Capability building through the Kia Niwha Fellowships

Fellowship recipient:
Dr Natalie Netzler [1,2] (Ngāti Ruanui, Ngāti Hauā, Samoan; Moto'otua, Falealili)

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Research Title:

Indigenous Pacific traditional medicines as antivirals

This project aligns to the Te Niwha Mission, Vision and Charter in that we have Māori and Pacific co-leadership for the project, which was co-designed with a network of Samoan traditional healers to explore the antiviral properties of Samoan traditional medicines. The project aims were to interweave and expand indigenous Pacific knowledge to find specific traditional medicines to combat contemporary threats to Samoan health such as measles, RSV, and herpesvirus infection. Through this project, we aimed to help identify traditional antiviral treatments in partnership with traditional Samoan healers (taulasea) for specific use where clinics and hospitals are inaccessible, particularly in rural villages.

This project has helped to build deeper partnerships between Aotearoa and Samoa, as a foundation for a Pacific-led platform of infectious disease research. Through these partnerships, we aimed to ensure that all perspectives were interwoven into method development and to continue to build community relationships. We have drawn on the combined expertise of our researchers and traditional healers to ensure transparency, integrity and two-way communication throughout the process of our interdisciplinary collaborative approach.

The Fellowship has supported my leadership own development in the following ways:

Empowering Rangatiratanga: Greater understanding of my own strengths and areas for further development to lead effectively and authentically. By creating a compelling and shared vision, and inspiring others to work towards shared objectives.

Strengthening Whanaungatanga: Further embedded the importance of building strong and holistic relationships and partnerships with communities, teams and stakeholders.

Upholding tikanga/fa'asamoa and fostering kaitiakitanga: Ensuring that the right cultural frameworks are applied across all aspects of Indigenous research, including Indigenous Governance over these studies to maintain trust and transparency in a culturally supportive and inclusive research environment.

Enhancing mātauranga Māori/Samoan expertise: Using this partnership between Indigenous knowledge holders and biomedical research to incorporate and expand Indigenous Pacific knowledge systems, ensuring that this knowledge and perspectives are valued and preserved.

This Fellowship has also helped in building my own resilience and capacity to navigate change and remain effective under pressure while maintaining integrity.

The benefits of my leadership development will be shared with my own research team, and for my current and future partnerships. Through this study, the Samoan traditional healers (taulasea) and their patients could benefit from having additional medicines to apply arising from any new knowledge around specific antiviral activities of medicinal plant extracts. There are ongoing positive impacts from nurturing the partnerships between our Pacific nations and

communities. This development will also benefit my own career development as I build my own independent research path. Finally, this Fellowship has helped to support the further deepening of my personal connection to Samoa and Samoan culture.

Research purpose, benefits and future directions:

This project aimed to identify specific antiviral activities in a range of Samoan traditional medicine extracts in partnership with Samoan traditional healers and Pacific researchers.

Through partnerships with the Scientific Research Organisation of Samoa (SROS), Women in Business Development, Victoria University of Wellington, Otago University, Oceania University of Medicine and a network of traditional healers from across Samoa, we have examined a range of traditional Samoan medicines for antiviral properties using biomedical virology techniques. We have an agreement with the Samoan Ministry of Natural Resources & Environment (MNRE) to ensure that any intellectual property or commercial benefits that arise from this study remain in Samoa for local benefit. The results are shared with our Samoan partners to ensure that traditional healers benefit by supporting their knowledge base on specific antivirals for use against infection.

This research employs international partnerships to elevate Indigenous knowledge, capacity and capabilities in biomedical research, to combat infectious diseases. Our initial results revealed two traditional Samoan medicinal plants with broad-spectrum antiviral activities against several viruses that harm human health. This is exciting, but we need permission to share any specific results from our Samoan partners, which will be sought at the end of the study, so until then all our results are confidential and shared only within the project team.

This study is building important research partnerships between Aotearoa and Samoa. This could be a foundation for a larger Pacific nation platform for Indigenous-led research to fight against infectious diseases in the region.

Conclusion: Through Indigenous partnerships, we are studying the antiviral activities of traditional Samoan medicines and have identified two with broad-spectrum antiviral activities.

Future directions: We aim to expand this partnership across the wider Pacific region to build an Indigenous-led research platform to combat infectious diseases.