

# 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 caerulea* 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.