Expanding to new horizons

THE sea's equivalent of the famed bird's nest is actually a type of seaweed, also known as red seaweed. *Gracilaria changii* is one of red seaweeds found abundantly in Malaysia with one of the highest agar output in the world.

In addition to being used in Asian desserts, agar is important scientifically as a solid substrate to contain culture used for microbiological work. Industrially, it is used as a vegetarian substitute for animal-based gelatine and as a clarification agent for paper or fabric production.

UCSI University's (UCSI) head of the aquatic science programme, Asst Prof Dr Teo Swee Sen, was first introduced to the seaweed by her supervisor Assoc Prof Dr Ho Chai Ling.

"Assoc Prof Dr Ho is an important mentor to me and it was she who brought me to the mangroves where we waded through the mud to collect the seaweed," she says.

Dr Teo then discovered that the seaweed was a valuable resource and researchers from all over the world came to Malaysia to harvest it for scientific study.

"Dr Ho spoke highly about the scientific and nutritional value of the seaweed and was surprised that scientists were not paying more attention to it," she says.

As she pursued her postgraduate degree, she decided that she wanted to shed more light on the properties of *Gracilaria changii*.

Today, Dr Teo has published numerous research papers on the subject and is focused on sharing her knowledge with the next generation of scientists through the new BSc (Hons) Aquatic Science programme launched by UCSI.

UCSI is the first university in Malaysia to offer a degree that covers the study of both freshwater and marine ecosystems, including the ocean, wetlands, rivers, lakes and coastal estuaries.

The degree focuses on the fundamentals of preserving, managing and exploring the various water sources through the three-pronged approach – repair, rehabilitate and conserve.

With 70% of the Earth covered by water, Dr Teo points out that any threat to the fresh water or marine ecosystems will impact the entire planet and its inhabitants.

This gives graduates of the BSc (Hons) Aquatic Science programme tremendous opportunities in terms of making a difference and growing their career.

Students in this programme explore the wonders of Malaysia's aquatic systems and use their knowledge to conserve and manage the current water bionetwork in maintaining the aquatic ecosystem for the next generation to explore and learn from.

In the final year of the BSc (Hons) Aquatic Science programme, students have the option to specialise in either aquatic health and management or seafood processing and safety.

The former is related to biotechnology and paves the way for career opportunities in disease identification and molecular biology. The latter is associated with the study of food science and includes seafood farming, processing and packaging.

Students can also decide to focus on the research field and eventually academia as aquatic research is heavily supported by the Malaysian government.

Dr Teo says, "Students who are passionate about the aquatic world and possess patience will be well suited for the course. The experience is always fulfilling as it involves exploring unknown areas of the aquatic world. Not only do you make a difference in the world, you will also be building a pathway to your future career."

■ For more information, call 03-9101 8882 or visit *www.ucsiuniversity.edu.my/onlineenquiry*

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UCSI's head of the aquatic science programme Asst Prof Dr Teo during her research on the red seaweed, *Gracilaria changii*.

Asst Prof Dr Teo says Malaysian seaweed is garnering interest from around the world.