**Rice Bran Arabinoxylan and Oligosaccharide Products for Investigating Food and Immune Response Function**

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Soluble arabinoxylan (AX) isolated from cereal bran fibre is recognized for functional utility as a food gum and dietary fibre, and increasingly as a prebiotic. Recent interest has targeted activity as a modulator of epithelial barrier function in the gut. While maize and wheat arabinoxylan, and oligosaccharides derived from it (AXOs), have been well characterized in terms of their structure and functional properties, there has been comparatively little investigation of AX from rice bran as a food hydrocolloid; this despite rice being the staple cereal for more than half the world’s population. Cereal arabinoxylan fine structure can vary considerably between species and between diverse genotypes within a species, and this may have profound impact on properties as a function food product. Structural features include degrees of polymerization, substitution and branching, as well as diversity and distribution of branching, including glucuronic acid and ferulic acid substituents. We will present our work to isolate and characterize AX isolated from commercial rice bran (sourced from Arkansas cultivars), to prepare and characterize AXOs from rice bran fibre, and to assess functional activity by AXOs for modulating epithelial cell tight-junctions using a colonocyte bioassay. Results from these studies implicate technological approaches for generating distinctive products from rice bran AX.