# Investigation of a Safer Treatment for Lung Cancer Using a Traditional Hawaiian Herb, Morinda citrifolia (Noni)

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Lung cancer remains the as the leading cause of cancer-related deaths worldwide, with an estimated 124,730 deaths in the United States alone in 2025. The situation in Hawai?i is especially critical due to the high smoking rates, exposure to secondhand smoke, and healthcare disparities. Current treatments, such as using cisplatin (a common chemotherapy used to treat lung cancer), are non-selective and cause detrimental side effects. Thus finding a safe and effective treatment for lung cancer is urgently needed. Hawai?i boasts a diverse variety of native medicinal herbs traditionally used to treat various illnesses. In particular, Morinda citrifolia (noni) stands out for its wide-ranging therapeutic applications and potential anticancer properties. However, the underlying mechanism(s) of its effects remain unclear, preventing its further application in becoming a safe and effective alternative. This study demonstrates that Morinda citrifolia exhibits comparable anti-lung cancer activity to cisplatin while being significantly safer for normal cells. In addition, Morinda citrifolia's antioxidant activity is 2.36 times higher than other antioxidant-rich fruits, suggesting that its significant antioxidant activity may play a crucial role in its anticancer effects. Morinda citrifolia stands as a promising candidate towards future lung cancer treatment.

**Awards Won:**