

Symposium

## MULTIPLE MEDICAL BENEFITS OF EDIBLE BIRD'S NEST EXTRACTS

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Edible bird's nest (EBN) is a renewable product that made from swiftlet's (*Aerodramus fucifagus*) special glands secretion during breeding season. Although EBN has been taken by Chinese for its nutri-pharmaceuticals benefits since few hundred years ago, it has not been popular in other races. Besides the price issue, the medical and scientific evident of EBN effects is only actively investigated for the past 15 years. The active compounds in the EBN which contributed to the medical benefits were identified as glycoprotein or glycopetides. EBN glycopeptide is water soluble and can be extracted by using hot water and enzymatic digestion. The very well-known EBN effect on skin rejuvenation was demonstrated using human dermal fibroblasts isolated from skin. The EBN extract added into the fibroblasts culture promoted its proliferation, increased the wound healing rate and increased the anabolic synthesis of skin extracellular matrix like collagen and elastin. At the same time, EBN extract reduced matrix metalloproteinase 1 (MMP1) production. One of the controversial issues of taking EBN for health is in cancer patient. Through a proprietary extraction method, the extracted EBN showed anti-cancer properties against MCF7, a breast cancer cell. It triggered apoptosis in cancer cells mainly by intrinsic pathway. When EBN extract was applied together with tamoxifen, the cancer killing effect was enhanced. This synergistic work between EBN and tamoxifen could bring a new strategy of cancer therapy in the future.