BPH GLOBAL LTD
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Company Announcements Platform
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Singapore Polytechnic Completes R&D Program for Green Seaweed Kefir Beverages

Highlights

- **R&D project successfully completed by Singapore Polytechnic using facilities in the School of Chemical & Life Sciences.**
- **Two beverage types developed with a shared seaweed-based formulation:**
  - **A probiotic kefir beverage (non-pasteurised) containing live bacteria cultures to promote gut health, with a short shelf life (3 days once opened).**
  - **A postbiotic kefir beverage (pasteurised) retaining health-promoting metabolites but without live bacteria, offering a long shelf life (up to 12 months).**
- **Both beverages use Caulerpa lentillifera (Seagrape) extract as the core fermentation material.**
- **Multiple formulations refined through two rounds of sensory evaluation, producing appealing colour, flavour, and texture.**
- **Project carried out over 18 weeks (April–August 2025), overseen and reviewed by the Company's R&D consultant Gaia Mariculture.**
- **Gaia's review confirmed the potential health benefits, consumer appeal, and commercial pathways of both formulations.**

The Board of BPH Global Ltd (ASX: BP8) (**BPH** or **Company**), is pleased to advise that Singapore Polytechnic (**SG Poly**) has successfully completed the R&D program for the development of two innovative Green Seaweed Kefir Beverages.

This project follows the announcements made on 1 May 2025 and 22 May 2025, under which BPH Global's wholly owned Singapore subsidiary, Stemcell United Pte Ltd (**BP8 Singapore**), engaged SG Poly to conduct R&D activities to explore how kefir fermentation, when combined with the nutrient-rich properties of green seaweed, could produce functional consumer beverages The fermentation process increases the bioavailability of seaweed nutrients, making them more easily absorbed by the human body for maximum health impact.

The program was conducted at SG Poly's School of Chemical & Life Sciences over approximately 18 weeks from 16 April 2025 to mid-August 2025. Following completion, the program report was reviewed by the Company's R&D consultant, Gaia Mariculture, to assess methodology, outcomes, and potential applications. The seaweed *Caulerpa lentillifera* (Seagrape) extract was used as the fermentation material. Multiple samples were produced, each with different taste profiles and colour

characteristics, refined through two rounds of sensory evaluation. The formulation resulted in beverages with an attractive, naturally vibrant red colour (from beetroot extract), a distinctive flavour profile of fruity tartness with light fizziness and subtle sweetness, and a smooth, easy-to-drink texture.

Managing Director, Matthew Leonard, said: “We are very pleased with the successful completion of this project and the outcomes achieved by Singapore Polytechnic under the guidance of our R&D consultant Gaia Mariculture. The project has delivered two promising seaweed-based kefir beverages — a probiotic version designed for fresh consumption and a postbiotic pasteurised version offering longer shelf life and greater commercial potential.

This represents another milestone in BP8’s mission to develop innovative, science-driven consumer products based on natural and sustainable seaweed-derived ingredients. We look forward to further refining these concepts and exploring opportunities for market introduction.”



Caulerpa lentillifera (**Seagrape**) and the Postbiotic Green Seaweed Water Kefir Beverage

Two Beverage Types Developed

The R&D program confirmed the feasibility of developing **two distinct product formats** from the shared seaweed-based kefir formulation:

- **Probiotic Kefir Beverage (non-pasteurised):**
    - Contains live bacteria cultures to support gut microbiome health.
    - Offers potential functional benefits including digestion support, immune enhancement, and improved nutrient absorption.

    - Can be stored unopened in a refrigerator for up to three months but has short shelf life of three (3) days once opened, suitable for fresh consumption.
- **Postbiotic Kefir Beverage (pasteurised):**
    - Pasteurisation deactivates live bacteria but preserves beneficial metabolites (postbiotics).
    - Retains the nutrient-rich seaweed and plant-derived ingredients with a long shelf life (up to 12 months).
    - Provides a more practical commercial pathway due to extended stability and scalability.

Consultant Oversight and Assessment

The R&D work was overseen by the Company's R&D consultant, Gaia Mariculture Pte Ltd (Gaia), which provided direction throughout the project and conducted a post-completion review of Singapore Polytechnic's final report.

Gaia noted that the project demonstrated the feasibility of producing both probiotic and postbiotic kefir beverages incorporating seaweed nutrients, while also highlighting the potential for health benefits consistent with the Company's stated objectives:

- **Supporting blood sugar management and anti-hyperglycaemic function**;
- **Improving digestion and gut microbiome balance**;
- **Enhancing immune function**; and
- **Increasing the bioavailability of seaweed-derived nutrients** through fermentation.

Gaia further commented that the iterative approach adopted by SG Poly — involving multiple trials, adjustments, and taste evaluations — has delivered **two functional beverage concepts** that could form the basis for future product development and commercialisation pathways.

Next Steps to Commercialisation

Following the successful completion of the Singapore Polytechnic R&D program, the Company will progress the probiotic and postbiotic beverage concepts toward potential market entry. Key steps include:

- **Independent Review Completed:** Gaia Mariculture has confirmed that the formulations deliver the intended functional health benefits and that the R&D outcomes are robust.
- **Safety & Shelf-Life Testing:** Undertake extended microbiological, shelf stability, and packaging compatibility studies to ensure both formulations meet safety and quality standards for their intended shelf lives (three (3) days and 12 months respectively).
- **Consumer Acceptability Trials:** Ongoing taste panels and sensory evaluations will continue, although initial feedback indicates the beverages already satisfy taste and flavour standards.
- **Regulatory & Labelling Compliance:** Assess the products against food safety regulations in target markets and ensure health claims are substantiated and compliant.
- **Pilot Manufacturing & Scalability:** Transition from laboratory-scale production to pilot-scale trials to confirm batch consistency, optimise processing parameters, and evaluate cost-effectiveness of large-scale manufacturing.
- **Commercial Partnerships:** Identify and secure distribution and manufacturing partners, including opportunities to license production rights to qualified third parties.
- **Market Positioning & Appeal:** Develop branding, pricing, and go-to-market strategies aligned with consumer demand for sustainable, plant-based functional health products.

The Company will keep the market informed as it advances these initiatives and evaluates opportunities for commercialisation of the seaweed-based beverage concepts.

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Authorised for release by:
The Board of BPH Global Ltd

For further information, please visit our website at www.bp8global.com or contact the Company Secretary on 03 9088 2049.