

**Submission to:*****Consultation - Pilot Program to ease restrictions on the importation of kava for personal use***

I am one of a very few full time researcher/academics who focus solely on health and social issues related to the use of kava at traditionally influenced consumption volumes: that is kava extracted with water and consumed over many hours as an aqueous beverage. That experience has led to me being awarded two New Zealand Health Research Council post-doctoral fellowships in which I am currently investigating the impacts of kava on cognition, learning that is being applied to driver safety. In addition to this, I have spent the past 15 years engaging with the kava literature and have twenty plus years kava use experience in a wide variety of settings ranging from highly formal cultural spaces across the Pacific to informal European only social use environments. I have eleven peer reviewed publications (including two books) on the cultural and social use of kava. I also have a book and two papers currently in press and three papers under review. One of those under review papers draws on kava literature to addresses kava misinformation and myth, or kava information which has wrongfully been published as fact. Associate Professor Matt Tomlinson, recently of the Australia National University wrote, "*Dr Aporosa must now be considered the world's leading researcher on the social use of kava (Piper methysticum)*" (Oct. 2016). I would argue that I have appropriate knowledge and qualifications to make an informed submission to the Australian Government's request for "views on the proposed regulatory changes" to kava.

My knowledge of the kava literature and research requires me to start by pointing out several inaccuracies, common misunderstandings regarding kava, presented in the *Pilot program to ease restrictions on the importation of kava for personal use: Consultation paper* document.

1. "*liver toxicity is a known adverse effect with kava if consumed in high dosages and frequency*" (p.8). This comment is misinformed and inaccurate. Kava is vastly safer than over-the-counter pain relief. For instance, a New Zealand Medicines Classification Committee report states that in "a comparison with paracetamol-associated hepatotoxicity", kava is "dramatically" safer than the "popular non-prescription drug widely sold through grocery outlets."<sup>1</sup> Research of this nature<sup>2</sup> counters the common myth that kava use is dangerous. That misconception was the basis of the 2002 European Kava Ban. The first authoritative publication to demonstrate kava's safety following the ban was the 2007 World Health Organisation's *Assessment of the risk of hepatotoxicity with kava products*. That report was influential in the June 12, 2014, German Federal Administrative Court decision which overturned the 2002 ban stating the hypotheses and assumptions that led to the ban were unjustified and had created unsubstantiated suspicion<sup>3</sup>. In a 2016 update, the WHO's kava risk assessment report stated, "On balance, the weight-of-evidence from both a long history of use of kava beverage and from the more recent research findings indicates that it is possible for kava beverage to be consumed with an acceptably low level of health risk"<sup>4</sup>. That "acceptably low level of health risk" is also demonstrated when kava is compared with *Diazepam*, a commonly prescribed benzodiazepine in Australia. Schmidt and colleagues<sup>5</sup>, who investigated the 83 alleged kava toxicity reports that led to the European

Kava Ban, reported that “only three cases could be attributed to *kava* with high probability” and in those cases it is suspected that other factors were responsible for the negative reactions (p.182). More importantly, they added that if 12 “probable” cases had been confirmed responsible for liver failure, this would account for a toxicity rate of “0.23 cases per 1 million daily doses” (p.187). At the same time though, the researchers reported that consumers in Germany – one of the European countries who initiated the ban – were reportedly taking *Diazepam* with a toxicity rate of 2.12 cases per million daily doses (p.187). Regardless that the risks associated with *Diazepam* are vastly more concerning than *kava*, *Diazepam* continues to be widely prescribed in Germany and most other European country’s including Australia.

The WHO and other authoritative research<sup>6</sup> shows that concerns over *kava* hepatotoxicity as stated in the *Pilot program... Consultation paper* are unfounded and unnecessary. This lack of concern is also acknowledged by Australian researchers Clough & Jones<sup>7</sup> who stated “No evidence for serious liver injury in Arnhem Land *kava* users has emerged”. Confusingly, they immediately follow with, “however, this controversy has made for greater urgency to control *kava* use and to monitor its health effects”, leaving the reader with a sense of caution, and feeding *kava* suspicion and misinformation in a similar manner to the comment discussed here from the *Consultation paper* document. The question needs to be asked: is it possible for those with limited knowledge regarding *kava* safety to make an informed submission to this process when the information in the *Consultation paper* document is overstated and inaccurate?

2. “Elevated liver enzymes on exposure return to normal levels upon ceasing or reducing *kava* consumption.” (p.8) This comment, when presented under a section entitled ‘**Health impacts of *kava* use**’, is not only misleading and alarmist, it is unnecessary. Although *kava* use is known to elevated liver enzyme levels, namely GGT ( $\gamma$ -glutamyl transferase) and decreased blood lymphocytes, Australian Professor Robert Moulds formally of the Fiji School of Medicine (FSM) is clear that this is of little concern. He, together with Dr Jioji Malani (also of the FMS), addressed this matter in their publication<sup>8</sup> by asking rhetorically, “How relevant is the finding that some... heavy *kava* drinkers have raised serum GGT levels?” (p.452) In response they commented that the association between heavy *kava* consumption and “raised serum GGT levels is... difficult to determine. Alcohol causes raised serum GGT levels and can cause acute hepatitis and acute liver failure as well as chronic cirrhosis of the liver. However, other drugs (eg, phenytoin) also commonly cause raised GGT levels, reflecting CYP450 enzyme reduction, yet seldom (if ever) cause acute liver failure or cirrhosis of the liver. Hence, raised GGT levels do not necessarily imply 'subclinical' liver toxicity.” (p.452).

In 2010 I discussed “subclinical liver toxicity” with Professor Mould at the FSM. He responded that observed abnormalities “are a common concern among doctors who are unfamiliar with the liver function test results of *kava* drinkers”. He added that “while elevated GGT and white blood cells [lymphocytes] were abnormal [to those unfamiliar with *kava*'s effects on the liver], this does not mean that this abnormality is of concern. Jioji [Malani] and I have written on this”, referring to the publication drawn on in the previous paragraph and a 2002 article by Dr. Malani entitled *Evaluation of the effects of Kava on the Liver*<sup>9</sup>.

Admittedly the comment in the *Consultation paper* includes, “Elevated liver enzymes ... return to normal levels upon ceasing or reducing *kava* consumption.” However, when

combined with the Moulds & Malani findings, this would suggest that the comment was unnecessary and when presented under a section entitled **'Health impacts of kava use'**, does little more than feed kava misunderstanding, myth and raise suspicion.

3. *"Long term consumption of kava can lead to toxic effects, such as dry and scaly skin which is reversible on cessation."* Although lengthy kava use (high consumption volumes over several weeks) can cause a drying of the skin (called 'kava dermatopathy' or kanikani in Fiji; tino māvaevae in Samoa; lahelahea in Tonga), experts agree this is not harmful and will subside and then disappear a week or so after the cessation of kava without leaving scarring or skin discoloration<sup>10</sup>. Moreover, for some Pacific peoples, 'kava dermatopathy' is considered a positive demonstration of their 'enthusiastic' engagement with their culture. Therefore, it is argued that care must be taken not to link harmless manifestations of culture with emotive terms such as "toxic effects". Moreover, while 'kava dermatopathy' many not appear aesthetically pleasing to some, it is nevertheless harmless. Therefore, to include this theme under a section entitled **'Health impacts of kava use'** together with alarmist language such as "toxic effects" is unnecessary and does little more than feed kava misinformation and misinform those seeking to make a submission to this process.
  
4. *"there is evidence to suggest that the time spent in activities related to kava use by regular kava drinkers among Pacific Islanders could create relationship distress."* A large body of research and ethnographic comment reports that kava use, even at high volumes and regular use, is not addictive<sup>11</sup>. Of interest is kava's use in several drug-addiction therapy programmes, encapsulated in the title of Steiner's (2001)<sup>12</sup> paper, 'Kava as an anti-craving agent', which reports the preliminary results of kava to mitigate alcohol, tobacco and/or cocaine craving. Further, kava has been used as part of two District Health Board (New Zealand [NZ]) addiction rehabilitation programmes; one aimed at alcohol which is now in its seventh year<sup>13</sup> and the other, a NZ smoking cessation programme entitled 'Kava-cation' which boasts a 90% success rate<sup>14</sup>. Leading kava expert, Dr Vincent Lebot<sup>15</sup> adds weight to this discussion when he stated: 'by pharmacological standards, kava is not classified as a drug, as its consumption never leads to addiction or dependence. It has psychoactive properties but is neither an hallucinogenic nor a stupeficient.' (p. 169).

These understanding are important in light of the comment that *"time spent in activities related to kava use ... could create relationship distress"* which also appears under the title, **"Social impacts of kava use"**. That *"time spent"* in kava use activities is not as a result of a need to 'sooth' addiction. Therefore, *"time spent in activities related to kava use"* results from person choice and not specifically \*kava\* or the need to consume kava. A comparison can be made with activities such as gaming, surfing, rugby and movie watching. I am familiar with situations in which *"relationship distress"* has resulted from a member of the family spending large amounts of time *"in [these] activities"*. However, unlike 'kava', the gaming console, the surfboard, the rugby ball and the TV are not criticised as being the elements responsible for *"creat[ing] relationship distress"*.

Further, Pacific Islanders spend lengthy periods of time *"in activities related to [food preparation and] use"* and in socialisation setting without kava, settings which could also lead to *"relationship distress"*. What though has become the focus is \*kava\*. This again suggests that this comment was, in a similar manner to the other statements discussed above, unnecessary and does little more than feed kava misinformation.

For more discussion on kava misinformation and myth, please consult the following conference paper, *Kava (Piper methysticum): Demythifying the Pacific's cultural keystone species*<sup>16</sup>, which has been re-written and is currently under review for publication in an authoritative journal.

Misinformation and alarmist commentary regarding kava is not new in Australia. For instance, Professor Peter d'Abbs<sup>17</sup> (Darwin School of Medicine) commented that not long after the introduction of kava to the Northern Territories (NT) in the early 1980s as part of a harm reduction measure, an approach praised at the time for reducing alcohol related violence, "anecdotal and often sensational reports circulated about all-night binges, with ensuing detriment to families' health, rising absenteeism and even breakdowns in essential community services" (p.333). In addition to this were reports that Aboriginal kava users in the NT were routinely mixing kava with other substances such as alcohol. This was regardless that a Northern Territories Drug and Alcohol Bureau investigation reported this to be incorrect<sup>18</sup>. The idea that kava is routinely mixed with alcohol in the NT persists. While there is no doubt that isolated incidents of kava-alcohol mixing does occur, my informants in the NT are clear that this is not routine practice. Further, in cases where this is done, it is \*kava\* that has been maligned when the reality is the mixing of alcohol with kava is not strictly 'kava', it is a completely different substance with very different effects in the same manner as when milk was mixed with brandy, it is no longer milk.

Further, those "sensational reports" included generalisations that NT Aborigines were (and in some cases today continue to) drink more kava than Pacific Islanders. This again is inaccurate. My doctoral studies<sup>19</sup> measured kava consumption in urban and rural Fiji. When those use levels are compared with quoted figures on Aboriginal kava consumption, urban and rural Fijians have always consumed more kava than NT Aborigine kava users. According to Professor d'Abbs<sup>20</sup>, kava regulations, when instituted in the NT, were based on little more than "bureaucratic encroachment" and "public health bureaucracy" as opposed to fact and "scientific legitimacy" (p.179). Moreover, it appears little has changed with sensationalised reporting regarding kava in Australia remaining, evidenced in the statements within the *Pilot program ... Consultation paper*.

Social scientists are clear that throughout history, humans have always used drug substances of one sort or another<sup>21</sup>. Indeed, 'Drug theory' reports that drug restrictions and prohibition results in two dominant outcomes: the creation of a black market economy and "substance switch"<sup>22</sup>. The US alcohol prohibition provides an excellent example of the creation of a black market economy, an outcome that has also resulted in the NT regarding kava. Zillman, in her recent article stated, "Pacific Islanders are here and they're selling kava... and they've been making a lot of money"<sup>23</sup>. Put simply, it appears "bureaucratic encroachment" and "public health bureaucracy" have led to Police etc being drawn away from important duties to enforce black market activities associated with a substance that is "dramatically" safer than "popular non-prescription [paracetamol]"<sup>24</sup>.

Regarding 'substance switch', Clough and colleagues<sup>25</sup> report that kava restrictions in the NT led to reports of substance switch which included solvent sniffing, increased cannabis use and the home brewing of alcohol, essentially 'drug theory 101' in action. This questions the wisdom regarding the banning of kava in the NT, particularly as the effects of kava lack marked euphoria or hallucination, do not inhibit decision making, and do not lead to violent behaviour<sup>26</sup>. Has the banning of this mild substance encouraged criminal activity in the form of

black marketeering and unnecessarily tied up law enforcement personal, not to mention the costs associated with that unnecessarily action? Additionally, has the NT kava ban also led to the use of more harmful drug substances? This appears to have occurred among Pacific peoples living outside of the NT.

Pinomi<sup>27</sup> reported that in the months following the 2007 regulation which limited imports of kava to 2 kilograms per person, "We have witnessed a sad increase in violence in the Pacific Island community ... What is now happening is alcohol has become the substitute for kava; kava's promotion of a gentle sense of contentment is being replaced with the violence so often associated with excessive drinking. The good work done with young people by fostering their traditional culture will be undone by pushing them towards alcohol." Tongan kava researcher Edmond Fekoho<sup>28</sup> explains the critical role that kava venues play in diasporic communities as "cultural classrooms", places where respect, language and traditions are taught, made possible because kava does not result in the euphoric effects or socio-cultural harm of most other drug substances<sup>29</sup>. Darwin Medical School Professor Peter d'Abbs<sup>30</sup>, discussing the benefits of kava to indigenous systems explains, "unlike alcohol it did not lead to violent behaviour; second, it did not befuddle the mind and could therefore be used to stimulate 'clear-headed' discussions..." (p.169). Fekoho also discusses the importance of kava as an alternative to alcohol in Pacific communities<sup>31</sup>, a benefit that is also encouraging kava use among Europeans<sup>32</sup>.

Alcohol is the most widely available recreational drug in the world, killing in excess of 3 million users annually (WHO, 2018). In 2014, ABC Australia reported "15 Australians die each day from alcohol-related illnesses"<sup>33</sup>. NZ addiction specialist Dr McMinn<sup>34</sup> states, "alcohol is in essence a Class B drug (meaning it has a very high risk of harm), but it is so pervasive and traditional that no one sees it like that. 'Whilst the legal approach is often to look at narrowing the focus on the user...the major approach is society's permissive, over-promotion, over-acceptance of excessive alcohol consumption'." In contrast, and countering yet again sensational reports such as Zillmans<sup>35</sup> recent article from the NT in which she stated, "Kava will kill people and it has killed people in Northeast Arnhem", kava has **not** (directly) killed a single user in the past 10 years. This statement is expanded on, and substantiated, by research and literature such as WHO's 2016 kava risk assessment in a paper I currently have under review with an authoritative publisher. Regardless of the extremes in harm level, socio-cultural impact and effects from alcohol use, particularly when compared with kava, it is kava in Australia that attracts heavier regulatory measures than alcohol. This clearly does not make sense.

While I am NOT suggesting kava is the idyllic wonder-substance, it does allow for quality discussion unimpeded by marked euphoria and the stimulation of emotions and does not have the huge social costs associated with it as does alcohol use. Additionally, it is also acknowledged that there are some in the NT who complained of incidents in which some Aboriginal users spent extreme lengths of time in kava use. In his article on kava in the NT, Professor d'Abb's<sup>36</sup> explains a post-colonial Aboriginal history of socio-cultural dysfunction exacerbated by land confiscation, Government influence legal injustices and disempowerment which led to "traumatic social change" (p.167). However, in a similar manner to the claim in the *Consultation paper* document that "*time spent in activities related to kava use ... create relationship distress*", kava has been scape-goated as contributing to Aboriginal dysfunction as opposed to the real issues.

The scape-goating of kava has also resulted in unnecessary regulations that have impacted upon Pacific peoples living in Australia. The kava issue in both the NT and rest of Australia needs to be reconsidered, with that reconsideration based on research, fact, consideration and reason as opposed to misinformation, “sensational reports ... bureaucratic encroachment ... public health bureaucracy”<sup>37</sup>. Consideration and reason can start by recognising that if humans have always used drug substances and always will (as the research shows), and ‘drug theory’ shows that the prohibition of a drug leads to ‘substance switch’ and creation of a black market economy, why have any limits at all on kava in Australia; why limit kava, a culturally significant substance that is safer than paracetamol, does not cause impairment, harm or violence in the manner of alcohol, and can “be used to stimulate ‘clear-headed’ discussions”? Moreover, why has Australia’s kava prohibition/restriction policy not been matched in equal measure with alcohol prohibition considering the huge socio-cultural and health harms associated with alcohol?

In summary, while the *Consultation paper* support document asks whether kava for person use should increase to 4 kilograms, and whether this will impact on health and social systems, and whether there should be a two year evaluated pilot programme, the bigger question is; considering the discussion above, why has kava, and not alcohol, been the focus of restrictions in Australia? And why has Australia not followed New Zealand and most other countries in recognising kava safety levels not only for Pacific users, but others seeking to interact with a very low impacting substance that allows “‘clear-headed’ discussions”?

This submission process provides the Australian Government with the opportunity to consider the facts and re-evaluate their entire kava position and completely removed all restrictions on this mild substance in line with most other countries including their neighbour who they share the *Food Standards Australia New Zealand* with, the *Standards* which NZ uses to guide kava use in that country.

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## References:

- <sup>1</sup> Rasmussen, P. (2005). Submission on proposed reclassification of kava as a prescription medicine - Medicines Classification Committee, June 2005. Auckland: New Zealand Association of Medical Herbalists (p.6-7).
- <sup>2</sup> Showman, A. F., Baker, J. D., Linares, C., Naeole, C. K., Borris, R., Johnston, E., . . . Turner, H. (2015). Contemporary Pacific and Western perspectives on `awa (Piper methysticum) toxicology. *Fitoterapia*, 100, 56–67. (p.58).
- <sup>3</sup> Oliff, H. S. (2016). German Court lifts kava ban; Hepatotoxicity may be linked to kava cultivar. *HerbClip (American Botanical Council)*, Feb. 29. Retrieved from <http://cms.herbalgram.org/herbclip/539/021651-539.html?ts=1457750546&signature=6bd228d776f8fb995d151cdeefcc9ec&ts=1457897952&signature=cf83c3f3893311a5a3c216c9a515aad7>
- <sup>4</sup> Abbott, P. (2016). *Kava: A review of the safety of traditional and recreational beverage consumption (Technical Report)*. Rome: Food and Agriculture Organization of the United Nations and World Health Organization.(p.26)
- <sup>5</sup> Schmidt, M., Morgan, M., Bone, K., & McMillan, J. (2005). Kava: A risk-benefit assessment. In S. Mills & K. Bone (Eds.), *The essential guide to herbal safety* (pp. 155-221). Missouri: Elsevier, Churchill, Livingstone.
- <sup>6</sup> Showman, A. F., Baker, J. D., Linares, C., Naeole, C. K., Borris, R., Johnston, E., . . . Turner, H. (2015). Contemporary Pacific and Western perspectives on `awa (Piper methysticum) toxicology. *Fitoterapia*, 100, 56–67. doi:10.1016/j.fitote.2014.11.012

- <sup>7</sup> Clough, A. R., & Jones, P. J. (2004). Policy approaches to support local community control over the supply and distribution of kava in the Northern Territory (Australia). *Drug and Alcohol Review*, 23(1), 117-126.
- <sup>8</sup> Moulds, R. F. W., & Malani, J. (2003). Kava: Herbal panacea or liver poison? *Medical Journal of Australia*, 178, 451-453.
- <sup>9</sup> Malani, J. (2002). *Evaluation of the effects of Kava on the Liver*. Suva: Fiji School of Medicine. (p.7).
- <sup>10</sup> Norton, S. A., & Ruze, P. (1994). Kava dermatopathy. *Journal of the American Academy of Dermatology*, 31(1), 89-97. (p.94)
- <sup>11</sup> Singh, Y. N. (2004). Pharmacology and toxicology of kava and kavalactones. In Y. N. Singh (Ed.), *Kava: From Ethnology to Pharmacology (Medicinal and Aromatic Plants -Industrial Profiles Volume 37)* (pp. 104-139). Boca Raton: CRC Press. (p.128-30) Keltner, N. L., & Folkes, D. G. (2005). *Psychotropic drugs* (4th ed.). Missouri: Elsevier Mosby. (p.524)
- <sup>12</sup> Aporosa, 2008; Bilia et al., 2001; Connor et al., 2001; Geier & Konstantinowicz, 2004; Keltner & Folkes, 2005; Mediherb, 2004; Scherer, 1998; Thompson, 2004
- <sup>13</sup> Steiner, G. G. (2001). Kava as an anti craving agent: Preliminary data. *Pacific Health Dialog*, 8(2), 335-339.
- <sup>14</sup> Crowley C. (2015) Kava use at Hamner Clinic, Tauranga. Phone interview, Jan. 9.
- <sup>15</sup> Daunauda S. (2016) Pacific Programmes: Kava-cation. Marlborough Primary Health Organisation. Available at: <http://www.marlboroughpho.org.nz/pacific-health/>.
- <sup>16</sup> Lebot V. (1991) Kava (Piper methysticum Forst. f.): The Polynesian dispersal of an Oceanian plant. In: Cox PA and Banack SA (eds) *Islands, plants, and Polynesians: An introduction to Polynesian ethnobotany*. Oregon: Dioscorides Press, 169-201.
- <sup>17</sup> PERMANENT LINK - <https://researchcommons.waikato.ac.nz/handle/10289/12255>
- <sup>18</sup> Hunter, E., & D'Abbs, P. (2003). In 'modest but practical ways': Medical practitioners and substance misuse in Aboriginal Australians. *Internal Medicine Journal*, 33(8), 333-335.
- <sup>19</sup> Alexander, K., Watson, C., & Fleming, J. (1987). *Kava in the North: A research report on current patterns of kava in Arnhem Land Aboriginal communities*. Darwin: Australian National University North Australia Research Unit.
- <sup>20</sup> Aporosa, S. (2014). *Yaqona (kava) and education in Fiji: Investigating 'cultural complexities' from a post-development perspective*. Albany: Massey University, Directorate Pasifika@Massey.
- <sup>21</sup> D'Abbs, P. (1995). The power of kava or the power of ideas? Kava use and kava policy in the Northern Territory, Australia. In N. J. Pollock (Ed.), *The power of kava* (Vol. 18, Canberra Anthropology (Special volume,1&2), pp. 166-183). Canberra: Australian National University.
- <sup>22</sup> Jay, M. (2012). *High society: Mind-altering drugs in history and culture*. Vermont: Park Street Press.
- <sup>23</sup> Hari, J. (2015). *Chasing the Scream*. USA: Bloomsbury Publishing.
- <sup>24</sup> Zillman, S. (2019). 'It paralyses everything': PM's kava plan flies in the face of elders' concerns and police evidence. ABC News (Australia online), Feb. 4. Retrieved from <https://www.abc.net.au/news/2019-02-04/morrison-kava-import-plan-flies-in-face-police-evidence-elders/10775068>
- <sup>25</sup> Rasmussen, P. (2005). Submission on proposed reclassification of kava as a prescription medicine - Medicines Classification Committee, June 2005. Auckland: New Zealand Association of Medical Herbalists (p.6-7).
- <sup>26</sup> Clough, A., Lee, K. S., Cairney, S., Maruff, P., O'Reilly, B., d'Abbs, P., & Conigrave, K. M. (2006). Changes in cannabis use and its consequences over 3 years in a remote indigenous population in northern Australia. *Addiction*, 101(5), 696-705.
- <sup>27</sup> Aporosa, S. (2017). Understanding cognitive functions related to driving following kava (Piper methysticum) use at traditional consumption volumes. *Journal of Psychopharmacology*, 31(8), (Supplement) A84. Permanent link: <http://researchcommons.waikato.ac.nz/handle/10289/11307>
- <sup>28</sup> Pinomi, S. (2008). Kava restriction puts an unfair burden on Pacific culture. *The Sydney Morning Herald*. May 30. p.15. Retrieved from <http://www.smh.com.au/news/opinion/kava-restriction-puts-an-unfair-burden-on-pacific-culture/2008/05/29/1211654216506.html>
- <sup>29</sup> Fehoko, E. (2014). *Pukepuka fonua: An exploratory study on the faikava as an identity marker for New Zealand-born Tongan males in Auckland, New Zealand*. (Masters), Auckland University of Technology. Retrieved from <http://aut.researchgateway.ac.nz/handle/10292/7723>
- <sup>30</sup> Fehoko, E. (2015). Social space and cultural identity: The faikava as a supplementary site for maintaining Tongan identity in New Zealand. *New Zealand Sociology*, 30(1), 131-139.
- <sup>31</sup> Aporosa, S. (2017). Understanding cognitive functions related to driving following kava (Piper methysticum) use at traditional consumption volumes. *Journal of Psychopharmacology*, 31(8), (Supplement) A84. Permanent link: <http://researchcommons.waikato.ac.nz/handle/10289/11307>
- <sup>32</sup> D'Abbs, P. (1995). The power of kava or the power of ideas? Kava use and kava policy in the Northern Territory, Australia. In N. J. Pollock (Ed.), *The power of kava* (Vol. 18, Canberra Anthropology (Special volume,1&2), pp. 166-183). Canberra: Australian National University.
- <sup>33</sup> Holt, H., & Fehoko, E. (2018). Kava consumption an 'alternative to alcohol consumption' and could be a solution to youth crime. Television New Zealand: Breakfast, March 28. Retrieved from <https://www.tvnz.co.nz/shows/breakfast/clips/kava-consumption-an-alternative-to-alcohol-consumption-and-could-be-a-solution-to-youth-crime>
- <sup>34</sup> Fast Company Studios. (2016). Is this drink disrupting the alcohol business? Kava is creating a bar experience that takes alcohol out of the equation. fast.co (online). Retrieved from <http://www.fastcompany.com/3058564/is-this-drink-disrupting-the-alcohol-business>
- <sup>35</sup> <http://www.abc.net.au/news/2014-07-31/15-australians-die-each-day-from-alcohol-related-illness-study/5637050> See actual study here- Gao, C., Ogeil, R., & Lloyd, B. (2014). *Alcohol's burden of disease in Australia*. Australia: The Foundation for Alcohol Research and Education and Victorian Health Promotion Foundation.
- <sup>36</sup> Whelan, M. (2014). A serious risk of harm. *The Wireless*, Jan. 20. Retrieved from <http://thewireless.co.nz/themes/excess/a-serious-risk-of-harm> (3-10-14)
- <sup>37</sup> Zillman, S. (2019). 'It paralyses everything': PM's kava plan flies in the face of elders' concerns and police evidence. ABC News (Australia online), Feb. 4. Retrieved from <https://www.abc.net.au/news/2019-02-04/morrison-kava-import-plan-flies-in-face-police-evidence-elders/10775068>
- <sup>38</sup> D'Abbs, P. (1995). The power of kava or the power of ideas? Kava use and kava policy in the Northern Territory, Australia. In N. J. Pollock (Ed.), *The power of kava* (Vol. 18, Canberra Anthropology (Special volume,1&2), pp. 166-183). Canberra: Australian National University.
- <sup>39</sup> D'Abbs, P. (1995). The power of kava or the power of ideas? Kava use and kava policy in the Northern Territory, Australia. In N. J. Pollock (Ed.), *The power of kava* (Vol. 18, Canberra Anthropology (Special volume,1&2), pp. 166-183). Canberra: Australian National University.