

The Fundamentals by: Dr. Ivan Danhof, M.D., Ph.D.

Dr. Danhof is regarded by many as the leading authority on the Aloe Vera plant. He has impeccable credentials: B.S. in biology and chemistry, M.S. in Nutrition and Microbiology, Ph.D. in Physiology, and a Medical Degree with specialties in Internal Medicine and Gastroenterology. He has written 80 research papers throughout his career. Additionally, he served as a Fulbright Scholar in Afghanistan investigating Botanical Medicine.

Dr. Danhof has stated the following:

The Aloe Vera mucilaginous polysaccharide is a long chain molecule composed of individual mannose and glucose molecules connected together. There is wide range in the size of the mucilaginous polysaccharide molecule.

The varying sizes determine their healing properties:

1.Small/50-600 molecules. Reduces inflammation--which is involved in a variety of serious conditions. Also helps with the reduction of blood sugar with both type I and II diabetes.

2.Medium/up to 1500 molecules. Where as vitamins and minerals can only function outside the cells, mucilaginous polysaccharides are very effective intracellular antioxidants and free radical scavengers--very important in preventing and treating an array of potential conditions. With the ever increasing pollution on the planet and loss of nutrients in the soil, the increase in free radicals and loss of cellular oxygen will only become worse with time. This makes Aloe Vera mucilaginous polysaccharides even more important than ever.

3.Large/up to 5,000 molecules. Has a direct anti-bacterial and anti-viral effect. Important with all the new infectious diseases cropping up.

4.Very large/up to 9,000 molecules. The very large molecules are immune modulating, which have a powerful healing effect on many different immune system disorders.

The mucilaginous polysaccharide molecule is very fragile. When the leaf is cut, enzymes in the plant are released which breaks down the long chain sugars of the mucilaginous polysaccharide into simpler sugars, which then results in a loss of the different healing properties. Stabilization of the mucilaginous polysaccharide is the key to preserving the healing properties associated with Aloe Vera.

Stabilization requires extraction of the mucilaginous polysaccharides in a freeze dried form; but also the process must include a way to deactivate the enzymes released in the plant when it is cut. Furthermore, the high concentration of mineral salts found in Aloe Vera gel must be separated from the final extract because they are very irritating to the gut. An Aloe product must be very soothing to the gut to promote healing.

Synergism is a property that many of the large Aloe companies tout who do not have the patented technology to extract stabilized mucilaginous polysaccharides. In other words, many of these companies claim that all 200 of the various ingredients found in Aloe Vera must be present for healing to occur. But none of these claims have any basis in scientific research, while there is abundant scientific research to prove that the mucilaginous polysaccharide is the sole ingredient responsible for all the healing properties attributed to Aloe.

THE POLYSACCHARIDES ARE NOT DIGESTED by the enzyme systems in the human digestive tract; these mannose containing molecules are absorbed by endocytosis, i.e., **THEY ARE TAKEN UP INTO THE CELL INTACT.**