Methicillin-resistant Staphylococcus aureus (MRSA)

Many bacterial infections possess multi-drug resistance. Among the most significant of these bacteria is methicillin-resistant *Staphylococcus aureus*, more commonly known as MRSA or “the superbug.” This bacterium is resistant to standard antibiotics, including penicillin. According to the *Journal of the American Medical Association*, MRSA is responsible for nearly 20,000 hospital-stay-related deaths annually in the United States.¹

Cannabinoids are acknowledged to possess antibacterial and antifungal properties,² and topical preparations of the plant were initially investigated for these purposes nearly a century ago.³ In 2008, investigators at Italy’s Universita del Piemonte Orientale and Britain’s University of London, School of Pharmacy, assessed the germ-fighting properties of five separate cannabinoids against various strains of multidrug-resistant bacteria, including MRSA. They reported that all of the compounds tested showed “potent antibacterial activity” and that cannabinoids were “exceptional” at halting the spread of MRSA.⁴

Other studies have reported that non-cannabinoid constituents in the plant, such as terpenoids, also possess antibacterial properties against MRSA and malaria.⁵⁻⁷

Ethanol-based tinctures containing crushed cannabis leaves have also been documented to inhibit MRSA growth.⁸

Recent studies have also demonstrated that cannabinoids are effective in reducing the colony count of dental bacteria,³ leading investigators to opine in favor of “the potential of cannabinoids in developing efficient and safer mouthwash products and next generation oral care products.”¹⁰

Clinical trials regarding the use of cannabinoids as antibacterial and antimicrobial agents have been recommended, but are yet to be conducted. Experts opine, “Cannabis sativa … represents an interesting source of antibacterial agents to address the problem of multidrug resistance in MRSA and other pathogenic bacteria.”¹¹

REFERENCES

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