**ASTROBIOLOGY ORIGINS AND WHAKAPAPA MĀORI - A PARALLEL.** I.H. Mogoșanu1,2, T.N.W.T.A. Waaka3, J.G. Blank1,2,4, K.A. Campbell1,3, K.P. Paul5, C.L.R. Newton7,8, E.H. Tait6,7,8, E. Gregory9, 1New Zealand Astrobiology Network (Wellington New Zealand; haritina@astrobiology.net.nz), 2Blue Marble Space Institute of Science (Seattle WA USA), 3Society for Māori Astronomy, Research, and Traditions SMART (Wellington NZ), University of Otago, 4NASA Ames Research Center (Moffett Field, CA USA), 5School of Environment and Te Ao Mārama – Centre for Fundamental Inquiry, University of Auckland, Auckland, 1142, New Zealand, 6Ngati Whakaue, 7Te Taumata O Ngati Whakaue Iho Ake, Rotorua, New Zealand, 8Ngāti Pikiao, Ngāti Manawa, 9Ngāti Whakaue, Tuhoe, Maniapoto.

**Introduction:** The First Nation (indigenous) peoples of Aotearoa (New Zealand) are known as the Māori. Māori have an oral tradition of reciting the Whakapapa – the genealogy of human origins back to the beginning of the Universe – recognizing the Sun, the Planets, and other stars as senior progenitors of humanity which, in these stories, included many of the stages in a process that parallels the western hypothesis of the Big Bang.

In November 2016, a pilot Spaceward Bound expedition [1] was launched with funding from the New Zealand Government (MBIE’S Unlocking Curious Minds program) and in collaboration with the educational division of the tribal authority, Ngati Whakaue, one of the guardian tribes from the Te Arawa confederation of the Rotorua region, a world renowned, active geothermal location. In this program, 20 students (ages 8-16) and their families were engaged in the immersive learning style of relating to their environment and discovering the extent of life on Earth through astrobiology. One of the expedition’s objectives was to discuss and compare ancient cultural wisdom with the modern view of science and discover ‘hidden knowledge’ that is often cyphered inside traditions and cultural practices and teachings. [2]

Māori Ways of Knowing: The unwritten teachings of Mātauranga Māori [3] encapsulate the traditional way of relating to and rediscovering one’s own linkage to the land, sea and sky based on the connectedness of knowledge with respect to its lineage bound within the immediate environment, that informs our understanding of the Universe around us.

SBNZ participants were supported and informed by their Māori cultural traditions and pūrākau (stories) that in one tradition links the arrival of sentient beings on Earth with the collision of comets, or Tūnui ā Rangi, often interpreted as Atua (ancestral and/or guardian life forces).

Genealogies and creation traditions are the most sacred of all knowledge for Māori, as they map tribal lines of descent connecting their fundamental beliefs about the nature of reality and the foundation from which all other whakapapa derive. Even though genealogies of creation vary from tribe to tribe, or from region to region, and from tohunga to tohunga, they most often begin from Te Kore (the nothingness, the primal source, the potential) and then are followed by Te Pō (the night, representing the unknown darkness of creation). Te Pō and Te Ao (light) follow Te Kore. Finally, genealogical recitations culminate in Ranginui and Papatūānuku (the sky/sun father and earth mother), followed by the guardian forces of nature and the beginnings of human and other lifeforms on Earth, as explanations of how the phenomenological world came to be [4].

In our presentation, we will describe a parallel between Tātai whakapapa (genealogy) and the science of Astrobiology, illustrating a new perspective on both (Māori and Western science) understandings about the creation of life in the Universe. [5]

**References:**

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Fig 1: Te Takinga Marae at night with the Southern Cross, and the coalsack/The Flounder (a dark patch neighbouring the S. Cross) in the backdrop, picture taken during the first (2015) Spaceward Bound New Zealand expedition.