

Search for a Spanish Partner for a Bilateral R&D Project

Organization	
Date of Request:	July 11, 2024
Company name:	University of Sharjah
Contact person and title/designation:	Ali El-Keblawy, Professor Department of Applied Biology, University of Sharjah
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SECTION 1: Entity launching the partner search

(Please give brief / to the point explanations. For more explanation on any point below, you may add a short paragraph as an annexure, with this document.)

Sector	Environmental Sciences and Engineering
Entity mission or core functions	The core mission is to promote sustainable agriculture and soil restoration practices within the circular economy framework by utilizing biochar products (i.e., biochar, biochar loaded with biostimulants), nano-biochar, nano-biochar loaded with biostimulants derived from local waste materials, and alginate-based composites for atmospheric moisture harvesting and composting
Date of establishment	2010
Ownership (if public and traded, add stock exchange and ticker symbol)	Department of Applied Biology, University of Sharjah, a public university.
Total number of employees	15 faculty members
Number of employees in R&D	+ 10 faculty and researchers
Key products sold or services provided	<ul style="list-style-type: none"> Biochar Products: Soil amendments and foliar fertilizers for sustainable agriculture.

	<ul style="list-style-type: none"> • Biostimulant-Loaded Biochar: Enhanced biochar products with biostimulants targeting agricultural markets. • Alginate-Based Composites: Products for atmospheric moisture harvesting and improved soil water retention. • Consulting Services: Expertise in biochar production and application for regions facing similar agricultural challenges.
Entity core technical competences	<ul style="list-style-type: none"> • Production of biochar and nano-char from local organic waste. • Integration of biostimulants with biochar for enhanced plant growth and stress resistance. • Development and application of alginate-based composites for atmospheric moisture harvesting. • Field testing and application of biochar and alginate products in real-life farming scenarios in arid regions.
Key R&D programs and activities	<ul style="list-style-type: none"> • Development of biochar from date palm waste and Prosopis juliflora biomass. • Production of nano-char and enhancing its properties for soil application. • Research on the synergistic effects of biochar and biostimulants on soil health and crop productivity. • Development of alginate-based composites for atmospheric moisture harvesting and soil enhancement. • Field implementation and analysis of biochar and alginate products under various environmental conditions.
Examples of accomplishments	<ul style="list-style-type: none"> • Innovative approach to promoting sustainable agriculture and soil restoration in arid regions. • Utilization of invasive species and local waste materials for biochar production. • Enhanced soil fertility and crop growth with reduced reliance on chemical fertilizers. • Development of alginate-based composites for effective atmospheric moisture harvesting and improved soil hydration.
Company strategic orientation	<p>The strategic orientation of the Applied Biology Department at the University of Sharjah focuses on achieving sustainability goals through innovative use of biochar, biostimulants, and alginate-based composites to improve soil health and agricultural productivity in arid regions. The</p>

	<p>project aligns with global efforts to combat environmental issues and establish sustainable agricultural practices, highlighting the importance of investing in sustainable agriculture to create land-based carbon sinks and promote circular economy principles. By turning waste into valuable resources and reducing dependency on chemical fertilizers, the company aims to support regional climate action plans such as the UAE's Net Zero 2050 strategy</p>
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SECTION 2: Spanish Company Profile <i>(Please provide a brief summary of the prospective partner company or organization. This summary may address some or all of the points below)</i>	
<p>Profile of ideal technology partner</p>	<p>The ideal technology partner would be an organization or company specializing in sustainable agriculture, soil health, and environmental restoration. The partner should have a robust background in producing and applying alginate-based composites and brown algae powder for atmospheric moisture harvesting and sustainable agriculture. Experience in large-scale field implementation and commercialization of innovative agricultural products is highly desirable.</p>
<p>Core technological competencies and expertise</p>	<ul style="list-style-type: none"> • Expertise in alginate-based composites production. <ul style="list-style-type: none"> ○ Proficiency in synthesizing and characterizing alginate-based materials for moisture harvesting and soil enhancement. • Advanced capabilities in integrating biostimulants with alginate for enhanced plant growth and stress resistance. <ul style="list-style-type: none"> ○ Development of biostimulant-loaded alginate composites to improve plant health and productivity. • Proficiency in field testing and application of alginate-based products in various environmental conditions. <ul style="list-style-type: none"> ○ Extensive experience in conducting field trials to assess the efficacy of alginate-based products in different agricultural settings. • Competence in characterizing soil properties and monitoring plant health and productivity. <ul style="list-style-type: none"> ○ Advanced soil and plant analysis techniques to evaluate the impact of alginate-based products on soil health and crop yields. • Experience in sustainable agricultural practices

	<p>and circular economy principles.</p> <ul style="list-style-type: none"> ○ Implementation of practices that promote resource efficiency, waste reduction, and environmental sustainability.
<p>Other essential qualifications (e.g.: ownership, track records etc.)</p>	<ul style="list-style-type: none"> • Proven track record in successful implementation of sustainable agriculture projects. <ul style="list-style-type: none"> ○ Demonstrated success in previous projects focused on sustainable agriculture and environmental restoration. • Ownership or access to state-of-the-art laboratory and field testing facilities. <ul style="list-style-type: none"> ○ Equipped with modern laboratories and testing facilities to support R&D activities and product development. • Strong network of collaborations with research institutions and agricultural stakeholders. <ul style="list-style-type: none"> ○ Established partnerships with academic institutions, industry experts, and farmers to facilitate knowledge exchange and collaborative research. • Demonstrated ability to secure and manage funding for large-scale projects. <ul style="list-style-type: none"> ○ Expertise in obtaining and managing grants and investments for research and development projects. • Commitment to environmental sustainability and innovation. <ul style="list-style-type: none"> ○ Dedication to advancing sustainable agricultural practices and developing innovative solutions to address environmental challenges.
<p>If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details</p>	<p><u>I. AlgaEnergy</u></p> <p>Profile: AlgaEnergy is a biotechnology company focused on the sustainable cultivation and commercialization of microalgae. They have expertise in developing high-value products from algae, including biofertilizers and biostimulants that can enhance plant growth and resilience.</p> <p>Contact Details:</p> <ul style="list-style-type: none"> • Website: AlgaEnergy • Email: info@algaenergy.com • Phone: +34 91 490 20 20, +34 91 490 47 94

- **Address:** Avenida de Europa, 19, Parque Empresarial "La Moraleja", 28108 Alcobendas, Madrid, España

2. Algaia

Profile: Algaia is a fast-growing biomarine ingredients company producing and marketing seaweed extracts for food, cosmetics, dietary supplements and agriculture.

Contact Details:

- **Website:** Algaia
- **Email:** services@algaia.com; contact@algaia.com
- **Phone:** +33 2 96 48 54 54 (Headquarters in France, but they operate in Spain)
- +33 (0)1 43 12 58 90 or. +33 (0)1 43 12 58 91.
- +33 (0)2 61 81 98 02

3. Seakura

Profile: Seakura cultivates and processes marine algae for various applications, including agriculture. It develops algae-based products that are environmentally friendly and enhance plant growth and soil health. The company cultivates and adds value to some of the finest and cleanest seaweed in the world.


Contact Details:

- **Website:** Seakura
- **Email:** sfes@sakura.eu
- **Phone:** +34 931 576 008
- **Address:** Sakura Finetek Spain S.L
- Ronda Sant Pere 17, 6-1
- 08010, Barcelona, Spain

4. Biorizon Biotech

Profile: Biorizon Biotech focuses on biotechnology applications in agriculture, producing biostimulants, biofertilizers, and other products derived from microalgae. Their expertise in algal biotechnology makes them a suitable partner for projects involving alginate-based composites.

	<p>Contact Details:</p> <ul style="list-style-type: none"> • Website: Biorizon Biotech • Email: info@biorizon.es • Phone: +34 950 340 617 • Address: PITA Science and Technology Park, C/ Albert Einstein, 15, 04131 El Alquíán, Almería
<p>If you are interested in collaboration: please specify details and other important information you want to share with a potential company</p>	<p>We are interested in collaborating on projects focused on developing and commercializing alginate-based composites and brown algae powder for sustainable agriculture. Our goal is to enhance soil health, increase crop yields, and support environmental restoration efforts. We seek partners who can contribute expertise, resources, and funding to jointly advance these initiatives.</p>
<p>Interested areas of collaboration</p>	<ul style="list-style-type: none"> • Co-development of alginate-based composites and brown algae powder products tailored to specific crops and environmental conditions. • Large-scale field trials and implementation of alginate-based soil amendments for atmospheric moisture harvesting and soil enhancement. • Joint research on the impact of alginate-based products on soil health and crop productivity. • Commercialization strategies and market development for innovative agricultural products. • Exchange of knowledge and technologies related to sustainable agriculture and environmental restoration.
<p>Specific R&D contribution you are seeking/offering</p>	<p>We are offering our expertise in the production of alginate-based composites, biostimulant integration, and field testing. Our research team is equipped to conduct comprehensive soil and plant analyses, providing valuable data on the effectiveness of alginate-based products. We seek contributions in the form of funding, advanced laboratory capabilities, and market access to support the successful commercialization of these products.</p>



Signature

Name: Ali El-Keblawy

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