and influence of Xianzhilou.

Pictures:



Activity 4: Supplyside West 2016 (USA)

Time: October 6-7, 2016

Place: USA

Participants: Merchants from more than 50 countries and areas, such as America, Europe, Asia, South America, Africa, etc.

Events: From October 6 to 7 of 2016, Xianzhilou attended “Supplyside West 2016” sponsored by Virgo Publishing Inc., which is the biggest professional exhibition of pharmaceutical and health foods materials in the US, showing herb extract, materials of functional foods, pharmaceutical materials, cosmetics materials and health foods materials, etc. There were up to 1500 booths and merchants more than 50 countries and areas.

Effects: Xianzhilou has negotiated with more than 30 foreign merchants, and learned the recent demand trend of health foods in the North America market. 2 foreign merchants showed willingness to cooperate with us after learning the scientific research ability of Xianzhilou. As the biggest exhibition of health and creative materials, the Supplyside West has become the top choice of market developing in North America for Chinese companies of health materials, natural extracts.

Pictures:



Activity 5: 2016 Tnternational Conference on Ganoderma Research

Time: November 11-13, 2016

Place: Fuzhou, Fujian province, China

Participants: 800 people in all, including experts and scholars from America, Serbia, Nigeria, Indonesia and Japan, more than 200 domestic experts and insiders, about 600 persons from all walks of life.

Events: 2016 Tnternational Conference on Ganoderma Research was held in Fuzhou, from 11th to 13th November, 2016 by the International Society on Ganoderma Research (ISGR), United Nations Industrial Development Organization (UNIDO), the China Edible Fungi Association and Fuzhou Municipal People's Government. The conference was organized by the Fuzhou City Bureau of Agriculture, Fujian Xianzhilou Biotechnology Group and Fujian Science and Technology Exchange Center and co-sponsored by Fujian Edible Fungi Industry Association, Fuzhou Edible Fungi Industry Association and Committee on medicinal fungi of Fujian microbiological Society.

The conference consisted of two parts, academia forum of ganoderma and the concert on ganoderma. We invited 20 famous experts and scholars both at home and abroad and more than 200 delegates to share and discuss the ganoderma classification, modern ganoderma cultivation techniques, new ganoderma products development, clinical application of health function and ganoderma culture on the theme of “ Scientific and technological innovation and Ganoderma (Lingzhi) industrial development”. The experts and delegates shared the new research findings

of ganoderma and discussed the development direction of ganoderma industry together in the conference.

Taiwan little giant string and wind orchestra were invited for showing at the concert of ganoderma. They used the traditional art to present ganoderma precious values and mystery story.

Effects: academic influence: 800 people were invited in this conference, including experts and scholars from America, Serbia, Nigeria, Indonesia and Japan, more than 200 domestic experts and insiders, about 600 persons from all walks of life. This was the most influential with the biggest scale academic conference of ganoderma, which gathered the top experts and scholars and insiders of ganoderma both home and abroad to discuss the present and future of ganoderma industry. This conference laid the foundation for promoting ganoderma industry development of Fuzhou even the whole china and transformation, upgrading and sustainable development of the ganoderma industry.

Social benefit: Organizing Committee invited Prof. Shaoguang Hong, chief expert of the national health and family planning commission of China and Beijing University Prof. Zhibin Lin, president of ISGR, to give the conventioners special reports on “Health and Happiness, Health and Ganoderma” and popularize the concern of health. Another highlight of this conference was the concert “Impression Ganoderma Concert”. It was the first connection of traditional Chinese music and ganoderma culture, which brought a music festival, as well as showed the charm of traditional Chinese music and ganoderma culture, and laid the foundation for the traditional

Chinese music and ganoderma culture expanding, and going out of the country to the world.

The success of the conference, promoted the development of edible and medicinal fungi such as ganoderma of Fuzhou, and expanded the traditional Chinese music and ganoderma culture. At the same time, the conference attracted widespread attention, and was reported by many newspaper medias, Fujian Daily, Fuzhou Daily, Fuzhou Evening Post, and dozens of network medias, China News, Ifeng, Tencent, NetEase, etc. they carried on the omni-directional propaganda of the conference, and expanded the influence of this ganoderma conference, the brand effect and the industry position were efficiently promoted as well with the year-on-year growth rate of revenue 16.5%. This conference provided a good opportunity for us to sign some project cooperation intentions, for example, we cooperated to declare "Cooperation Project between China and Serbia" with Prof. Miomir Niksic of University of Belgrade, and the application document has been submitted to the National Science and Technology Exchange Center.

Pictures:







Activity 6: Supplyside West 2017 (USA)

Time: March 10-12, 2017

Place: USA

Participants: 56300 insiders and 2000 exhibitors all over the world, and merchants from more than 30 countries and areas, such as America, Europe, Asia, the South America, Africa, etc.

Events: From March 10 to 12, 2017, Xianzhilou attended “Supplyside West 2017” sponsored by American Association of Health Food. The exhibition gathered 56300 insiders and 2000 exhibitors all over the world, and merchants from more than 30 countries and areas, such as America, Europe, Asia, the South America, Africa, etc.

Effects: Xianzhilou has negotiated with more than 60 foreign merchants, and learned the recent demand trend of health foods in overseas markets. 3 foreign merchants showed willingness to cooperate with us after learning the scientific research ability of Xianzhilou. This exhibition has raised the awareness and influence of Xianzhilou in overseas markets.

Pictures:



Activity 7: JUNCAO Technology Training Courses for Nations alongside the Belt and Road

Time: June 29, 2017

Place: Ganoderma farm of Xianzhilou, Pucheng County, Fujian Province, China.

Participants : 34 students of JUNCAO Technology Training Courses for Nations alongside the Belt and Road from 5 countries such as Mongolia, Sri Lanka and Fiji, etc.

Events: June 29, 2017, 34 students of JUNCAO Technology Training Courses for Nations alongside the Belt and Road from 5 countries such as Mongolia, Sri Lanka and Fiji, etc. came to the ganoderma farm of Xianzhilou in Pucheng County for learning. They visited the ganoderma farm on Wufu, and the farm tour guide explained the growth and harvesting process. The oversea students learnt the dynamic ganoderma and the strict criteria of base management. Then they came to Xianzhi Sci-Tech Industrial Park. They marveled at rows of production equipments with high-tech charm and high quality management system. In the subsequent symposium, students carefully studied the technical advantages and innovative ideas on solving the fungi and forest contradiction, and gave high evaluation to Xianzhilou's efforts for driving farmers' income.

Effects: This activity raised the awareness and influence of Xianzhilou brand of organic ganoderma. As a leader in ganoderma industry, Demonstration Base of Edible-medicinal Mushroom Cultivation and Processing Technology awarded by the United Nations, Xianzhilou committed to the international development of

edible and medicinal fungi, and warmly welcomed the students of edible fungi all over the world, popularized ganoderma cultivation technology of Chinese to the world, and promoted the development of ganoderma health industry.

Pictures:



Activity 8: Conducting the project of “Demonstration and Promotion of Ganoderma High-yield and High-quality Cultivation and Deep Processing Technology in Developing Country “ in Malaysia

Time: June 19-23, 2017

Place: Malaysia

Participants: project manager of Fujian Science& technology Exchange Center, technical experts of Xianzhilou Biology&Science Group.

Events: June 19-23, 2017, project manager of Fujian Science& technology Exchange Center and technical experts of Xianzhilou Biology&Science Group, 5 in all, went to Malaysia for the Perez-Guerrero Trust Fund project “Demonstration and Promotion of Ganoderma High-yield and High-quality Cultivation and Deep Processing Technology in Developing Country ”. By the method of field research, cooperation talking, technology introduction and training, they evaluated the development status and deep process technology demand of ganoderma industry,. Project team successfully accomplished the previous agreement. The project strengthened cooperation and exchange of edible-medicinal fungi industry between China and Malaysia, promoted enterprises of Fujian province going abroad under the strategy of “the Belt and Road”, participating in international program, and realizing technological innovation and technology transformation, and the friendly relationship between China and Malaysia has been promoted through the project practice.

Effects: According to the stage plan and schedule of “Perez-Guerrero Trust

Fund” project, project team carried out the work in multiple places. Firstly, they went to Negeri Sembilan State to visit the Chinese herbal medicine and health food association, demonstration and processing base of health foods of BIOENERGY company, talked with related representatives about the cooperation of edible-medicinal fungi cultivation and health food development between China and Malaysia. Then they went to Johor Bahru and visited medicinal plant base and processing factory, talked about the cultivation technology of medicinal plant and development of ganoderma medicinal value. And thirdly, they went to Kuala Lumpur to visit Malaysian institute of biotechnology and health food, and hold talks on active substance extracting of edible-medicinal fungi and the application of medicinal plants in specific disease treating. Then they visited Natural Summit Health Food and Processing Company, talked about deep processing of ganoderma health food and the trade cooperation. In the TCM doctor and acupuncture association, technical training of “Cultivation Technology and Medicinal Value Research of Ganoderma” was launched for local employees of ganoderma, summarized and discussed the cultivation technology and deep processing technology of ganoderma suit local conditions.

In Negeri Sembilan State, the project team talked about the cooperation of edible-medicinal fungi cultivation and health foods development between Fujian and Malaysia. During the period, Prof. Gaosheng Huang, TCM and health food association, indicated that the health effects and medicinal value of ganoderma were highly approved by Malaysians, especially the Malaysian Chinese,

ganoderma products have vast market potentials, and the local technology and output couldn't satisfy the demands of the market. However, the approval process for imported health foods and medicine were strict and took too much time, and the import of ganoderma products from China has met many obstacles, so the transfer of cultivation technology and deep processing of ganoderma from China to Malaysia would be a good way to solve the above problems. Meizi Huang, the general manager of BOENERGY Science & Technology Ltd., the biggest innovative leading company of Malaysia TCM and Health Foods Association, said that Fujian province has advanced production and processing technology, and hoped during the maturity period of ganoderma in June of next year, the delegation of Malaysian technicians of ganoderma production and processing, Chinese medicine physicians and dietitians would be organized to visit the ganoderma production base of Fujian Xianzhilou Company. And remote video could be used for technology exchange with Xianzhilou experts for the time being.



Members of the project team talking about the cooperation of edible-medicinal fungi cultivation and health foods development with the Malaysia Health Foods Association and BIOENERGY Company



The project team presenting books on ganoderma cultivation and processing technology, medicinal efficacy of ganoderma with cases explanations.



Health foods products exhibition room of BIOENERGY Company



Health foods producing and processing shop of BIOENERGY Company



Test shop of bioactive substance extracting and processing of BIOENERGY Company



Test shop of health foods producing and processing of BIOENERGY Company



Test shop of health foods producing and processing of BIOENERGY Company



Members of the project team taking group photo with the Malaysia Health Foods Association and BIOENERGY Company

Project team visited the BIONICE medicinal plant cultivation base and processing plants, talked about the cooperation of ganoderma cultivation and processing technology and medicinal efficacy development of ganoderma. During the talking, Danmin Huang, chief R&D dean of BIONICE said, for historical reasons, Malaysia has western medicine of high professional standard and mature certification system, however the development of Chinese medicine and medicinal plants were lagged behind, and the operation model as well. In reality, it really does exist that some diseases, which was incurable in western medicine, could be well treated by medicinal plants and Chinese medicine. Chinese medicine, Malaysian medicine and Indian medicine were tied for “the traditional medicine” locally. The lack of systematic certification system of traditional medicine, and authority inspection system of medicinal plant components became the obstacle of the traditional medicine. For this reason, BIONICE tried the combination of Chinese medicine treatment and western medicine inspection, kept an active communication with local government, ensured the quality of medicine plants, transferred the former way of depending on raw materials imports and semi-finished goods to local production, and controlled the planting processing, combined the extracting processing with developing, explored characteristic and sustainable model of Chinese medicine. On the cooperation of ganoderma medicinal value development, Prof. Huang hoped that under the “the belt and the road” strategic background, BIONICE should strengthen cooperation with Xianzhilou in factories building, researching and developing together, set up branch factory in Malaysia relying on

the rich sources of medicinal plants and the strength of Xianzhilou Chinese herbal medicine factory, explore the mode of specialty store, strengthen the medical cooperation of the nations alongside “the belt and the road”.



Talking with Prof. Danmin Huang about the cooperation of medicinal plants cultivation and processing technology and the development of ganoderma medicinal value



Visiting the BIONICB laboratory of medicinal plants extracting and deep processing



BIONICB medicinal plants processing shop



Group photo of project group and experts of BIONICB



The whole equipment of medicinal plants deep processing

The project group visited Malaysian Institute of Biotechnology and Health Food, talked about bioactive substance extracting of edible-medicinal fungi and development of health foods and treatment of medicinal plants on specific diseases.

The consultant of Malaysian Institute of Biotechnology and Health Food, the president of Malaysian cell therapy industry association, professor of Malaysia International Medical University, Deen Lin said, many years of clinical practice had proved ganoderma extract effective in treatment of malignancy, severe liver disease, deep burn, improving the body immunity. As the strict local certification of Chinese medicine and HALAL products, ganoderma products should change the dosage forms to accommodate for local requirements. During the talking, the project group learned the huge demands of Chinese medical screening reagents and specific vaccines and mature technology with clear property right in Malaysia, and the hepatitis C reagent and HFMD vaccine aroused great interest in Malaysia. The next step, project group will build up the channel through the service platform system of technology transfer, and contribute to the international industry-university-research cooperation.



Talking about the technology cooperation and transfer of bioactive substance extracting and detection



Group photo of project group and experts of health foods research institution

The project group visited Kuala Lumpur Natural Summit health foods processing and international trade company and talked about the technology and trade cooperation of ganoderma health foods. The president of Natural Summit said, Natural Summit focused on the development of cultivation and organic medicinal herb resources, extracting of herbal extracts, producing of traditional Chinese medicine and international import and export. Both sides expressed the cooperation willing of extracting line and concentrating equipments, etc. Fujian Xianzhilou has advanced production technology of ganoderma wall-breaking spores powder and spores oil, products showed well efficacy, the both sides should cooperate to develop overseas markets. Malaysia is commonwealth country in history, so its products has advantages to gain access to relative western markets.



Talking with Natural Summit about the ganoderma health foods deep processing technology transfer and trade cooperation

Project group launched training entitled “research of ganoderma cultivation and medicinal value” in Malaysia TCM Doctor and Acupuncture Association, organized the local ganoderma employee, exchanged cultivation technology face to face, explored and concluded the technology of ganoderma cultivation and deep processing accommodate for local conditions. The training was taught by Xiaoyu Li, the vice president of Fujian Xianzhilou Biotechnology Group. More than 20

ganoderma employees and representatives participated in the training. Ms Li explained the ganoderma cultivation situation, technology process, pharmacologic functions, clinical efficacy, cell tests, etc., distributed training books and relative documents, and interacted with students. The training achieved good effects. After the training, the president of Malaysia TCM Doctor and Acupuncture Association issued the “Guest training lecture” certificate to vice president Xiaoyu Li.



Introducing “organic ganoderma cultivation process”



Cell immunity test



Introducing the organic ganoderma greenhouse cultivation technology



Introducing “organic ganoderma cultivation process”



Certificate being awarded to vice president Xiaoyu Li

IV. Activities costs

Activities costs of this project were strictly based on the financial budget. FSTEC referred specialized accountants to manage the economic evaluation and review for this project. Project leaders were also responsible for monitoring of cost for each activities regarding to the project and required for submission of periodical report to the Director General of FSTEC for processing and stage of the project. Details are shown below:

No.	Items	PGTF Fund	Xianzhilou Fund	Total
1	International travel	17,500 USD	79,000 USD	96,500 USD
2	International consultants	4,500 USD	15,000 USD	19,500 USD
3	Training workshop	2,800 USD	32,000 USD	34,800 USD
4	Seminar	4,200 USD	11,000 USD	15,200 USD
5	Domestic travels	580 USD	7,500 USD	8,080 USD
6	Unpaid PGTF Fund	5,420 USD	20,500 USD	25,920 USD
	Total	35,000 USD	165,000 USD	200,000 USD

V. Project management arrangements

1.Management arrangements.

Fujian Provincial Science & Technology Exchange Center with Foreign Countries (FSTEC) will be responsible for overall management of the project. The project will be implemented by FSTEC. FSTEC will appoint a project coordinator who will report to it. All project staff will be appointed by FSTEC and will not hold UNDP contracts. The UNDP Country Office will, on request by SU-TCDC, release an advance equivalent to 90 % of budget resources after project approval. FSTEC will produce a report to be submitted to the UNDP Country Office and forwarded to SU-TCDC. SU-TCDC will recommend release of the remaining 10% of the budget by the Country Office. The role of the Country Office will be to facilitate signature of project document, disbursement of 90 % of resources, forwarding the report to SU-TCDC and disbursing the final 10 % of project funds.

2.Execution Arrangements.

The project will be executed under the National Execution modality (NEX) with Fujian Provincial Science & Technology Exchange Center with Foreign Countries as Executing Agent.

3. Monitoring and evaluation; lessons learned.

Progress monitoring will be done by China International Center for Economic and Technical Exchange, Ministry of Commerce. However, any staff from the UNDP or Perez-Guerrero Trust Fund may undertake monitoring activities in line with managerial roles above. The project may be audited by the Perez-Guerrero Trust Fund. The lessons learned will be written into a report after the project has been implemented.