



Ethno-veterinary medicine for reducing the use of antibiotic and other chemical veterinary drugs in veterinary practice

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Abstract:

The excessive and indiscriminate use of antibiotics in human, agriculture and animal health care, have resulted in the creation of antimicrobial resistance. AMR makes it harder to eliminate infections from the body as existing drugs become ineffective. In addition to increasing drug resistance, these methods have led to unavoidable side effects and allergic reactions on consumers who consume animal products such as milk and meat. In India in the past 5 years the annual rate of use of antibiotics is rising by 6-7 %¹. About 90% of the antibiotics used in humans, crops and the livestock end up in the environment. It is estimated that by 2050 the antimicrobial resistance (AMR) will cause 10 million deaths per year² One of the immediate challenges for people working on AMR is to reduce the use of antibiotics and related drugs both for human and animal consumption.

The University of Trans-disciplinary health sciences and Technology (TDU) along with Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) has documented Ethno-veterinary practices from 24 locations in 10 states and rapidly assessed them using Ayurveda and established that 353 formulations out of 441 are safe and efficacious³. In Vitro antimicrobial activity of the extracts of the herbal formulation against mastitis had inhibitory activity against *E. coli* and *S. aureus*⁴. Clinical study using traditional formulation for Mastitis showed that somatic cell counts (SCC), electrical conductivity (EC) and pH of the milk become normal within 6 days indicating cure of mastitis⁵. We used the in silico approach to find the effect of the herbal preparation against the infection. The bioactive compounds were tested for its effect against the target proteins of *S. Aureus* using molecular docking studies⁶. It has been shown that traditional medicine can be used during dry period to reduce the incidence of mastitis⁷ and reduce ROP⁸.

In conclusion, Adopting the Ethno-veterinary Science



and Practices to combat infectious diseases in livestock has been identified and tested as a key game changer in reducing the use of antibiotic in veterinary practices

Biography:

Assessment of health traditions to find its safety & efficacy, training of vets and farmers to manage certain clinical conditions using medicinal plants to reduce antibiotic use in animals & humans. 35 years experience in teaching & research in the Universities. 12 years in Health traditions, training of vets and farmers to use medicinal plants for certain clinical conditions (Mastitis, FMD, enteritis, udderpox, bloat, and other 10 clinical conditions) to reduce antibiotic use training of household to use medicinal plants to manage their primary health care, cultivation of medicinal plants

Publication of speakers:

1. Sustainable utilization of gums and resins by improved tapping techniques in some species. Proceedings: Harvesting of Non-wood forest products. 2001
2. Gums and resins: improved tapping technique in some species. Proce. International Workshop on Sustainable management of Non-wood forest products, 1998
3. Gum and Resin Ducts and Cavities in Angiosperms
4. Cambial variant and wood structure in the stem of *Spatholobus roxburghii*
5. Sculptures on the vessel element walls of some tropical trees.

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