

# Health researcher Apo Aporosa

*A kava plant.  
Photo:  
J.D.  
Baker.*

## Affiliations

Apo was born in Tāmaki Makaurau/Auckland. “I identify as kailoma; of iTaukei (indigenous Fijian) and European whakapapa (vuvale o Robinson). My dad is Pākehā and my mum’s great-grandmother was Adi Maimalaga, the daughter of Tui Macuata Naerevono, from the village of Naduri in northern Fiji.”

## School and subjects

Hamilton Boys’ High School and Richmond Methodist High School in Kadavu, Fiji.

“I was interested in Biology at school, but I had reading and learning difficulties which affected all my schooling and early work life. Instead of admitting this, I tried to hide it; in hindsight, that was probably harder than seeking help. I left school with no School Cert passes and joined the NZ Army. My years in the army allowed me entry into the NZ Police.

“Then I worked on development projects in Fiji, at a rural school and village I am related to. This provided my first real opportunity to teach. Because I came from Aotearoa, I was asked to teach New Zealand Geography to Year 9 students, thrown in the deep end. I realised I had skills to assist other slow learners.”

“My wife Jan encouraged me to go to university; I thought she was crazy at first. Pacific student support were amazing when I was up front about my reading and learning difficulties, and this opened up a completely new world to me, one in which learning actually became fun instead of pressured.”

## Training and jobs

**Gunner**, Royal NZ Artillery, 1981-4.

**Constable**, NZ Police, 1985-1992. “I left the police with post-traumatic stress disorder (PTSD)”.

**Community development worker**, Aotearoa, 1993-2000 and Fiji, 2000-2010.

**Teacher**, Fiji, 2004-5.

**Certificate of Adult Teaching**, 1999, WINTEC.

**Master’s**, 2006, and **PhD in Development Studies**, 2013, Massey University.

**Research Fellow**, Waikato-Tainui College for Research and Development, 2013-16.

**Research Fellow**, University of Waikato, 2016-22.

## How he got into science

“Jan, who is a doctor of clinical and neuropsychology, suggested I include brain function tests in my PhD. That was my major introduction to science. My work is only possible with the support of people like Jan and others.”

## Fields of science

Health research; ethnopharmacology; cultural identity and its link to academic achievement.

*Dr Aporosa (kneeling) presents a tabua (whale tooth) to former Governor-General Sir Anand Satyanand, after he became Chancellor of the University of Waikato.*



## Research examples

### *Impacts of kava on thinking and behaviour*

“Kava is a plant and drink with huge cultural significance. Kava contains 20 kavalactones, compounds that act on the body and mind,” says Apo. “However, most research into kava has used kava tablets, which include only the six most active kavalactones.”

Although kava-tablet research has shown that kavalactones act on receptors in the central nervous system, slowing response times in the muscles, limbs and brain, there is still a great deal about kava that is unknown.

“What we do know is that kava is very safe. It’s not alcohol, is non-addictive and regular high-volume use does not cause the negative health and social issues of alcohol. Because kava does not interfere with decision making, it is often drunk to talanoa (discussion) aimed at strengthening relationships”, says Apo.

To further understanding on kava and thinking, Apo is working with ESR to measure how kava metabolises in the body. “We don’t even know the drug half-life of kava yet, so we can’t tell if the kavalactones in my body are one hour old or three days old.”

### *Using Western standardised psychometric tests ethically with Pasifika people*

Apo says that most Western-developed psychometric measures, such as Body Mass Index (BMI) and brain function tests, were developed only with European populations to predict what is ‘average’ or ‘normal’. “Using European norms to evaluate Pacific and other indigenous peoples is both unethical and colonising, as results automatically depict these popula-

tions as deficient in some way.”

Instead, in Apo’s kava research, the Pacific experimental and control groups were measured against each other and against their own baselines. This allowed for Pacific world views and ways of knowing and understanding.

## How he finds things out

Surveys, interviews, psychometric testing, controlled trials, observation.

To test the effects of kava on the brain, Apo used the Brain Gauge, a special type of computer mouse, which analyses perceptions between fingertips and brain to measure speed (reaction time and fatigue); accuracy; sequencing (how well the brain tracks the order of events); plasticity (how well the brain reacts and adapts to change); how well the brain tracks time; and concentration.

Participants’ responses were measured before the kava sessions, at three hours, and after six hours of kava drinking. These measures were compared with a control group that did not drink kava.

## Most valuable results

### *How kava affects the brain, body and driver safety*

“The tests supported users’ experience; that kava doesn’t affect us in the same way as alcohol or other recreational drugs – it simply relaxes us without interfering with reason or disrupting quality conversation,” says Apo.



*Apo serving kava.*

## Ngā Kupu

**Arotahi** – To concentrate, concentration

**Hinengaro** – Mind, awareness

**Paerewa** – Standard, benchmark

**Roro** – Brain

**Tāmitanga** – Colonisation, trauma

**Taraiwa** – To drive, driver

**Tirohanga tauanga** – Survey

**Whakamātau** – Experiment, trial.

*Paekupu & Te Aka Māori Dictionary*



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*Traditionally influenced kava use in Aotearoa.  
Photo: Apo Aporosa.*

Of the six factors tested by the Brain Gauge, kava had no significant effect on concentration, accuracy, sense of time, plasticity or fatigue. However, it did strongly affect how the brain orders events. This suggests that kava, in large amounts, can affect driving.

Driving after a kava session is common in Pacific communities. Apo distributed a leaflet to Pacific kava drinkers about this result, in four Pacific Island languages and English, to mixed reactions. Many valued the information, although substantial change in driving behaviour is yet to be seen. Some were concerned that the results could lead to restrictions on kava's availability, which could damage Pacific cultural practice and push kava drinkers towards alcohol.

Apo was recently awarded a Fulbright scholarship to study the potential of kava circles and talanoa in reducing trauma symptoms among post-combat soldiers. He says, "Soldiers have said that this works – we now need to test it scientifically."

## Science and Pasifika knowledge

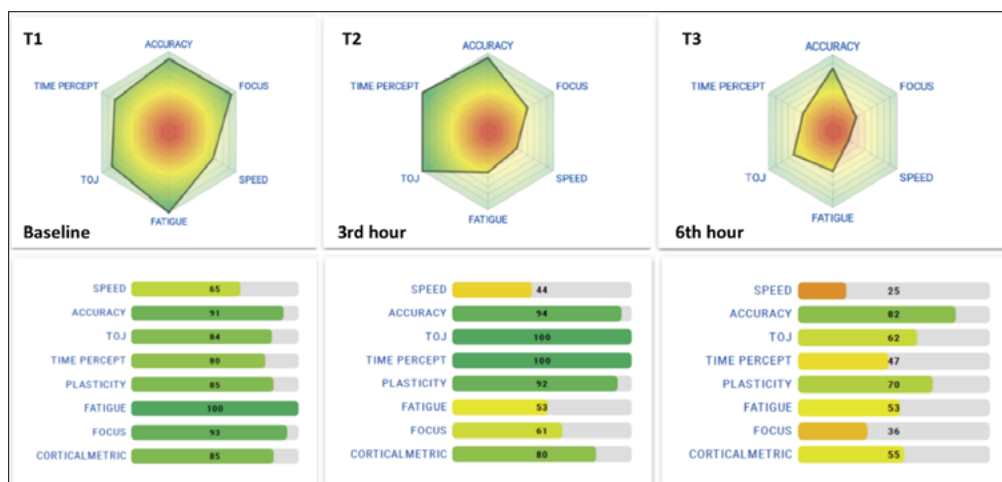
Apo uses the [Pacific Post-development Methodological Framework](#), where communities determine research topics, research interactions are "based on respect, and use appropriate protocols", and results are returned to communities in ways they find useful. This limits power imbalances and helps create new knowledge.

## What he likes about science

"Science is exciting because you can be the

first in the world to discover new things that can change peoples' lives for the better. There is always something new to learn."

"Science is not only a Western thing. Pacific and Māori students have science in their DNA and culture – our ancestors were navigating huge areas of unknown ocean, starting more than 3,000 years ago, using traditional forms of science and geometry about the stars, wind and sea currents. I wish I'd known that at school."



*Apo's brain function prior to kava drinking, and after three and six hours of kava use. **Note:** Apo's results are different to those of the whole controlled study.*

"When our ancestors discovered new lands, they used traditional forms of science to work out what plants were edible or good for medicine, and to breed new plant species which they took with them as they journeyed further.

For a long time our traditional forms of science have been overshadowed by Western ways, but this is now changing and I'm really excited to see what the Pacific scientists of the future are going to do."

## Links

- NZ Herald, 2022, [Waikato researcher Dr 'Apo' Aporosa wins Fulbright to study kava as treatment for Post-Traumatic Stress Disorder](#).
- A. Aporosa, 2022, [Traditional kava-drinking, cognition, and driver fitness](#), *Research Outreach*, 129, 70-73.
- A. Aporosa, 2020, [De-mythologizing and re-branding the traditional drink kava](#), *Research Outreach*, 113, 106-9.
- Stuff, 2021, [Kava impacts driving performance, new study shows](#).
- S. 'Apo' Aporosa, 2015. [www.aporosa.net](#).



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