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Phlorotannins from Ecklonia cava (Phaeophyceae): biological activities and potential health benefits.

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Abstract

The importance of bioactive derivatives as functional ingredients has been well recognized due to their valuable health beneficial effects. Therefore, isolation and characterization of novel functional ingredients with biological activities from seaweeds have gained much attention. Ecklonia cava Kjellman is an edible seaweed, which has been recognized as a rich source of bioactive derivatives mainly, phlorotannins. These phlorotannins exhibit various beneficial biological activities such as antioxidant, anticancer, antidiabetic, anti-human immunodeficiency virus, antihypertensive, matrix metalloproteinase enzyme inhibition, hyaluronidase enzyme inhibition, radioprotective, and antiallergic activities. This review focuses on biological activities of phlorotannins with potential health beneficial applications in functional foods, pharmaceuticals, and cosmeceuticals.