Cite as: Carmen Mac Gregor, The Perks of PERKii Probiotics, Innovation & Impact, 2021

URL: iai.digital/2021/perkii

The Perks of PERKii Probiotics

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Abstract: Did you know that stomach acid can be harmful to probiotics? PERKii uses globally patented micro-encapsulation technology to protect probiotics from the stomach's acidic environment, allowing them to get through your gut.

Keywords: Probiotics, Encapsulation, Micro-shield.

1. The success story

The gut acts as an ecosystem for our microbiota, thus has become the target of many probiotic products. PERKii® creators recognised that probiotics must pass through the acidic environment of the stomach before they can reach the gut and exert their benefits. As a result, PERKii® became the world's first non-fermented, low-calorie probiotic drink using ProGel™ technology to micro-encapsulate the live probiotics. Since starting in 2016, PERKii® has successfully commercialised the patented technology to produce a range of formulated probiotic drinks that are now available nationwide in Australia, with over 10,000 points of distribution.

2. How did we start?

In 2005, at the University of Queensland, Professor Bhandari successfully developed an encapsulation technology that became known as ProGel™. He recognised that the technology had exciting consumer potential. PERKii's® CEO, Anthony Davie, attributes the motivation behind the start-up to the rationale that "as *probiotic products gained popularity, it became evident that many of the existing products were not able to ensure the survival of live bacteria by the end of their shelf-life*. *They were also not able to safeguard the passage of the probiotics through the acidic stomach environment and into the gut*". After identifying a gap in the market, the PERKii® creators envisioned a targeted release probiotics product that not only improved the bio-delivery of probiotics but also improved the on-shelf stability and taste of them. With support from shareholders including Uniseed, UniQuest, and Brisbane Angels; ProGel™ decided to spinout the PERKii® probiotic drink opportunity into PERKii Pty Ltd.

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3. Our Technology

Developed at the University of Queensland, the PERKii® innovators re-conceptualized the ProGel™ micro-shield technology to micro-encapsulate the probiotics. This facilitated protection of the probiotics from de-naturing, due to acidic pH levels (as low as pH 2.0), meaning they can travel through the stomach to reach the gut. Once in the lower intestine, the probiotics are released from their micro-shield and attach to the intestinal wall, which is where they impart their intended benefits.

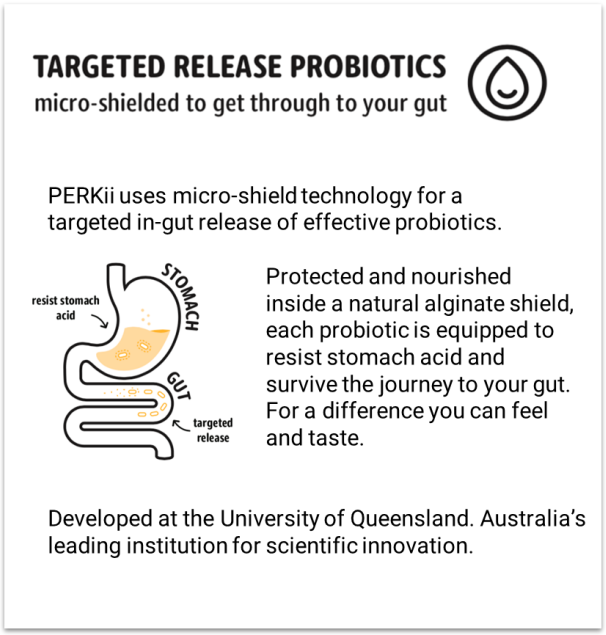

Figure 1. *Example of PERKii's consumer-friendly description of the technology.*

4. The journey so far

PERKii® launched its targeted-release probiotic drinks in mid-2016 with early-stage backing from Uniseed, Brisbane Angels, and UniQuest. Uniseed has supported the Australian start-up throughout the commercialisation process and backed its local market expansion. In 2018, PERKii Pty Ltd secured investment from the Queensland Government's Business Development Fund to further increase production and the aim of international expansion. Currently, PERKii® is trademarked with patents granted in Australia, New Zealand, Japan, South Korea, and the United States. Davie laments that achieving this rapid uptake has meant that PERKii® can continue to *"successfully commercialise this university-led innovation with international expansion in mind"*. Davie highlights that "*funding the business during the time it takes to achieve commercialisation within national supermarket chains has required patience*". In saying this, significant venture capital has meant the drinks are now available nationally in Coles and Woolworths supermarkets, quick-service restaurants, airports, petrol & convenience stores, as well as major independent grocery stores across Australia and New Zealand.

PERKii® was originally available in three flavours as a still formulated drink containing Lactobacillus probiotic. The success of PERKii's® original drinks led to product expansion in November 2020, and the company launched a new sparkling drink range containing the Bifidobacterium probiotic. Both the still and sparkling beverages contain over one billion microencapsulated probiotics. PERKii has further "*delivered consistent and strong revenue growth each year since its inception in 2016 and has continued to enjoy strong sales growth in 2021 despite the challenges of COVID-19*" says Davie.

PERKii® has most recently engaged in research and inquiry into effective probiotics, and even commissioned Emeritus Professor Ross Barnard to conduct an independent review of the Lactobacillus and Bifidobacterium probiotics used in the drinks. Barnard reported that these probiotics may support the body's immune function through "immunostimulatory effects". By researching and understanding the benefits of particular probiotics, PERKii® has been able to incorporate effective probiotics into their drinks and further modernise the probiotic industry by developing a dairy-free drink that is neither fermented nor cultured.

Figure 2: *PERKii's current product range of still and sparkling drinks.*

5. Look to the future

Davie posits that so far, PERKii® has "*successfully commercialised a lab-based science into a scalable product that can be produced safely and sustainably at the highest quality*. *PERKii® has further translated the scientific benefit of the technology into a consumer relevant proposition and launched within national supermarket chains*". Along with these accomplishments are challenges explains Davie, such as "*the difficulty to accelerate international exports during COVID-19*". In saying this, Davie insists that PERKii® is continuing to endeavour to make PERKii® products available globally either organically, through a sale, or a significant distribution arrangement.

It is evident that PERKii® has the potential to revolutionise gut health on a global scale, as consumers are becoming more aware of the probiotic industry, they are also becoming aware that probiotics don't survive the journey through the stomach. Davie is adamant that by staying true to their founding purpose *"to support overall health through better gut health"*, PERKii® has a bright future ahead.

References

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The company

PERKii
targeted release probiotics

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Investment Rounds (collected in 15.08.21)

| April, 2016 | Uniseed, UniQuest, Brisbane Angels, Advance Queensland Business Development Fund | 5.5m

| July, 2018 | Uniseed, Brisbane Angels, Advance Queensland Business Development Fund | $3.0m

| April, 2020 | Uniseed, Brisbane Angels | $2.0m

Key facts (collected in 15.08.21)

The company started in 2015.

The first product was delivered in mid-2016.

The company currently employs 14 employees.

The next milestone is launch further new products in the Australian market.

Carmen Mac Gregor holds Bachelor of Pre-Medicine, Science and Health, and is currently studying a Doctor of Medicine at the University of Wollongong. Through her tertiary education, Carmen has engaged in multiple research focused subjects and has used her critical thinking skills to evaluate the clinical significance of research papers. Carmen also spends time tutoring for the University of Wollongong, where she supports students who are studying medical and health sciences.

Carmen has experience volunteering and working within rural healthcare settings. In particular, Carmen has worked as a valued team member at Nardy House, which is a rural residential care service that supports people living within profound disabilities. During her time at Nardy house, Carmen was involved in research and product evaluation to ensure residents received high quality, person-centred care.

Carmen has a passion for improving the quality and delivery of healthcare through advancements in research and innovation. She is committed to supporting the health needs of both individuals and communities where she hopes to become a clinician who supports the progression and direction of quality health care.