

R&D COLLABORATIVE PROPOSAL / **COMPANY PARTNER SEARCH**

The information you are about to provide in this form will be distributed among companies matching your company profile and that might be interested in the proposal of collaborative R&D project that you will be describing in this form.
(Please use English language for filling in the document)

YOUR COMPANY PROFILE

Company name:CH Biotech R&D Co., Ltd.

WEB site: <https://www.chbio.com.tw/en/>

Number of employees: 153

Year of Establishment: 2013

Activity/ sector:

Key products and/or services: Plant Growth Regulator (PGR), Fertilizers

Annual turnover: About 1.5 billion NT dollars

Balance Total:

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YOUR COMPANY DESCRIPTION

(Activity description, main markets, strategic alliances, competitive position, share (%) of turnover due to exports, R&D resources and investment, partnerships with other companies or research organization, previous relationship with Taiwanese national R&D institutions, etc)

(The minimum information to show the potential of your company)

CH Biotech is an agricultural biotech company dedicated to innovative crop production technology in Taiwan. Through independent and innovative core key technologies, the Company develops high-efficacy, precise, low-carbon plant growth regulators and fertilizer products that meet the demands of modern agriculture and are distributed in the global agricultural market.

CH Biotech has built up its own Plant System R&D Center to an international level since its establishment. From the advanced laboratory in Zhangbin Industrial Park to the Global R&D Center in Chung Hsing Park, Central Taiwan Science Park, in 2018, CH Biotech has constantly been making investments in upgrading its software and hardware infrastructure, aiming to develop new formulas that are beneficial for global agricultural production. At present, our annual investment in R&D is approximately 20% of revenue and the R&D team of CH Biotech comprises dozens of doctors and masters possessing international perspectives. Supplemented by systematic R&D procedures, we introduced an operating model verified as successful in the U.S. market to allow the operating performance of CH Biotech to achieve new heights every year.

CH Biotech aims at the huge market of world agriculture for business opportunities and demands. We have created innovative core technologies and developed plant growth regulators and fertilizers of high effectiveness, precision, and low carbon which satisfy the production requirements of modern agriculture. For products developed by CH Biotech, we cooperate with distributors by adopting an innovative business model, “asymmetric vertical strategical alliance,” together with an exclusive sales model. Leveraging on the strategic layout of “Taiwan R&D, U.S. Manufacturing, and Worldwide Marketing,” we generate sales in the U.S., Canada, Australia, Brazil, Argentina, Uruguay, Chile, and other countries, and concurrently enjoy high profits arising from the new R&D models.

YOUR COMPANY PRODUCTS

(Technologies, applications, services, previous R&D projects, etc)

(The minimum information to show the potential of your company)

CH Biotech is an agricultural biotech company and our products are mainly plant growth regulators (PGR) and fertilizers. Aiming at the business opportunities of the global agricultural market, we innovate core key technologies autonomously and develops efficient, precise, and low-carbon PGR and fertilizer products in alignment with the needs in modern agricultural production. The unique and innovative features of our products lie in

- i. Reducing carbon emissions in crop production
- ii. Protecting food production under climate change
- iii. Reducing the energy input in crop cultivation.

PGR is a chemical substance synthesized or extracted and transmits signals to regulate and induce crops like plant endogenous hormones. It is a trace biologically active substance that can significantly regulate the growth and development of plants. PGR features low dosage and fast and remarkable effect and is an important agrochemical product in agriculture to achieve high yield, high-quality agricultural products, and environmental protection.

Our fertilizer products are specialized fertilizers. Different from basic fertilizers of nitrogen, phosphorus, and potassium, specialized fertilizers are high-efficiency fertilizers designed according to specific nutrient needs for each type of crop during different periods. This technology product contributes to the development of precision agriculture and the promotion of sustainable agriculture.

Due to the global demand for carbon reduction, we are developing new circular material products for agriculture. We hope that through this new technology product, we can reduce resource waste, help agriculture reduce carbon emissions, and promote the development of circular agriculture.

COLLABORATIVE R&D PROJECT PROPOSAL

(Describe as precisely as possible the technology cooperation proposal and your main motivation, describe what you have to offer and what you expect from your potential partner from a technical point of view and from a commercial point of view, describe the profile of the company that you request, describe if you have previous contact with companies, additional comments)

Driven by the rising global awareness of sustainability, we are developing a new waste hydrolysis technology, subcritical hydrolysis, to transform many residual resources into high-value products. We are initially focusing on residual materials that can be hydrolyzed from proteins into peptides, and we have successfully obtained a small amount of pilot test data. Peptides are of great importance in the medical field and are also widely used in health foods and cosmetics. Therefore, we hope to use subcritical water hydrolysis technology in conjunction with the reuse of residual materials to achieve large-scale and precise production for agricultural applications.

We have obtained preliminary results in small-scale pilot tests of some raw materials. However, due to the large number of parameters that affect the results (raw material composition, physical properties, temperature, pressure, time in each stage, etc.), the current trial and error testing is time-consuming and inefficient. **Therefore, we hope to use data science or AI algorithms to analyze the existing data and other new raw material hydrolysis parameters to further construct our hydrolysis technology production model.**

The next step is to gradually scale up production from small-scale tests and adjust the model according to the actual parameters of large-scale production. Ultimately, we hope to use this model to accelerate the development and prediction of this waste utilization technology and improve R&D and production efficiency.

Targeted PARTNERS in Europe

(if you know a potential company, write its name and contact details in this section. We will try to contact them to evaluate their willingness to meet with you)