Phytochemicals with Health Benefits–Contribution from Brown and White Finger Millet (Eleusine coracana) Varieties

Sudha Rani Ramakrishnan¹, Ramachandran Chelliah², and Usha Antony³

Centre for Food Technology, Department of Biotechnology, Anna University, Chennai 600 025, Tamilnadu, India
E-mail: ¹<sudha215@gmail.com>, ²<ramachandran865@gmail.com>, ³*<twinkle19872001@yahoo.co.in>

KEYWORDS Arginine. Limonene. Oleic Acid. Procainamide. Seed Coat

ABSTRACT Bearing in mind that millet market is currently growing, comparison of phytochemicals in two finger millet varieties with different seed coat colours (brown and white) has been carried out. The phytochemicals content was higher in the brown variety when compared to the white variety. Gas chromatography coupled with mass spectrometry (GCMS) analysis revealed the presence of propanamide, 2-butenedioic acid (E)-, diethyl ester, 2-amino-1-(o-hydroxyphenyl) propane, oleic acid, propan-1-one, 2-amino-1-piperidin-1-yl-, hexanedioic acid, bis (2-ethylhexyl) ester, guanidine, N,N,N’,N’-tetramethyl-, limonene, phthalic acid, 2-cyclohexylethyl butyl ester, actinobolin, n-hexadecanoic acid, 9,12-octadecadienoic acid (Z,Z)-, cyanoacetyl urea, tetracosane, fluoxetine and arginine in the finger millet grains. Phytochemicals are known to have antioxidant activity, and analysis by DPPH assay showed 85.77 percent in the brown variety and 62.18 percent in the white variety. Further studies are needed to isolate active compounds of the extract and correlate structural function relationships in order to propose their exact mechanism of action in various disorders.