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### Recent research trends for bee venom in South Korea

Heat-clearing and detoxicating TCM is the most frequently used category in the treatment of cancerous tumors, but lacks Bee Venom (BV) from honeybee (*Apis mellifera* L.) has long been used as a complementary medicine to treat an array of conditions including rheumatoid arthritis, back pain, cancerous tumors and skin disorders. Pure BV is generally obtained by electric stunning using a BV collector without harm to the honeybees, removing impurities from the collected BV and lyophilizing the final product in South Korea. The obtained BV is possibly sufficient for the quantitative and qualitative analysis. We study that BV collected from the honeybee has a number of potential medicinal properties. In recent years, BV used in the cosmetic industry as an antiwrinkle agent improves skin wrinkles. Topical application of cosmetics containing purified BV has been reported to be effective in the treatment of humans with acne vulgaris. Another study conducted has reported that BV has a potential anti-bacterial effect against inflammatory skin disease. We report that BV has antibacterial and synergistic activities with ampicillin or penicillin against MRSA strains. We also studied that the determination of irritant effects on skin and eyes is an important initial step in the assessment and evaluation of the safety of a substance. In this regard, it has been demonstrated that BV does not induce skin sensitization in guinea pigs, and has no dermal or ocular irritation potential in New Zealand white rabbits. We determined the phototoxicity and photosensitivity of BV in guinea pigs to ensure that its topical dermatologic use does not damage the skin. Another study, has reported that BV treatment has interesting features for practical application in livestock production. BV is potentiating an immune response to the normal environmental, social and nutritional challenges that the newly weaned young pigs and calves encounter. BV supplementation via drinking water showed significant effects on overall performance of broilers during the early stage of life. The results of our study are promising and may contribute to the use of natural products as drugs.

### Biography

Sang Mi Han has completed her PhD at the age of 28 years from Kyungbook National University and postdoctoral studies from Kyemyung University School of Medicine. She is the director of Bee products application laboratory. She has published more than 100 papers in reputed journals and has been serving as an editorial board member of repute.

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