Title:	NMR-based metabolomic profiling of the differential concentration of phytomedicinal compounds in pericarp, skin and seeds of Momordica charantia (bitter melon)
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Abstract:	Momordica charantia is a medicinal plant which is widely used in different traditional medicinal systems to treat several diseases. We have identified the differential distribution of phytomedicinally important metabolites in the pericarp, skin and seeds of M. charantia fruit via NMR spectroscopy. Multivariate statistical analysis showed a clustering of the metabolic profiles of seeds and pericarp, and their clear separation from the metabolic profile of the skin. The total phenolic and flavonoid content of the fruit extracts were estimated via bioassays, the radical scavenging activity was estimated via in vitro DPPH and ABTS assays and an inhibitory activity test of α-glucosidase was also performed. The pericarp and seeds contained significant amounts of phenolic compounds and flavonoids, indicating that they are a good source for antioxidants. The skin contained a significantly higher amount of phytosterols such as Charantin and momordicine, which are known to correlate with antidiabetic activity.
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