

# In

INSIGHT  
FROM  
MANNATECH'S  
R&D  
DEPARTMENT

## Introduction to Mannatech's Ambrotose® Products



Over the course of thousands of years, people around the world discovered plants that were particularly beneficial for health. These plants then became either dietary staples or were reserved for special uses. Today, scientists are investigating this folk wisdom, identifying the health promoting components of such plants and discovering the mechanisms by which they exert their effects.

Aloe vera has been a popular medicinal plant for centuries. In the 1980s, Dr. Bill McAnalley was fascinated by the potent health benefits of fresh aloe vera gel. A PhD pharmacologist, Dr. McAnalley discovered that a key active component of this gel was a polysaccharide (a long chain of mannose molecules—a mannan).



This discovery—that a plant constituent typically dismissed as “just fiber” could provide health benefits far exceeding established GI tract health benefits—was the beginning of a paradigm shift in nutrition. Dr. McAnalley then went on to develop a method to create a powdered form of this polysaccharide that preserved the activity found in fresh gel.

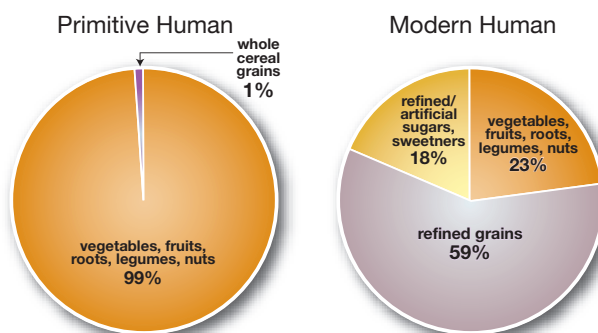


In 1996, with Dr. McAnalley on board as Chief Science Officer, Mannatech launched the first polysaccharide dietary supplement to recognize and capitalize on biologically-active polysaccharide technologies: Ambrotose® complex. Ambrotose® products, available to consumers in powder or capsule forms, contain stabilized aloe vera gel saccharides, glucosamine and other plant saccharides from safe, natural sources. Over 43 patents worldwide have been issued for the technology related to the Ambrotose® formulation.

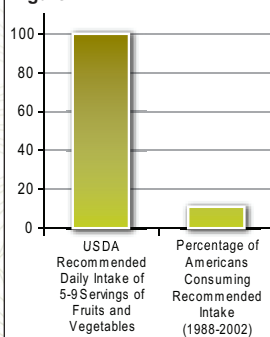
Since then, a growing number of scientists are acknowledging that aloe vera and other plant saccharides appear to function as immune system modulators and are thus much more than “just fiber.”\* In addition, other human oligosaccharides in breast milk are now recognized for their potent health effects—effects that extend well beyond infancy.<sup>1</sup>

Can't we get these polysaccharides from the foods we typically eat? Not really. A key component of Ambrotose® products is stabilized aloe vera gel polysaccharides. Other healthful saccharides from brown algae and plant gums are much less common in our modern diets than they were in the past (Figure 1).<sup>2</sup> Further, very few of us eat enough fruit and vegetables—additional sources of plant saccharides. Only 11% of U.S. adults meet the guidelines for recommended fruit and vegetable intake (Figure 2).<sup>3</sup>

**Figure 1**  
Intake of Saccharides



**Figure 2**



What benefits do Ambrotose® products provide? Laboratory studies suggest that Ambrotose® exerts prebiotic, antioxidant and immune system effects. In a double-blind, placebo-controlled human study, it exerted beneficial effects on brain function.\*

There is still much to learn. Polysaccharide research, particularly the interaction of these molecules with human physiology, is currently an area of intense scientific focus.

Mannatech's Ambrotose® complex was the first polysaccharide dietary supplement to recognize and capitalize on biologically-active polysaccharide technologies

Undoubtedly more understanding will be generated in the years and decades to come. Researchers in Mannatech's laboratory and at numerous academic institutions are continuing to explore the mechanisms of action of its Ambrotose® products.

#### REFERENCE LIST

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2. Eaton SB, Eaton SB, III, Konner MJ. Paleolithic nutrition revisited: a twelve-year retrospective on its nature and implications. *Eur J Clin Nutr* 1997; 51(4): 207-16.
3. Casagrande SS, Wang Y, Anderson C, et al. Have Americans increased their fruit and vegetable intake? The trends between 1988 and 2002. *Am J Prev Med* 2007; 32(4): 257-63.

**\* These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.**

Technical Information  
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Mannatech™