



Te Whanaketanga Puutaiao Maaori Pre-Conference & Summit

Friday 30 – Saturday 31 August 2019

Te Rau Aroha, Invercargill @ Rydges Hotel, Queenstown

Queenstown Research Week 31 August – 6 September, 2019





The TWP design represents the peaks and flows of life's journey. It conveys physical heights of achievement whilst remaining humble and secure in one's uniqueness, the genetic blueprint that makes up each living being. The overall shape of the design is the in-turned koru¹ which symbolizes relationships. It speaks of the importance of whakapapa², whanaungatanga³ and tapu⁴ to acknowledge the taonga⁵ in each being. The blue represents Ranginui⁶ and the knowledge and relationships of above, the green represents Papatuaanuku⁷, the knowledge and relationships of the surface below. The white represents the noa⁸, the areas of mystery, in which research pursues, and weaves inbetween each element to represent how consciousness exists in all. Te Whanaketanga Puutaiao Māori reflects, not only on life sciences, but its connection to Te Ao and all the elements of life. It exists to encourage thought where not all things are as they seem, and whilst we reach pinnacles, there will always be another mountain or terrain ready to Summit.

¹ Koru symbolises new life, growth, strength and peace

² Genealogy

³ Relationships

⁴ Sacredness

⁵ Treasure

⁶ Ranginui, God of the Sky

⁷ Papatuanuku, Mother Earth

⁸ Noa denotes absence of limitations or conditions

Illustrated by: Darren Wise

Darren Wise is a stainless sculptor based in Rukuhia, Hamilton. His art pieces have been sold and on display in various art galleries around Aotearoa, most recently, Te Paapaa Tongarewa, National Museum in Wellington. Darren is available by commission. Reference "TWP" on enquiry.

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Studio Gallery (By Appointment)

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Te Whanaketanga Puutaiao Maaori

Te Whanaketanga Puutaiao Maaori highlights maatauranga Maaori (Maaori knowledges) in life science research. Maatauranga Maaori informs, supports and strengthens Maaori frameworks and how we may respond, and ultimately improve, the health of whaanau Maaori. Utilising a Kaupapa Maaori methodology involves traditional knowledge holders, and practitioners, to understand the needs of Te Ao Maaori.

The Summit highlights the increasing presence of Maaori in contemporary rangahau puutaiao (scientific research) and provides examples of the scope of activities and associated Te Ao-Maaori centred issues. Presenters include iwi representatives, kairangahau (researchers), and Maaori bioethicists, with a particular focus on genomics-informed health research and use of genomic data.

TWP is an opportunity for scientists to present their research that provides examples of associated Te Ao-Maaori centred issues to the wider community. Consultative approaches, innovative uses, and applied science solutions will be explored with a particular focus on genomics-informed health research and use of genomic data. Presentations could also focus on research design, (tikanga, practices, resolution, consultation process).

Queenstown Research Week is New Zealand's biggest annual scientific gathering. It is a week of co-ordinated meetings covering a wide range of areas of science. The concept has developed from three different iconic New Zealand scientific meetings the Australasian Winter Conference on Brain Research, the Queenstown Molecular Biology Meetings and the NZ Medical Sciences Congress (Medsci). QRW 2019 runs from 31st August – 6 September 2019.

Convenors:

Katrina Bevan, Phil Wilcox

2019 Speakers:

Prof. Peter Shepherd, Katrina Bevan, Irene Kereama-Royal, Prof. Phil Wilcox, Kimiora Henare, Karaitiana Taiuru, Ben Te Aika, Marcelle Nobel, Owen Pomana, Manu Caddie.

Venue:

Te Rau Aroha, Invercargill
Rydges Hotel, Queenstown

TE WHANAKETANGA PUUTAIAO MAAORI

Pre-Conference Programme

Friday 30 August, 2019

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|---------|--|
| 10.15am | Arrive Invercargill Airport |
| 11.00am | Poowhiri Te Rau Aroha Marae, Invercargill |
| 11.30am | <i>Kai o te poupoutanga o te raa/Lunch</i> |
| 12.30pm | Whakawhanaungatanga |
| 1.30pm | Session 1: Hauora Hapoori Southland Maaori Health Providers (MHCP) and Maaori Community Orgs (MCOGS) |
| 3.30pm | <i>Paramanawa Afternoon Tea Rolling</i> |
| 4.00pm | Session 1: continued Haukainga Hiitorii |
| 5:00pm | <i>Whaakaataa/ Break</i> Whakarite to moenga |
| 5.30pm | <i>Kai o te Po/Dinner</i> |
| 6.30pm | Session 2 – TWP Poroporoaki ki Te Rau Aroha |
| 8.30pm | Karakia Whakamutunga |

TE WHANAKETANGA PUUTAIAO MAAORI

Pre-Conference Programme

Saturday 31 August, 2019

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|---------|---|
| 6.30am | <i>Maranga/Rise and ready</i> |
| 7.00am | <i>Kai o te ataa Packed Breakfast</i> |
| 7.30am | Depart Te Rau Aroha for Queenstown |
| 10.45am | Registration |
| 11.00am | Poowhiri QRW @ Rydges Hotel Queenstown |
| 12.00pm | <i>Kai o te poupoutanga o te raa/Lunch</i> |
| 1.00pm | TWP Opening Address Convenors |
| 1.15pm | Keynote Presentations: (Q1) Prof Peter Shepherd (University of Auckland) Tatai Oranga |
| 1.45pm | (Q2) Katrina Bevan (Kirikiriroa) Patient Centricity |
| 2.15pm | (Q3) Irene Kereama-Royal (Tamaaki Makaurau) Moo Wai, Naa Wai Raanei Teenei Rangahau: Whaanau Māori Navigating Self-Determining Engagement With Genomics Research. |
| 2.45pm | (Q4) Dr. Phillip Wilcox (University of Otago) Towards A Variome Resource For Genomic Medicine In Aotearoa/New Zealand Māori |
| 3.15pm | <i>Paramanawa/Afternoon Tea (Rolling)</i> |
| 3.30pm | (Q5) Dr. Kimiora Henare (University of Auckland) Ngā tikanga o te taiwhanga pūtaiao - Tikanga in the laboratory |

| | |
|--------|--|
| 4.00pm | (Q6) Karaitiana Taiuru (Christchurch) Cultural and Intellectual Property - Tikanga considerations, "What does the tikanga interface look like and how will it be applied?" |
| 4.30pm | (Q7) Ben Te Aika (Genomics Aotearoa) Understanding genomic data management – An indigenous perspective of “data protection” and “data sovereignty.” |
| 5.00pm | <i>Whakaataa/Short Break</i> |
| 5.10pm | Guests Presentations - Beyond 2020: Guest Chair (Q8) Marcelle Nobel (Regen, Queenstown) (Q9) Owen Pomana (Regen) (Q10) Manu Caddie (Hikurangi Enterprises) Whakaora Te Whenua, Whakaora Te Whānau: Healing the land, healing the people – developing novel treatments and pharmaceutical manufacturing in an isolated Māori community. |
| 6.20pm | Closing Remarks |
| 6.25pm | <i>Karakia Whakamutunga/Ends</i> |
| 7.00pm | Summit Dinner |

Presenter Profiles

Professor Peter Shepherd



Professor Peter Shepherd is incoming Director of Maurice Wilkins Centre for Molecular Biodiscovery and based at the University of Auckland. He is also Chair of Queenstown Molecular Biology Meetings Society. Peter's research continues to be in the broad area of signal transduction with a particular focus on type-2 diabetes and cancer. With his lab at University of Auckland, Peter prefers the collaborative approach with research groups across New Zealand and overseas to make the most of their research programmes. The main research current areas are (i) identifying new combinations of old drugs targeting signal transduction pathways to get improved efficacy in treating cancer, (ii) developing new drugs targeting CSF1R to improve the efficacy of immunotherapies for cancer (iii) investigating the role of β -catenin in mechanisms controlling the secretion of insulin from β -cells and (iv) understanding how genetic factors contribute to the increased risk of metabolic diseases in Māori and Pacific peoples.

The lab also has a strong focus on scientific outreach with science education and partnerships with Māori.

Katrina Bevan



Katrina Bevan is Director at Ngāa Puuawai Koiora, and the Bevan Foundation. The Foundation provides advocacy and dispute resolution services (ADR) through KBL and also promotes and delivers professional development in ADR. She consults locally and regionally interfacing with community, local government and Kaupapa Māori Organisations on a range of social, health and child wellbeing factors in risk benefit analysis, policy/strategy matters and implementation, with a particular interest in tamariki/rangatahi, hauaa, Indigenous Healing, and Epigenetics. Her

Ngāa waka o Tainui, Ngāati Porou, Ngāati Kahungunu, Ngāa Puhi,

research interests include gene expression and gene regulation in child DD for alternative treatment. Katrina has a long experience in whāngai/foster care, child development education, child disabilities advocacy, scripts and schema use in ADR. She donates her time to various social health outreach organisations as she has a passion for wairua, hauora.

Irene Kereama-Royal

Irene is of Ngāpuhi and Parehauraki descent. She is a member of the Royal Society of NZ's expert panel on gene editing technologies with interests in genomic research, diagnostics and treatments for familial diseases, particularly cancers. Irene is a Researcher at Ngā Wai a Te Tūi Māori Research Centre at Unitec Auckland.



Ngāpuhi and Parehauraki

Dr. Phillip Wilcox

Phillip Wilcox (BForSci(Hons)(Cant) PhD(Nth Carolina > SU) DipTeAraReoMāori(Te Wananga o Aotearoa)) is of Ngāti Rakaipaaka, Rongomaiwahine, Ngāti Kahungunu ki te Wairoa.

Phil specialises in Quantitative genetics, applied genomics, breeding, medical genetics, and Māori engagement.

He is Senior Lecturer in the University of Otago's Department of Mathematics and Statistics, and has experience in applied genomics and statistical genetics. He is the current convenor of MapNet, a NZ-wide collective of gene mapping scientists and the Project Leader of the Virtual Institute for Statistical Genetics. He is formally a Kaihautu Maori in both the Biological Heritage National Science Challenge and the BioProtection Research CoRE, and is a mandated spokesman for Ngati Rakaipaaka regarding the Rakaipaaka Health and Ancestry Study. He has worked on genetics of plant species (particularly forest trees) and humans diseases.



*Ngāti Rakaipaaka,
Rongomaiwahine, Ngāti Kahungunu
ki te Wairoa.*



Te Aupouri, Te Rarawa

Dr. Kimiora Henare

Kimiora Henare (Te Aupouri, Te Rarawa), (PhD, MHSc, BSc) is a Research Fellow at the Auckland Cancer Society Research Centre (ACSRC), Te Kupenga Hauora Māori, and the Department of Oncology at the Faculty of Medical & Health Sciences, University of Auckland. His research interests include cancer biology and immunology.



*Ngāi Tahu, Ngaati Rarua,
Ngaati Kahungunu, Ngaati
Hikairo, Tuwharetoa, Ngaati
Hauiti*

Karaitiana Taiuru

Karaitiana Taiuru is of Ngāi Tahu (Koukourarata, Puketeraki, Rāpaki, Taumutu, Tuahuriri, Waewae, Waihao, Waihopai, Wairewa); Ngāti Rarua; Ngāti Kahungunu (Ngāti Pahuwera); Ngati Hikairo (Ngati Taiuru); Tūwharetoa (Ngāti Tamakopiri); Ngāti Hauiti (Ngati Haukaha); Ngāti Whitikaupeka.

Having an accomplished career in the technology industry where representing Māori and Indigenous Rights, Mr Karaitiana Taiuru is currently a PhD Student at Te Whare Wānanga o Aotearoa researching IP rights and tikanga Māori with gene research

Ben Te Aika

Benjamin Iwikau Te Aika is of Ngati Mutunga, Te Ati Awa, Kati Wairaki, Kati Mamoe, Waitaha. Passions are children, hunting, whakapapa and whenua. Specialist in Māori economic development in environmental advocacy.

A Māori artist, carver, taa moko. Currently Vision Mātauranga Coordinator at Genomics Aotearoa.



Ngati Mutunga, Te Ati Awa, Kati Wairaki, Kati Mamoe, Waitaha

Marcelle Noble

CEO and Founder of Regen Cellular, New Zealand's only clinic providing Pure Expanded Stem Cell (PESC) therapy for the treatment of osteoarthritis, sports injuries and autoimmune diseases.

With her affiliates in Monash and Melbourne Universities, Marcelle founded the first University based stem cell clinic in New Zealand, able to extract and expand patient's stem cells in a state of the art PC2 laboratory based in Queenstown.

ReGen is the only specialist clinic treating osteoarthritic conditions and sports injuries using expanded stem cell therapy. Since 2015 it has treated hundreds of patients from the retired to celebrity athletes, helping them avoid replacement surgery.

Last month further innovation from the company saw it become the first clinic in Australasia to offer its PESC therapy via intravenous infusion to patients suffering autoimmune disorders ranging from MS to IBS and type 1 diabetes.





Ngāti Kahungunu

Owen Pomana

Owen Pomana has had a colourful life. After serving in the New Zealand Navy, personal reasons led to a downward spiral where he ended up living on the streets in Australia, involvement with drugs and working for (and fighting with) some of Australia's most notorious gangs.

Miraculously, Owen became a Christian in 2007. His past however meant he did end up serving 3 years in an Australian prison then was deported back to New Zealand told never to return. This has not stopped Owen, his life experiences and belief in God has allowed him to travel the world helping women escape from human trafficking, ministering to people on death row – including Andrew Chan and Myuran Sukumaran from the Bali 9 as well as assisting and rehabilitating many of the homeless people on the New Zealand streets.

His involvement with this conference however is due to a near death beating he received from Hells Angels in 2005 that would result in him requiring 2 hip replacement operations later in life. Owen opted for the new cutting edge stem-cell replacement therapy, his presentation will cover his treatment and recovery and some of his fascinating stories that led to him needing stem cell treatment.



Ngaati Pukenga, Tainui

Manu Caddie

Manu Caddie (Ngāti Pukenga, Tainui) is a co-founder and CEO of Hikurangi Cannabis Company, the first New Zealand company to receive a medicinal cannabis license. Hikurangi is collaborating with researchers around the world on novel cannabinoid drug discovery including genomics work on indigenous organisms and cannabis with clinical trials commencing 2020.

Ngaa Puawai Koiora Centre for Innovation

About us

Ngaa Puawai Koiora Centre for Innovation (NPK) is concerned with research in human development and life sciences. 'Ngaa Puawai Koiora' reflects the meaning 'Blooming life' drawing together concepts of innovative prowess, better haua and ora. NPK undertakes rangahau that supports haapu health and education aspirations underpinned by spiritual knowing and cultural epistemology. Current research: Epigenetics - Gene regulation and gene expression influencing conduct disorder, reasoning and self-regulation in tamariki with developmental disabilities uptake efficacy of traditional Maaori kai, Rongoa Maaori for alternative management and treatment options.

Previous research: Te Mana o Ngaa Mokopuna indigenous pedagogy, A Mokopuna Hauaa Framework in education, Scripts and Schemas in ADR (ongoing)

Our education centre is linked to support capability in successful outcome implementation. To support, develop and promote implementation for and with haapu/Maaori to enhance taha wairua, human development undergirded with relevant genomics research for good health and life outcomes. Closely aligned to improving access to research and providing pathways for innovation. Increasing haapu engagement in genomics has the potential to contribute greatly to influencing hauora.

NPK partners with organisations to work collaboratively in research and to sustain Maaori relationships and implement or improve their own knowledge basis with an indigenous perspective.

Enquiries: reception@kbl.nz

Ngaa Puawai Koiora Centre for Innovation (NPK) contributes to Maaori and Indigenous aspirations.

Goal 1: Kaupapa Maaori research

Goal 2: Integrity Implentation and support

Goal 3: Kaupapa Maaori research collaborations

Te Whanaketanga Puutaiao Maaori Summit

Presentation Info & Abstracts

Q1: Peter Shepherd (Presentation) will describe the development of a partnership approach *Tatai Oranga*, including the Maurice Wilkins Centre, Ngati Porou Hauora and the Waharoa ki te Toi research centre in Kaitaia. This work focuses on understanding the biological drivers of increased rates of metabolic diseases in Maori and Pacific peoples.

Q2: Katrina Bevan (Presentation), will introduce Patient centricity: A Hauaa Ora Framework. This work focuses on link between policy, and efficacy of management and treatment as an outcome of genomic research for hauaa whaanau.

Q3: Irene Kereama-Royal (Abstract)

Q4: Phil Wilcox (Abstract)

Q5: Kimiora Henare (Abstract)

Q6: Karaitiana Taiuru (Abstract)

Q7: Ben Te Aika (Abstract)

Q8: Marcelle Noble (Presentation)

Q9: Owen Pomana (Talk)

Q10: Manu Caddie (Abstract)

Q3: Mō Wai, Nā Wai Rānei Tēnei Rangahau: Whānau Māori Navigating Self-Determining Engagement With Genomics Research.

Kereama-Royal. I.R.1

Ngā Wai A Te Tūī Māori Indigenous Research Centre, Unitec Institute of Technology, Auckland, NZ.

Self-determining decision making and tools to protection and control personal data as outcomes for Māori engagement in genomics research is more difficult to achieve, than it would appear. With cancer treatments, the opportunity to access precision oncology could provide a significant medical breakthrough in treatment options for Māori cancer patients, who suffer some of the poorest cancer outcomes in the developed world.

However, prior to active engagement in genomics research, there is more we can do to improve how researchers and Māori can navigate forward together and fully engage in the relatively new genomics health environment. It is only on the basis that proceeding forward means full consultation and informed consent – which is both a critical engagement process and an essential ethical procedure. For Māori, the social, moral, ethical and cultural considerations associated with gaining the consent to engage, must be discussed and decided on by the collective in a whakapapa grouping, as the individuals in the group have a genetic association to each other, that gives rise to an obligation to consent to engagement, as a group.

Several initiatives from the Māori research sector in particular, have emerged in recent years to help understand the challenges, barriers and reticence experienced by Māori when considering engagement in genomics research. A strong recommendation has been made by a team of Māori researchers and practitioners to researchers working with Māori, to use a preferred practice model described as an engagement ‘roadmap’. The roadmap includes¹:

facilitating ongoing dialogue, Māori leadership, reciprocity, agreed kawa (guiding principles), tikanga (cultural protocols), and honest monitoring of what is and what is not being achieved. We challenge cancer researchers worldwide to generate locally appropriate roadmaps that honestly assess their practices to benefit Indigenous people internationally.

Further initiatives such as the Te Mana Raraunga Māori Data Sovereignty Group and the Te Ira Tangata genomics research guidelines, aid with improving understanding of Māori research and engagement priorities and needs and help Māori to navigate some of the challenges with helpful tools and explanations. More work is needed if Māori are to gain wide benefit and be in better control of their engagement and outcomes from genomics research in future. This is one example of how a whānau took a considered approach to their engagement with genomics research in 2017/18.

*1.Mapping a route to Indigenous engagement in cancer genomic research. Kimiora L Henare, Kate E Parker, Helen Wihongi, Cherie Blenkiron, Rawiri Jansen, Papaarangi Reid, Michael P Findlay, *Benjamin Lawrence, *Maui Hudson, *Cristin G*
www.thelancet.com/oncology Vol 20 June 2019.

Q4: Towards A Variome Resource For Genomic Medicine In Aotearoa/New Zealand Māori

Wilcox, P.L.¹, Flavell, T.², Watson, H.³, Harre-Hindmarsh, J.³, Hudson, M.⁴, Kereama-Royal, I.⁵, Wihongi, H.⁶, Russell, K.⁷, Sporle, A.⁸, Rolleston, A.⁹, Robertson, S.R.¹

¹University of Otago, Dunedin, NZ, ²Te Wānanga o Aotearoa, Te Awamutu, NZ, ³Ngāti Porou Hauora, Tairāwhiti, NZ, ⁴University of Waikato, Hamilton, NZ, ⁵Unitec Institute of Technology, Auckland, NZ, ⁶Waitemata and Auckland District Health Boards, Auckland, NZ, ⁷Ngai Tahu Research Consultation Committee, Dunedin, NZ, ⁸University of Auckland, Auckland, NZ, ⁹The Centre for Health, Tauranga, NZ.

International and national research has shown that genomic information resources developed for populations with Caucasian ancestries have limited applicability to ethnicities with non-Caucasian ancestries. Development of a library of genome-wide genetic variation (i.e., a ‘variome’) within extant NZ Māori is therefore required to implement genomic medicine for Māori, thereby offsetting further health disparities relative to ‘mainstream’ NZ. In this presentation I will describe our approach to characterising potential health benefits for Māori communities, firstly by describing the use of such an information resource for different classes of heritable diseases known to occur within Māori communities, then by reframing benefits within a Te Ao Māori framework using Durie’s Whare-Tapa-Wha holistic wellness model¹. Mechanisms to protect against misuse of the information resource will also be discussed.

1. Mason Durie, Whaiora: Maori health development. Auckland: Oxford University Press, 1998, pp. 68–74

Q5: Ngā tikanga o te taiwhanga pūtaiao - Tikanga in the laboratory

Henare, K. L.1

1Auckland Cancer Society Research Centre, Discipline of Oncology, Te Kupenga Hauora Māori, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, Aotearoa/NZ.

The biomedical laboratory is a contentious place for Māori researchers, as we are often faced with a dilemma of conflicting worldviews. Many of the contemporary techniques used to advance biomedical knowledge may challenge Māori ethical frameworks, whether they include genetic engineering or gene editing to determine the function of a gene or its role in biology and pathology, or the use of human tissue donated for use in research to untangle the complex molecular biology or test new drugs. Anecdotally, these tensions facing Māori laboratory scientists might be one reason for Māori opting out of a path in biomedical sciences, in addition to the culturally unsafe space that laboratories are known to be for the researcher and taonga gifted by participants for research.

This presentation will discuss some examples of how tikanga Māori might be incorporated into the lab in order to appropriately prepare and support the Māori biomedical researcher to work with these tools, and why these steps are important. As the Māori workforce continues to grow in these spaces, the incorporation of tikanga into the laboratory environment will be discussed in the context of creating a culturally safe space (i) for Māori to apply their skills and mātauranga and (ii) for kaitiakitanga and manaakitanga of taonga gifted for research. To illustrate these possibilities and challenges, the journey of Māori scientists before us as well as that guiding a recent biomedical/cancer research project will be discussed.

Q6: Cultural and Intellectual Property - Tikanga considerations, "What does the tikanga interface look like and how will it be applied?"

Taiuru, K.N.1.

1Te Whare Wānanga o Awanuiārangi, NZ.

Taonga Species is an undefined term that is often misunderstood. Within Genomics is no exception.

By introducing a well-defined definition of Taonga Species based on traditional knowledge and whakapapa; researchers and academics will be able to clearly identify when appropriate tikanga is required and where and how to seek assistance.

Interviews with leading tikanga practitioners, Iwi and Māori leaders, in addition to international Indigenous Leaders, about their perspectives of gene extraction and genomic research were conducted.

The results closely reflect those of a Te Ao Maori belief of genes in the early 2000's regarding Genetic Modification consultation by Iwi and Maori. Genetic Data is IP that belongs to Maori and is a taonga such as moteatea, waiata, whakatauki and whakapapa, it lives intergenerationally.

There is no new tikanga for human genetics and species. Traditional Māori beliefs are still applicable and to ensure the physical and spiritual wellbeing of Maori and taonga species existing health frameworks such as Masons Durie's Ngā Tapa Whā and Sir Hirini Moko Mead's Tikanga Test are relevant to genomic research. The customary tikanga needs to be adapted into modern day facilities and considerations of Data Sovereignty are vital. A range of useful interfaces will be discussed.

Q7: Understanding genomic data management – an indigenous perspective of “data protection” and “data sovereignty.”

Te Aika, Ben

Vision Mātauranga, Genomics Aotearoa, Kati Urihia, Kati Matamata, Kati Wairaki, Kati Mamoe, Waitaha, Ngati Mutunga, Ngati Tama, Te Ati Awa, Ngati Ruanui.

“What should culturally appropriate genomic data protection look like for indigenous species, data sovereignty?”

Unbundling the myriad of views is a sizable commitment. Understanding the ambiguity in these non-Māori terms such as “culturally appropriate protection” and “data sovereignty” is also a considerable task. Both these terms are discussed and compared to terms more consistent with mātauraka Māori. We consider terms such as “mana Māori” and various traditional expressions offer an improved cultural context and match when translated into English.

Understanding what may be considered “culturally appropriate” is important for Genomics Aotearoa. Quality engagement practices with takata whenua is crucial in reaching this understanding. Understanding the barriers to Māori participation in the science is key to facilitating an environment which fosters Māori exercising rakatirataka and kaitiakitaka.

Maintaining the delicate relationship between the researcher and takata whenua is essential. Ensuring that biological whakapapa is maintained under the best cultural conditions possible. New standards for quality engagement in place, which assists the researcher to better integrate the desires of takata whenua with the science is important.

A trusted environment is essential, where takata whenua exercise kaitiakitaka and rakatirataka over the biological whakapapa with the research engagement practices being at the highest standards possible. Responding effectively is the best possible solution in a rapidly evolving science and research environment.

“Appropriate protection” or enabling practices, may mean greater institutional responsibility in facilitating the nexus point where the researcher – takata whenua – data repository oversight develop a shared agreement on the use and storage of data.

Q10: Whakaora Te Whenua, Whakaora Te Whānau: Healing the land, healing the people – developing novel treatments and pharmaceutical manufacturing in an isolated Māori community.

Caddie, M

1Hikurangi Bioactives Limited Partnership, Ruatōrea, Aotearoa/NZ.

Hikurangi Group is a collective of commercially-driven social enterprises based in and around Ruatōrea in the Tairāwhiti region of Aotearoa New Zealand. Over the past four years a range of research initiatives have focused on the utilisation of indigenous resources in the development of novel therapeutic products and intellectual property. Hikurangi enterprises are focused on truly sustainable high-value product development as a strategy for environmental, social, economic and cultural revitalisation. By securing private investment to partner with world-leading scientists and research institutions, Hikurangi has been able progress pre-clinical and clinical research on a diverse array of bioactives.

The presentation will provide an overview of the ethical imperatives driving Hikurangi initiatives, key research projects undertaken to date and commercialisation strategies. Challenges faced by indigenous communities aiming to commercialise indigenous organisms and undertake genomics research in Aotearoa will be explored along with reflections on research relationships and principles for productive partnerships.



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