

Antimicrobial Activity of Ayurvedic Drug

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Abstract—Bacterial infections of digestive tract are considered to be the major cause of morbidity and mortality, especially in children and elderly patients in India. There are reports showing that infection caused by bacterial enteropathogens has led to approximately 46,000 hospitalizations and 1500 deaths each year in United States. These bacterial pathogens belong to the genera of non-typhoid *Salmonella*, *Shigella*, *Vibrio*, *Campylobacters*, species of *Yersinia enterocolitica* (*Y. enterocolitica*) and *Clostridium difficile* (*C. difficile*), and of course to the group of diarrhoeagenic *Escherichia coli*. Management of disease involves maintaining hydration, decreasing the frequency of stools passed etc. The antibacterial used can shorten span of disease and can cure infection. However, a number of cases have been reported where enteric bacteria has developed resistance to antibiotics—including sulfa compounds, penicillins, tetracycline, and trimethoprim/sulfamethoxazole— when these drugs are used extensively. In this background antimicrobial activity of medicinal plants which have traditionally been claimed to have antidiarrheal properties was screened. The extract of the formulation was made in the solvent of different polarity and was tested against *E. coli*, *Salmonella typhimurium*, *Staphylococcus aureus* and *Shigella dysenteriae*. In silico study comparing five steroidal alkaloids reported to be present in Ayurvedic drug selected for the present study along with drugs which are commercially being used for the treatment of diarrhea.