

Scientists at NABI generated apple based pectin oligosaccharides with potential prebiotic properties

By Dr. Bilqeesa Bhat

Researchers at National Agri Food Biotechnology Institute (NABI), Mohali have generated Pectin oligosaccharides (POSs) from apple pectin, rhamnogalacturonan-1 and homogalacturonan with different degrees of esterification (high and low). The degree of polymerisation and structure of POSs were responsible for its biological outcomes. Owing the biological activities, generated POSs can be considered as an effective prebiotic and may be exploited for maintaining immune and microbial homeostasis in human gut. The researchers are continuing this study.

Upon analytical characterization, it was found that the POSs contain linear and branched oligomers with varying DP. It was found that the POSs had both immuno- and bacterio-modulatory biological activity. The POSs significantly reduced the inflammatory response triggered by lipopolysaccharide, and promoted the growth of several human gut beneficial bacteria. Pectin oligosaccharides (POSs) are being recognized as one of the potent prebiotics, given their structural complexity.

Contact details:
Dr Ravindra Pal Singh,
Ramalingaswami Fellow,
NABI