

ABSTRACT

Staphylococcus aureus (SA) is an opportunistic human pathogen that can cause infections in humans, including atopic dermatitis, also known as eczema. Eczema is a skin condition where patients experience flare-ups characterized by redness, itchiness, dried skin, and may vary among individuals. Interestingly, there is a common pattern where all eczema patients' skin is colonized by SA, and treatment that reduces its colonization could alleviate the patients' symptoms. However, since the discovery of antibiotics, SA has developed resistance to several antibiotics, including *methicillin-resistant Staphylococcus aureus* (MRSA), which has rapidly spread globally from one country to another. MRSA is known to colonize the skin of eczema patients and resist all beta-lactam antibiotics, posing an urgency to find alternative solutions. Therefore, two well-known medicinal plants native to Taiwan, *Houttuynia cordata* and *Rhodomyrtus tomentosa*, will be extracted using ethanol and water, each in two different ratio 1:5 and 1:0.25 (w/v) of dried plant leaves. The findings show that indeed MRSA can colonize the skin of eczema patients, and both Taiwanese native plants were able to inhibit its growth with specific solvents and ratios.

Keywords: *Methicillin-resistant Staphylococcus aureus*, Eczema, *Houttuynia Cordata*, *Rhodomyrtus Tomentosa*