GLYCYRRHIZA URALENSISCAN INDUCE ALLERGIC REACTION BY BINDING WITH HUMAN IMMUNOGLOBULIN E

[1]EUN-JIN AN, [2]HYEUNG-JIN JANG

College of Korean Medicine, Kyung Hee University, 26, Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, Republic of Korea

Humans use various secondary metabolites derived from plants to maintain their health. For this reason, medical herbs have been consumed universally without deep research about the risk of these substance. However, they can induce unexpected adverse reactions in humans. Among these side effects, allergic reactions involving human immunoglobulin E can occur due to antimicrobialor antibacterial materials in plants. Glycyrrhizauralensis has been prescribed for the treatment of extensive diseases given its multiple types of pharmaceuticalefficacy, including its antimicrobial and antibacterial activities. Therefore, we researched whether Glycyrrhiza uralensis, which has antimicrobial ability, can cause allergic reaction in humans. To test the hypothesis devised here, we conducted proteomic levelexperiments. We utilized SDS-PAGE using a proteinextract of Glycyrrhiza uralensis, with Coomassieblue staining to confirm the protein pattern and western blotting to identify Human IgE binding proteins in Glycyrrhiza uralensis. Among the many candidates sera, these methods detected three positive sera. Moreover, an identified protein section with reactivity associatedwith Human IgE was analyzed by LC-MS/MS. Our experimental data provide a basis for testing the possibility of Glycyrrhiza uralensis as an Allergenby identifying the reactivity between human ImmunoglobulinE and proteins of Glycyrrhizauralensis.