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Abstract

Anti-stress and anti-HIV activity of mulberry juice were separated by centrifugation. The anti-stress activity was enriched in the supernatant fraction whereas the anti-HIV activity in the precipitate fraction. Oral administration of the supernatant fraction significantly reduced the elevated plasma level of lipid peroxide in mice loaded with water immersion restraint stress. The kinetic study revealed that the anti-stress activity was maintained for 4 hours after cessation of the administration of mulberry juice. The lignin fraction in the precipitate fraction scavenged superoxide and hydroxyl radicals more efficiently than other fractions, in a synergistic fashion was sodium ascorbate. Anti-HIV activity of mulberry juice was concentrated in the lignin fraction, whereas blueberry juice, which has no precipitating fibrous materials, did not show anti-HIV activity. The present study suggests the functionality of mulberry juice as an alternative medicine.