#### Michael:

Bromelain is an enzyme that I know comes from pineapple, or it's found in pineapple. It's probably also found other places maybe, but that's about all I know about it is that I find it in the digestive enzymes, and it's found in pineapple. Can you share some more with us?

#### Kiran:

Yeah, in fact, it's found in the core of the pineapple more, so if you were to try to get your bromelain from eating just pineapple, if you're not eating enough of the core, then you're not getting a whole lot of bromelain out of it, but it does come from pineapple. Actually, in Hawaii, it's used as a medicinal food quite often because it's well-known to help with things like allergies and injury, so if people have a wound, they might actually put some pineapple on it. They use it to help tenderize meat to some degree because it does have proteolytic activity, so when you put it on meat and let it marinate on meat, it breaks down some of the muscle tissue in the meat to tenderize it, but what bromelain is most well-known for in the studies is its anti-inflammatory effect and its digestive effect.

It's one of those that also acts as a digestive enzyme. It helps you break down proteins in the digestive tract if you're eating a lot of proteins and meat, but when you take it on an empty stomach, it can get absorbed and act as a powerful anti-inflammatory systemically. Then there's some studies on its ability to modulate the immune system. There was one study that was done that showed that it actually reduced allergy and asthma reduction in some patients versus a control. Lastly, bromelain has also been shown to have some anti-cancer effects, which are very interesting.

It seems to be able to target cancer cells in some of the protein coat that protects cancer cells within the body. It seems to be able to digest that protein and expose the cancer cells to the immune system.

#### Michael:

That's interesting. I only knew about a quarter of that, so it sounds like pretty versatile. There's probably a reason why you find it in almost all systemic enzyme blends and digestive ... It sounds like it's pretty well-researched then too.

### Kiran:

It has been around for a long time, so bromelain has a pretty good amount of studies behind it.

# Michael:

You said the core of the pineapple. Have you ever eaten the core of the pineapple?

### Kiran:

Only when I put it through my masticating juicer.
Michael:
Yeah.
Kiran:

That may be the only time, but other than that, no, not usually.

# Michael:

I didn't know if it tastes like the fruit part does or if it's just ... I don't know. I'll have to try that sometime. I guess pineapple juice, fresh pineapple juice, would have plenty of bromelain but probably not ... You don't know what you're getting if you buy a can or a container.

## Kiran:

Right. Yeah. Exactly.

Enzyme Series 2: Bromelain Enzyme