



Australian Government



THE PRIME MINISTER'S  
PRIZES FOR SCIENCE

*Celebrating 20 years*

## Dr Luke Campbell

nura

### 2019 PRIZE FOR NEW INNOVATORS

- Dr Luke Campbell is the co-founder of nura and inventor of the nuraphone—headphones that automatically learn and adapt to your unique hearing in less than a minute.
- Much like prescription glasses improve a person's sight, the nuraphone is uniquely tailored to enhance the clarity of the user's hearing.
- The nuraphone measures your hearing by detecting activity in the cochlea inside your inner ear. This activity in the cochlea generates new vibrations that can cause a faint sound to come back out of the ear.
- The nuraphone uses highly sensitive microphones (the same series of Knowles® microphones used by NASA for the Mars2020 mission) and advanced signal processing techniques to measure Otoacoustic Emissions (OAE)—sounds coming out of your ear—to understand how sensitive your hearing is to different tones.
- nura's patented technology takes these techniques further—rather than merely confirming activity, the nuraphone measures the relative sensitivity of your hearing across different tones.
- By detecting the ear's response to a variety of frequencies, the nuraphone can create a hearing profile. Once complete, this hearing profile is used to adapt the music to match the nuraphone 'sound system' to your 'hearing system', delivering perfectly balanced and crystal-clear detail.
- Dr Campbell has been involved in every stage of developing this concept—from R&D to commercialisation—and remains the Chief Technology Officer of the company.
- Significant intellectual property is involved in the nuraphone, as the concept of an in-ear and over-ear headphone with personalised sound is unique in a highly competitive global marketplace. As a result, Dr Campbell is the co-inventor of a vast array of patents and patent applications.
- CES—the largest electronic showcase in the world—named the nuraphone the Best Innovation in the headphone category for 2018.
- Dr Campbell has demonstrated a willingness to think outside the box and learn new skills essential to support the product's commercialisation.
- He showed great fortitude and conviction to reveal what was possible, overcoming the expectations of many in hearing science, who shared strong opinions that the product would not work.
- His Australian-owned company now has more than 65 employees, is internationally recognised, and presides over the world's largest database of human hearing health ever created.





THE PRIME MINISTER'S  
PRIZES FOR SCIENCE

*Celebrating 20 years*

## QUALIFICATIONS

- BMedSc (Hons), University of Melbourne (2009)
- PhD Otolaryngology, University of Melbourne (2019)

## CAREER HIGHLIGHTS

- 2018 Innovation Honouree—Headphones for nuraloop, CES 2019
- 2018 Red Dot: Best of the Best Award—Headphones for nuraphone
- 2018 Best of Innovation—Headphones for nuraphone, CES 2018
- 2018 Australia's Most Funded Kickstarter Project—nuraphone
- 2018 Gold IDSA.org IDEA award—consumer technology category
- 2018 Good Design Award for product design in the consumer electronics category
- 2016 HAX8 Hardware Accelerator Program—nura
- 2015 STC's Medtech's Got Talent finalist—nuraloop
- 2015 Melbourne Accelerator Program—nuraloop