

Appendix 37

COMPARISON OF INHIBITION OF GROWTH OF ENTERIC PATHOGENS BY ANTIBIOTICS AND PLANT EXTRACTS

(Data gathered by Dr Assumpta Sharon)

Abbreviations: rt: root; lf: leaf; stb: stem bark; ft: fruit; urf: unripe fruit; rnd: fruit rind; plp: fruit pulp.

Extracts were made in phosphate buffered saline at 1:10 (w/v)

Pathogens were isolated from patients in Hospital

Pathogen and Antibiotics (inhibition zone range in mm; disc conc. in ug*)	Plant extract (inhibition zone in mm)	
1. <i>Escherichia coli</i> (including other Gram-negative enteric pathogens)		
Amikacin (19-26 mm; 30 ug)	<i>Bauhinia purpurea</i> (stb)	29 mm
Ampicillin (16-22 mm; 10 ug)	<i>Oryza sativa</i> var. Intan (ft)	25
Erythromycin (08-14 mm; 15 ug)	<i>Psidium guajava</i> (urf)	23
	<i>Tephrosia purpurea</i> (ft)	17
	<i>Cocculus hirsutus</i> (rt)	16
2. <i>Pseudomonas aeruginosa</i> (including other Gram-negative enteric pathogens)		
Norflaxacin (22-29 mm; 10 ug)	<i>Punica granatum</i> (rnd)	11
Amikacin (18-26 mm; 30 ug)	<i>Holarrhena antidysenterica</i>	
Netilmicin (17-23 mm; 10 ug)	(stb, lf)	10
Gentamycin (16-21 mm; 10 ug)		
3. <i>Shigella flexneri</i> (including other Gram-negative enteric pathogens)		
Ampicillin (14 mm; 10 ug)	<i>Alstonia scholaris</i> (stb)	34
	<i>Cesearia esculenta</i> (plp)	32
	<i>Naregamia alata</i> (lf)	32
	<i>Naregamia alata</i> (rt)	24
	<i>Emblica officinalis</i> (plp)	24
	<i>Holarrhena antidysenterica</i> (stb)	24
	<i>Xeromphis spinosa</i> (ft)	22
	<i>Anethum sowa</i> (ft)	22
	<i>Anethum sowa</i> (lf)	20
	<i>Oryza sativa</i> var. Karna (ft)	18
	<i>Punica granatum</i> (rnd)	18
	<i>Lycopersocum esculentum</i> (sd)	16
	<i>Syzygium cumini</i> (ft)	16
	<i>Acalypha wilkesiana</i> (lf)	12

Pathogen and Antibiotics
(inhibition zone range in mm;disc conc. in ug*)

Plant extract
(inhibition zone in mm)

4. *Staphylococcus aureus* (including other Gram-positive enterococci)

Penicillin (27-35 mm; 10 units)	<i>Citrus aurantifolia</i> (plp)	32
Tetracyclin (19-28 mm; 30 ug)	<i>Anethum sowa</i> (lf)	17
Amikacin (20-26 mm; 30 ug)	<i>Acalypha wilkesiana</i> (lf)	12
Chloramphenicol (19-24 mm; 30 ug)	<i>Syzygium cumini</i> (ft)	12
Streptomycin (14-22 mm; 10 ug)		
Gentamycin (17-19 mm; 10 ug)		

5. *Vibrio cholerae* (including other enterococci)

Carbenecilin (23 mm; 100 ug)	<i>Casearia esculenta</i> (lf)	30
Ampicillin (17 mm; 10 ug)	<i>Naregamia alata</i> (ft)	22
Penicillin (15 mm; 10 units)	<i>Punica granatum</i> (rnd)	17
	<i>Anethum sowa</i> (ft)	12
	<i>Citrus aurantifolia</i> (plp)	12
	<i>Cocos nucifera</i> (green exocarp)	12

*Data from the National Committee for Clinical Laboratory Standards, Vol. 4, No. 16, 1984.

