

In Vitro Biological Screening of Steroidal Alkaloid Isolated from *Sarcococca saligna*

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SUMMARY. Present research work was aimed to isolate compound holaphylline from *Sarcococca saligna* and to determine their antibacterial, antifungal, insecticidal and phytotoxic activities. Holaphylline was isolated from the chloroform fraction of *S. saligna* through phytochemical investigation. The structure of compound was determined through modern spectroscopic techniques. The isolated holaphylline was then screened for antibacterial, antifungal, phytotoxic and insecticidal activity. The holaphylline showed mild to moderate antibacterial activity against *S. aureus* (79%), *B. subtilis* (72%), and *P. aeruginosa* (69%), respectively. Furthermore, holaphylline showed low to moderate antifungal actions against various pathogenic fungi. The maximum phytotoxic effect of compound (66%) was observed at different concentration levels. Additionally, isolated holaphylline showed maximum effect (65%) against *T. castaneum*, while low against *R. dominica* and *C. analis* (20% and 10%, respectively) in insecticidal activity. Holaphylline showed significant potential against bacteria, insects, while moderate effect against fungi that justify the traditional use of the said plant.

RESUMEN. El presente trabajo de investigación tuvo como objetivo aislar el compuesto holafilina de *Sarcococca saligna* y determinar sus actividades antibacterianas, antifúngicas, insecticidas y fitotóxicas. La holafilina se aisló de la fracción cloroformo de *S. saligna* a través de una investigación fitoquímica. La estructura del compuesto se determinó mediante técnicas espectroscópicas modernas. La holafilina aislada se examinó luego para determinar su actividad antibacteriana, antifúngica, fitotóxica e insecticida. La holafilina mostró actividad antibacteriana de leve a moderada contra *S. aureus* (79%), *B. subtilis* (72%) y *P. aeruginosa* (69%), respectivamente. Además, la holafilina mostró acciones antifúngicas de bajas a moderadas contra varios hongos patógenos. El efecto fitotóxico máximo del compuesto (66%) se observó a diferentes niveles de concentración. Además, la holafilina aislada mostró un efecto máximo (65%) contra *T. castaneum*, mientras que fue baja contra *R. dominica* y *C. analis* (20% y 10%, respectivamente) en la actividad insecticida. La holafilina mostró un potencial significativo contra bacterias e insectos, pero un moderado efecto contra hongos, que justifican el uso tradicional de dicha planta.

KEY WORDS: antibacterial, antifungal, holaphylline, insecticidal, phytotoxicity, *Sarcococca saligna*.

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