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Antibacterial Potential of Flavonoids Isolated from *Moringa oleifera* Leaves and Barkagainst Methicillin Resistant *Staphylococcus aureus* (MRSA) Prevalent in Rajasthan

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Abstract—*Annually, about 23,000 people die due to antibiotic-resistant bacterial infections. Antibiotic resistance makes it challenging to treat infections. Methicillin Resistant Staphylococcus aureus is a versatile pathogen capable of causing a broad spectrum ofcontagious infectious human diseases. The infections caused by MRSA account for >60% of intensive care unit submissions. Due to the rising antimicrobial drug resistance, research has begun on the use of medicinal plants as alternative medicines to treat infections.*

This study was focused to screen the extracts qualitatively and quantitatively for the presence of the phytochemicals and the extracted flavonoid was then analysed for its antibacterial activity by the Bioautography Method.

The results from our experiments showed that the total flavonoid content in Moringa oleiferaleaves and bark was 306.75 mg/mland 127.25 mg/ml respectively. The TLC of the methanolic and ethanolic extracts of M. oleifera leaves provided three compounds with Rf values of 0.06, 0.78, 0.81 and 0.18, 0.81, 0.83 respectively. The TLC of the methanolic extracts of M. oleifera bark provided compounds with the Rf values of 0.22, 0.69, 0.76 and 0.8. The agar-overlay bioautography of the isolated flavonoids showed clear zones thereby confirming the inhibitory activities against selected MRSA isolates. The results of this study can lead to the development of novel therapeutic agents capable of controlling or curbing the problem of drug resistance.

Keywords*: MRSA, Moringa oleifera, Antibacterial potential, Flavonoid, Bioautography.*