



KEEPING IT FRESH

Anneline Padayachee, the first food scientist finalist in a national communication competition, is helping keep the importance of research in the public eye.

Words by Marna Martlew

Research scientist, food technologist, nutritionist, personal trainer and health coach: 29-year-old Anneline Padayachee can rightly lay claim to all these titles. In October 2012 she added "Freshie" to this impressive list, joining a select group of young Australian scientists as a finalist in Fresh Science, the first food scientist to do so in the competition's 15 year old history.

Fresh Science is a national program funded by the commonwealth government, aimed at training young scientists in the art of clear communication so that their research can engage a broader audience.

"It was the best experience I've ever had and has opened up so many opportunities," Padayachee said.

The program targets emerging scientists whose research, although published in peer reviewed journals, had yet to gain a broader audience or media coverage.

Padayachee, a professional member of AIFST, admits to being slightly overwhelmed by the public response to her research, involving nutrients found in black carrots, generated by her participation in Fresh Science.

"I had to start a Facebook page to answer nutrition enquiries and I was working as a contract food technologist at OneHarvest [a Brisbane based company specialising in supplying fresh produce to supermarkets] and some children in a visiting school group recognised me as the 'Black Carrot Doctor' from my appearance on the ABCs Midday Report. That really amazed me," she laughed.

Based at the Centre of Nutrition and Food Sciences, a division of the Queensland Alliance for Agriculture and Food Innovations located at the University of Queensland (UQ), Padayachee worked on a collaborative project involving the ARC Centre of Excellence in Plant Cell Walls

not just the juice, but the fibrous pulp as well," Padayachee said.

The outcomes from Padayachee's PhD research and her ability to engage with a panel of science media experts earned her a Queensland state finalist berth in the Fresh Science competition and, ultimately, a place in the finals.

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and CSIRO. The study, a world-first, found that up to 80 per cent of antioxidant polyphenols, which have demonstrated anti-cancer behaviour, bind to the fibre component in fruits and vegetables during cell breakage, caused by chewing, juicing, pureeing etc. Fibre not only helps keep the gut clean but delivers the polyphenols to the colon where they are released, playing a vital role in bowel cancer prevention. Black carrots, the forerunner to the now more common orange variety, are rich in polyphenols and were used as the model system by Padayachee.

"I really believe in my research so if I can get anyone else interested in terms they can understand then I feel I've done a good job," she added.

"I'm really pleased that the media picked up on the main message I wanted to get across about the importance of consuming everything (when eating fruits and vegetables),

"We learnt the basics of media releases and met journalists as part of a two day workshop for state finalists. This was followed up by intensive media training in Melbourne with journalists and science communicators for the 12 national finalists," Padayachee said.

"It was a fantastic experience and I'd really encourage students to give it [Fresh Science] a go. The process really forces you to get down to the essence of the research you're doing," she said.

A Passion for Food

Padayachee, who migrated to Australia with her family from South Africa at the age of five, credits her family as a big influence on her attitude towards healthy food choices and appreciation of different food flavours and textures.

"Food has always been a central part of my family ... Whilst my family were not nutritionists they liked us to eat





well," she said.

Padayachee's passion for food science was ignited at high school when she was introduced to the concepts of food chemistry in a home economics class.

"I came alive and found the subject so interesting. Then I did work experience with a dietitian in a hospital, which didn't really appeal to me. But another stint of work experience with a food technologist at food equipment manufacturer Heat and Control really left me wanting to know more. I remember she was making chocolate topping and garlic flavoured nuts and I found the science behind it fascinating," Padayachee said.

Still, when it came to choosing an undergraduate degree she was torn between studying food science

and studying nutrition. In the end a bachelor of applied science at the University of Queensland fulfilled both ambitions, combining the two disciplines and, ultimately, leading to a doctorate in nutritional food science in July 2012.

Padayachee's supervisor at UQ and nominator for Fresh Science, Mike Gidley, is the director of the Centre for Nutrition and Food Sciences. He said that her passion for communicating nutrition developed as her research project unfolded.

"Anneline has an engaging presentation style coupled with an infectious enthusiasm for communicating the benefits of healthy food choices," Gidley said.

As both a registered nutritionist and qualified personal trainer and fitness instructor Padayachee takes her role as

an educator and health coach seriously, advising clients with chronic health issues such as diabetes and obesity.

If that is not enough, the talented researcher has also found time to present her research findings at AIFST and IUFOST conferences and symposia. She is currently on the organising committee for the Nutrition Society of Australia's national conference being held in Brisbane in 2013.

Having decided to take time out from research to consider her future career, Padayachee is currently lecturing in nutrition at a private college and is involved in Healthshare, an online health information network. She is sure that the lure of research will lead her back to academia.

"I think it's important to take time out to think about where you want to take your career. Now I feel I'm definitely ready to go back to research. When you are doing your PhD it drives you nuts by the end but it also opened up so many possibilities and raised so many questions that I'd like to answer," she said.

Padayachee is interested in broadening her research to include other nutrients and to unlocking the mechanisms behind how nutrients create a protective environment against diseases such as colorectal cancer. A firm believer in the development of functional foods, Padayachee believes that the Australian food industry has a very important role in developing healthy foods that consumers want and is proud of the fact that One Harvest is starting to use black carrots in their salads.

In the meantime, as a Fresh Science finalist she will be writing about her research for the general science publication *Australasian Science*, further honing her communication skills and getting the message out about the importance, and excitement, of scientific research to our everyday lives. By doing so she will be adding the titles of science communicator and role model to a growing list of achievements.