Medicinal Effects of Sambucus caerulea and Lomatium dissectum on A549 Lung Cancer Cells

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My research this year continued to investigate the anticancer effects of Lomatium dissectum, commonly known as fern leaf biscuit root (“doza" in our Native language), and Sambucus caerulea, elderberry (“hubui”). Indigenous people have used traditional plant medicines for healing and wellness for thousands of years. In my previous tests, Sambucus caerulea effectively inhibited the growth of MRC-5 lung cancer cells, whereas Lomatium dissectum was less effective in inhibiting the growth of these cancer cells. This year’s research investigated the effects of Sambucus dissectum and Lomatium dissectum on different types of lung cancer. I hypothesized that both Sambucus caerulea and Lomatium dissectum would be effective against A549 lung cancer cells. An AlamarBlue assay was performed with both plant extracts. A mixture of the plant extracts was also tested. In this year’s experiments, Lomatium dissectum had the strongest anticancer effect against A549 lung cancer cells. Sambucus caerulea was less effective on the newly tested strain of lung cancer. Overall, both plant extracts were effective against lung cancer cells in vitro; Sambucus ceaerulea showed more anticancer activity in MCR-5, and Lomatium dissectum showed more anticancer activity in A549 cells. Further tests should be conducted for consistent results.