Research Reveals Aloe's Effect On Inflammation

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It has been recognized for many years that some aloe-derived products have significant anti-inflammatory activity. Published evidence has shown that this is mediated, at least in part, by inhibition of prostanoid production in damaged tissue. Studies conducted at Texas A&M University and Texas Children's Hospital by Drs. Bob Bowden and Wayne Smith have now demonstrated that aloe extracts mediate a second anti-inflammatory mechanism by blocking certain integrins.

Integrins are proteins that mediate cell adherence. Thus in inflamed tissues, defensive cells such as blood neutrophils must first bind to endothelial cells on blood vessel walls before entering the tissues. This binding is integrin-mediated. Neutrophils, although critical for host defense, are unfortuntately able to cause significant tissue damage as a result of the release of potent enzymes and oxygen metabolites. Thus compounds that block neutrophil emigration will prevent tissue damage and so reduce inflammation.

Evidence has been presented to show that certain aloe-derived carbohydrates bind specifically to carbohydrate-binding sites on two ß2-integrins called LFA-01 and Mac-1. In doing this, they significantly reduce neutrophil emigration in some models of experimental inflammation.

This abstract is from Dr. TizardÕs presentation "Aloe-derived carbohydrates reduce inflammation by blocking neutrophil emigration mediated by certain beta2 integrins". If you would like more information on this topic, please contact the IASC.