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Antioxidant, anti-diabetic and other health-promoting properties of Jamaican *Rubus* berry species

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Although Jamaica is a highly fruitful country, many of its fruit species are unknown by the masses resulting in their exclusion from the diet and their non-exploitation with respect to cultivation and use in research and food and nutraceutical product development. The goal of our research therefore is to conduct research on uncommon Jamaican plant species including fruits, aimed at investigating their health-beneficial properties including antioxidant, anti-inflammatory, anti-diabetic and anticancer properties. This is done with a view of promoting productive utilization of the island's plant resources. Studies have been done on four berries species from the *Rubus* genus (*R. rosifolius*, *R. racemosus*, *R. ellipticus* and *R. jamaicensis*, three raspberry and one blackberry species respectively). Our results revealed that the Jamaican berries possess high antioxidant activities and levels of anthocyanins comparable to those found in similar commercial varieties sold worldwide. Extracts of the Jamaican berries demonstrated superior anti-inflammatory and anticancer properties compared to their counterparts. Additionally, extracts and compounds from the red and yellow raspberries (respectively *R. rosifolius* and *R. ellipticus*) showed anti-proliferative activity against several cancer cell lines including colon, breast and stomach cancers. *Rubus* leaf extracts have demonstrated high antioxidant activity and are good sources α -linolenic acid, an essential fatty acid. Phenolics including gallic acid, 3-O-methyl catechin and epicatechin have been isolated from *Rubus* leaf extracts which significantly account for their antioxidant activity. These results prove that these uncommon fruit species represent a valuable natural resource which may be productively harnessed for their health-promoting properties.

Biography

Camille S Bowen-Forbes completed her PhD in 2006 from The University of the West Indies and Postdoctoral studies from the Bioactive Natural Products and Phytochemicals Laboratory, Michigan State University. She is a Lecturer at UWI and has published her work in reputed science journals. Two of her publications received institutional awards for best research publication.

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