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Modern Drugs from Ancient Medicine: Finding New Antibiotics in Native American Medicinal Plants

This project was to test if there could be a new antibiotic discovered from Native American herbal remedies and if their claims that the plants, Usnea lichen and Oregon Grape root were antibacterial were correct. The experiment was to test if these two plants would inhibit bacterial growth in a petri dish. To test this question, I boiled each of these plants, making a water extract that was filtered with a micron filter and diluted to make three concentrations. Four paper discs were soaked in each concentration including a negative control of a disc with nothing on it, and a disc with Streptomycin on it for a positive control. These discs were placed in petri dishes poured with agar and streaked with a liquid bacteria culture. These dishes were then incubated to grow for 24 hours. The results were measured by the diameter with a ruler in mm around each disc with no bacteria grown. The results showed the Oregon Grape root to have inhibited the bacterial growth. The Usnea lichen did not inhibit growth. The blank disc did not inhibit growth and the Streptomycin did. The highest concentration of Oregon Grape root did the best, and the medium did okay. The data concluded that the Oregon Grape did have antibacterial properties and had the possibility of being used as an antibiotic. The high concentration inhibition of this plant was very close to the Streptomycin inhibition. This means that the Oregon Grape root could be made into a modern antibiotic.