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Rice extracts of pigmented germination inhibit key metabolic enzymes relevant to diabetes and hyperglycemia

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This study was carried out to determine the inhibitory enzyme effects of germinated pigmented rice. The blackish purple rice Heukjinju, Keunnunjami, Superjami and reddish rice Superhongmi were germinated 3 days and their metabolic enzymes (α-glucosidase, α-amylase, DPP-4, lipase and xanthine oxidase) and total phenolic contents were analyzed. The extracts of pigmented rice showed significantly higher total phenol content and enzyme inhibitory activities compared with the normal brown rice. The inhibition of enzymes markedly increased during germination which may have been due to the substantial increase in the phenolic content of rice. The results suggest that germinated pigmented rice, particularly Keunnunjami and Superjami, may be potentially useful as a functional food in the management of diabetes and hyperglycemia.

Biography

Soo Im Chung has completed her PhD in 2013 from Kyungpook National University, Korea and presently she is pursuing Post-doctoral studies at same university. She is interested in functional rice especially giant embryo and pigmented rice. Also, she concentrates on her research for potential as a functional food in the management of diabetes and hyperglycemia.

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