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Supplementary material

Antibacterial effect of extracts of *Haplopappus* species and the frequency per article in which this activity was described for each bacterial species. The frequency is given by the number of original research articles that describe inhibitory effects for these microbial species. This table only shows the bacterial species studied in which inhibitory effects were reported in at least one article.

Bacterial specie	Frequency per article	*Haplopappus* species	Extract	Results	Reference
Staphylococcus aureus	9	*H. uncinatus*	Resinous exudate	No inhibition	(Urzúa *et al.*, 2006)
				Inhibition zone 11-13 mm	(Urzúa *et al.*, 1995)
		H. foliosus		MIC 1000 µg/mL	(Urzúa & Mendoza, 2001)
				MIC 500 µg/mL	
				MIC 2.5 µg	(Urzúa *et al.*, 2003)
		H. diplopappus		Inhibition zone 9-10 mm	(Urzúa *et al.*, 1995)
		H. anthylloides			
		H. schumannii			
		H. pusillus			
		H. velutinus			
		H. illinitus			
		H. multifolius		Inhibition zone 11-13 mm	
			Ethanolic extract	Inhibition zone 9.3 mm	(Padilla *et al.*, 2021)
			Infusion	Inhibition zone 12.4 mm	
		H. taeda	Ethanolic extract	Inhibition zone 7.9 mm	
			Infusion	Inhibition zone 7.2 mm	
		H. rigidus	Ethanolic extract	Inhibition zone 11-20 mm	(Morales *et al.*, 2003)
			Chloroform extract	Inhibition zone 6-10 mm	
		H. litoralis	Resinous exudate	MIC 1.25 µg	(Urzúa *et al.*, 2012)
		H. chrysanthemifolius		MIC 2.5 µg	
		H. scrobiculatus			
		H. baylahuen	Decoction	Total inhibition	(Lazo, 1990)
			Ethanolic extract		
			Ethyl acetate extract		
			Dichloromethane extract	45% inhibition at 1000 µg/mL	(Brodkiewicz *et al.*, 2017)
			Methanolic extract		
Bacillus subtilis	8	*H. uncinatus*	Resinous exudate	MIC 63 µg/mL	(Urzúa *et al.*, 2006)
		H. diplopappus			
		H. velutinus			
Escherichia coli	8	*H. illinitus*	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. anthylloides			
		H. schumannii		Inhibition zone 9-10 mm	
		H. cuneifolius (H. pusillus)			
		H. multifolius	Ethanolic extract	No inhibition	(Elgueta *et al.*, 2021)
			Infusion		
		H. taeda	Ethanolic extract		
			Infusion		
		H. rigidus	Ethanolic extract		(Morales *et al.*, 2003)
			Chloroform extract		
		H. baylahuen	Decoction		(Lazo, 1990)
			Ethanolic extract		
			Ethyl acetate extract		
		H. litoralis	Resinous exudate		(Urzúa *et al.*, 2012)
		H. chrysanthemifolius			
		H. scrobiculatus			
		H. diplopappus			
		H. velutinus			

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Escherichia coli (continuation)	8	*H. illinitus*	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. anthylloides		Inhibition zone 9-10 mm	
		H. schumannii			
		H. cuneifolius (H. pusillus)			
		H. multifolius	Ethanolic extract	No inhibition	(Elgueta *et al.*, 2021)
			Infusion		
		H. taeda	Ethanolic extract		
			Infusion		
		H. rigidus	Ethanolic extract		(Morales *et al.*, 2003)
			Chloroform extract		
		H. baylahuen	Decoction		(Lazo, 1990)
			Ethanolic extract		
			Ethyl acetate extract		
		H. litoralis	Resinous exudate		(Urzúa *et al.*, 2012)
		H. chrysanthemifolius			
		H. scrobiculatus			
Proteus vulgaris	6	*H. uncinatus*	Resinous exudate	No inhibition	(Urzúa *et al.*, 2006)
				Inhibition zone 11-13 mm	(Urzúa *et al.*, 1995)
			Methanolic solution of resinous extract	No inhibition	(Urzúa & Mendoza, 2001)
		H. foliosus	Resinous exudate		(Urzúa *et al.*, 2003)
				Inhibition zone 11-13 mm	(Urzúa *et al.*, 1995)
		H. illinitus	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. diplopappus		Inhibition zone 9-10 mm	
		H. anthylloides			
		H. schumannii			
		H. cuneifolius (H. pusillus)			
		H. velutinus		Inhibition zone 11-13 mm	
		H. multifolius		Inhibition zone 9-10 mm	
			Ethanolic extract	No inhibition	(Padilla *et al.*, 2021)
			Infusion		
		H. taeda	Ethanolic extract		
			Infusion		
		H. litoralis	Resinous exudate		(Urzúa *et al.*, 2012)
		H. chrysanthemifolius			
		H. scrobiculatus			
Bacillus cereus	5	*H. uncinatus*	Resinous exudate	MIC 250 µg/mL	(Urzúa *et al.*, 2006)
		H. foliosus	Methanolic solution of resinous extract		(Urzúa & Mendoza, 2001)
			Resinous exudate	MIC 2.5 µg	(Urzúa *et al.*, 2003)
		H. litoralis		MIC 0.32 µg	(Urzúa *et al.*, 2012)
		H. chrysanthemifolius		MIC 0.32 µg	
		H. scrobiculatus		MIC 1.25 µg	
		H. multifolius	Ethanolic extract	Inhibition zone 8.6 mm	(Padilla *et al.*, 2021)
			Infusion	No inhibition	
		H. taeda	Ethanolic extract	Inhibition zone 15.2 mm	
			Infusion	Inhibition zone 12.2 mm	

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Micrococcus luteus	5	*H. foliosus*	Resinous exudate	Inhibition zone 11-13 mm	(Urzúa *et al.*, 1995)
				MIC 2.5 µg	(Urzúa *et al.*, 2003)
			Methanolic solution of resinous extract	MIC 250 µg/mL	(Urzúa & Mendoza, 2001)
		H. uncinatus		MIC 500 µg/mL	
					(Urzúa *et al.*, 2006)
		H. multifolius	Resinous exudate	Inhibition zone 9-10 mm	(Urzúa *et al.*, 1995)
		H. illinitus		No inhibition	
		H. schumannii		Inhibition zone 9-10 mm	
		H. pusillus			
		H. velutinus			
		H. diplopappus		Inhibition zone 11-13 mm	
		H. anthylloides			
		H. litoralis		MIC 2.5 µg	(Urzúa *et al.*, 2012)
		H. chrysanthemifolius			
		H. scrobiculatus		MIC 1.25 µg	
Pseudomonas aeruginosa	4	*H. taeda*	Ethanolic extract	No antimicrobial activity was observed	(Padilla *et al.*, 2021)
			Infusion		
		H. multifolius	Ethanolic extract		
			Infusion		
		H. diplopappus	Resinous exudate	Inhibition zone 9-10 mm	(Urzúa *et al.*, 1995)
		H. anthylloides			
		H. illinitus			
		H. schumannii	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. cuneifolius (H. pusillus)			
		H. velutinus			
		H. uncinatus			
		H. foliosus			
		H. rigidus	Ethanolic extract	No inhibition	(Morales *et al.*, 2003)
			Chloroform extract		
		H. baylahuen	Dichloromethane extract	MIC 1000 µg/mL	(Brodkiewicz *et al.*, 2017)
			Methanolic extract	40% inhibition 1000 µg/mL	
Clavibacter michiganensis subsp michiganensis	3	*H. uncinatus*	Resinous exudate	MIC 63 µg/mL	(Urzúa *et al.*, 2006)
		H. foliosus		MIC 250 µg/mL	(Urzúa & Mendoza, 2001)
		H. litoralis		No antimicrobial activity was observed	(Urzúa *et al.*, 2012)
		H. chrysanthemifolius			
		H. scrobiculatus			
Bacillus coagulans	2	*H. uncinatus*	Methanolic solution of resinous extract	MIC 125 µg/mL	(Urzúa & Mendoza, 2001)
		H. foliosus		MIC 1000 µg/mL	
			Resinous exudate	MIC 5 µg/mL	(Urzúa *et al.*, 2003)
Enterococcus faecalis	2	*H. taeda*	Ethanolic extract	No antimicrobial activity was observed	(Padilla *et al.*, 2021)
			Infusion		
		H. multifolius	Ethanolic extract		
			Infusion		
		H. rigidus	Chloroform extract	Inhibition zone 6-10 mm	(Morales *et al.*, 2003)
			Ethanolic extract		
Salmonella enterica subsp enterica serovar	2	*H. taeda*	Ethanolic extract	No antimicrobial activity was observed	(Padilla *et al.*, 2021)
			Infusion		
		H. multifolius	Ethanolic extract		
			Infusion		
		H. baylahuen	Ethanolic extract	MIC 11 mg/mL	(Elgueta *et al.*, 2021)

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Staphylococcus epidermidis	2	*H. taeda*	Ethanolic extract	Inhibition zone 6.8 mm	(Padilla *et al.*, 2021)
			Infusion	No inhibition	
		H. multifolius	Ethanolic extract	Inhibition zone 8.7 mm	
			Infusion	Inhibition zone 6.8 mm	
		H. illinitus	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. diplopappus		No antimicrobial activity was observed	
		H. anthylloides			
		H. schumannii		Inhibition zone 9-10 mm	
		H. cuneifolius (H. pusillus)			
		H. velutinus			
		H. uncinatus			
		H. foliosus			
Bacillus anthracis	1	*H. diplopappus*	Resinous exudate	Inhibition zone 9-10 mm	(Urzúa *et al.*, 1995)
		H. anthylloides			
		H. schumannii			
		H. cuneifolius (H. pusillus)			
		H. multifolius			
		H. illinitus			
		H. velutinus		Inhibition zone 11-13 mm	
		H. uncinatus			
		H. foliosus			
Bacillus pumilus	1	*H. schumannii*	Resinous exudate	Inhibition zone 9-10 mm	(Urzúa *et al.*, 1995)
		H. cuneifolius (H. pusillus)			
		H. multifolius			
		H. foliosus			
		H. diplopappus			
		H. anthylloides		Inhibition zone 11-13 mm	
		H. velutinus			
		H. uncinatus			
		H. illinitus			
Bordetella bronchiseptica	1	*H. anthylloides*	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. cuneifolius (H. pusillus)			
		H. foliosus			
		H. diplopappus			
		H. schumannii		Inhibition zone 9-10 mm	
		H. velutinus			
		H. uncinatus			
		H. multifolius	Resinous exudate	Inhibition zone 11-13 mm	(Urzúa *et al.*, 1995)
		H. illinitus			
Micrococcus flavus	1	*H. foliosus*	Resinous exudate	No inhibition	(Urzúa *et al.*, 1995)
		H. schumannii		Inhibition zone 9-10 mm	
		H. cuneifolius (H. pusillus)			
		H. velutinus			
		H. uncinatus			
		H. multifolius			
		H. illinitus			
		H. diplopappus		Inhibition zone 11-13 mm	
		H. anthylloides			
Streptococcus agalactiae	1	*H. multifolius*	Ethanolic extract	No antimicrobial activity was observed	(Padilla *et al.*, 2021)
			Infusion		
		H. taeda	Ethanolic extract	Inhibition zone 7.4 mm	
			Infusion	Inhibition zone 8.5 mm	

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Streptococcus pyogenes	1	*H. multifolius*	Ethanolic extract	No antimicrobial activity was observed	(Padilla *et al*., 2021)
			Infusion	Inhibition zone 10.9 mm	
		H. taeda	Ethanolic extract	Inhibition zone 7.4 mm	
			Infusion	Inhibition zone 12.1 mm	

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