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NURTURING NATURE TO COMBAT AILMENTS IN PAPUA NEW GUINEA: STUDIES ON VEGETAL SALTS AND ASH SUSPENSION THAT CLAIM TO REGAIN HEALTH AND CURE CANCER

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Papua New Guinea (PNG), abundantly blessed with diversities of flora and fauna species, is culturally very rich with numerous traditional practices that are still being followed by many on a routine basis. The country is one among few countries that nurtures the nature to combat common and complicated ailments for the betterment of mankind. People burn selected species of plants to produce ash from which crystalline vegetal salts of colour varying from white to black through cream yellow and brown are prepared by simple water lixiviation technique, mostly that are specific to ethnic groups. Each group has their own traditional way of making vegetal salts by using traditional containers, filters, ladles and pipes, all of which are made of plant parts. These salts are being consumed by people to regain energy and restore health. The salts were found to be strong electrolytes with good electrical conductance and contain common cations and anions. *Piper aduncum* is a spiked-pepper plant whose ash suspension in water has been confidentially used by a family in Busiga Village, Morobe Province, PNG as potion to treat cancer in people around the area. The suspension, upon analysis, was found to contain high percentage of black coarse carbon particles and common cations and anions in the filtrate portion of the suspension. Surprisingly, when cytotoxic studies with MCF-7, HeLa and Hep G2 cell lines were carried out, a positive response was revealed and IC_{50} values for the ash suspension, carbon particles and the clear filtrate were found to be 250, 150 and 400 µg/mL respectively, against MCF-7 cell line. A detailed study covering ICP, SEM and LC-MS analyses along with a quick review on vegetal salt production practices in and around PNG will be covered in the presentation.

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