

HOW DID I BENEFIT FROM THE AACC CONFERENCE

During the period of September 13-17th I attended and participated in the AACC meeting, Baltimore, Maryland. There were about 2000 participants from all over the world including North America, Asia and Middle East, which give me a good opportunity to network with Colleagues in my area of expertise. This allowed me to establish a good networking around the world which certainly will benefit my research program at the University of Guelph.

There was a huge exhibition at the conference displaying up to date analytical equipments, new technologies, and novel food ingredients and products. The exhibition gave me the opportunity to bring me up to date to the new analytical techniques and products in addition, it gave me the opportunity to establish a communication network with Grain and Food Industries as well as the Analytical Lab suppliers.

I also presented a Poster Presentation entitled: **“Effect of different sources of potential prebiotics on starch digestibility and pasting characteristics in a flour-water system”**

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A number of audience show interest in my poster presentation which hopefully will lead to potential collaborative projects in the future. At the conference there was a number of Symposia in the area of health and Nutrition it included topics about the health and nutrition of cereals and pulses alone and in products and ingredients derived from these plant materials. I have participated in these symposia and gained a lot of knowledge in these areas. Additionally I attended and participated in a meeting of “The AACC Technical Committee of Bioactive Components in Grains” and showed interest to become a member in this committee, and volunteered to be a part of a discussion group on the definition of bioactive components.

I had many discussions with colleagues in the area of developing new procedures to measure in vitro starch digestibility and amylose and amylopectin using high techniques such as HPLC.

Also I attended some of the industry presentations and got some knowledge about what some of their goals are.

Attending the AACCC Conference actually benefits me very much. I really appreciate your support because it actually gave me the chance to go and participate in this successful meeting.

Effect of Different Sources of Potential Prebiotics on Starch Digestibility and Pasting Characteristics in a Flour-Water System

The benefits of soluble and insoluble fiber incorporation in the diet are well recognized. It is also well recognized that cereals contain complex non-starch polysaccharides (NSPS) that could be potential prebiotics. Some authors demonstrated that oligosaccharides produced from β -glucan acted as selective factors, favoring growth of some known probiotic bacteria strains. While most studies have focused on direct health benefits of these potential prebiotics, little is known about any possible interaction between these NSPS and starch within a baked product matrix. The objective of the present study was to investigate the effect of fiber type and level, and water availability on the matrix structure and the *in-vitro* starch digestibility following heating and cooling of the flour-water system. Pasting properties of the composite flours were also investigated. Hard wheat flour was replaced with whole meals from different cereals (wheat, rye, barley and oat) at different replacement levels. Scanning Electron Microscopy (SEM) and Confocal Laser Scanning Microscopy (CLSM) were used to examine the structure of the baked system. RVA of the flour-water composite system indicated differences in peak and final viscosities depending on the type of whole meal included in the system. SEM, CLSM and starch digestibility results indicated differences among the different composite systems depending on the type of the cereal whole meals incorporated. These observations suggest that further research is required to better understand the nature of interaction between flour components when evaluating the health benefits of different prebiotics.

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