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A new benzofuran from *Acronychia pedunculata*

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Medium pressure liquid chromatography (MPLC) of the dichloromethane extract of the fruits of *Acronychia pedunculata* gave five fractions. The mosquito larvicidal activity of the fractions were evaluated against *Aedes aegypti* 2nd instar larvae The active fraction on extraction with hexane and MPLC of the residue followed by recrystallization led to the isolation of a new benzofuran. The structure of the new benzofuran was established on the basis of its spectroscopic data and chemical properties. ^{1}H and ^{13}C NMR, HMQC and HMBC of the benzofuran showed it to have a benzene ring substituted with 2 OH groups, a COMe substituent, an isopentenyl substituent and an isopropyl substituted furan ring formed by cyclization of an isopentenyl substituent with a OH group. On biogenetic considerations, the benzofuran could have either be 7-acetyl-4,6-dihydroxy-5-(3-methyl-2-butenyl)-2-(1-methyl-ethyl)benzofuran or 5-acetyl-4,6-dihydroxy-7-(3-methyl-2-butenyl)-2-(1-methylethyl)benzo-furan. The structure was shown to be the former since partial acetylation, methylation and hydrolysis of the acetylated hydroxyl group gave a product which was shown by ^{1}H NMR to have a single hydroxyl group which was not chelated. The new benzofuran showed moderate activity with a LC_{50} of 2.5 ppm while two known compounds also isolated from the extract, acrovestone and demethylacrovestone showed activities with LC_{50} of 3.6 ppm and 12.5 ppm respectively.