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## Honey: Clinical applications and scope as an alternate antibacterial therapy in multi-resistant ocular bacterial infections especially involving MRSA

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Medical uses of honey for curing various ailments have been endorsed Holy Koran, Vedas and Bible. The Russians used it in World War I to prevent wound infection and to accelerate wound healing. Besides, it has occupied a prominent place in traditional medicines throughout history due to its conventional use as antibacterial/antifungal agent, reducing edema in wounds and ulcers. In view of the prevalence of alarming antibiotic-resistance in clinical bacteria all over the world, there is a rapidly increasing move towards using honey as an alternate-therapy on multi-resistant organisms including superbugs – Methicillin Resistant Staphylococcus aureus (MRSA) and others to clear infection in wounds, with no adverse effects on wound tissues. Branded Manuka honey and many commercial products which have now flooded world market appear to be highly effective for the treatment of many wound infections, burns, psoriasis, gastrointestinal disorders, arthritis, eczema, sore throat, dental carries, stomach aches, flu like symptoms and corneal ulcers. Large number of workers including our laboratory in India and abroad have observed Honey's miracles in Ophthalmology, Dentistry, Surgery, Plastic Surgery, Paediatrics, Gynaecology, Dermatology and Gastroenterology. A large number of eye infections may pose a potential eye blinding threat particularly when not respond to common antibiotics due to emergence of resistance. In view of spread of multiple antibiotic-resistances in Ophthalmic conditions, our laboratory have explored honey as a possible antibacterial agent and found it to be potent during the treatment of corneal ulcers in rabbit models. Beside, topical application of branded Manuka Honey eye drops recently on 100 subjects (48 male and 52 female) in cases of dry eye syndrome led to reduction of bacterial colony counts obtained from eyes of such patients and tear film stability revealing honey's role in contributing to the symptomatic relief. Beside, our concept of using honey against multi-resistant dreaded super bugs MRSA involving eye was further supported by our antibacterial studies conducted in India and abroad especially in UK where Honey was tested on various bacteria including MRSA, MSSA from eye patients. Based on available information, we can see potential prospects and scope of Honey as an alternate antibacterial option in future particularly for the treatment of non-responding life threatening multi-resistant pathogens especially superbug MRSA strains and probably easily the external bacterial eye infections including conjunctivitis, keratitis, blephritis, orbital cellulitis, and dacryosystitis.

### Biography

Shamim Ahmad obtained his Ph.D. at the Department of Microbiology, Central Drug Research Institute, Lucknow in 1982. Currently, he is serving as Professor of Ocular Microbiology and Officer in-charge & Teacher in-charge (Administrative Affairs) at Ocular Microbiology Section, Institute of Ophthalmology, JN Medical College, Faculty of Medicine, Aligarh Muslim University, India since January 10, 1983. Prof. Ahmad had also served as Faculty for more than 5 years on deputation at Faculties of Medicine in the Department of Clinical Microbiology, Al-Arab Medical University, Libya and Department of Medical Microbiology, College of Medicine, King Khalid University, Saudi Arabia. Prof. Ahmad is the recipient of at least 6 International Fellowships including "DAAD"(W.Germany), "JSPS"(Japan), "ROYAL-SOC.-London"(UK), "DAAD"(Germany), "TUBA"(Turkey) and "SAIA" (Slovak Republic) as a visiting Professor. He is honored to be Chief Editor/Member/Reviewer in the Editorial team of 30 International journals of world repute, his current research interests being antibiotic resistance, MRSA and honey as antibacterial in ocular infections.

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