«This is the first time to our knowledge that any molecule can reduce blood levels of Substance P in any disease...»
–

Theoharis C. Theoharides
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UNDERSTANDING ANTI-INFLAMMATORY MARKERS SUBSTANCE P & TNFa

The study participants were chosen due to the symptoms and conditions that they had experienced for an extended period of time. What was surprisingly common among all participants were the high levels of neuroimmune mediators, better known as inflammatory markers or neuro-cytokines, in their blood levels – specifically, Substance P (SP) and Tumor Necrosis Factor (TNFa). Both of these markers are known to have proinflammatory actions. However, what was not conclusive prior to this study was each marker's relation to the other. Substance P, the lessor known of the two above markers, appears to be secreted based on a number of factors including physiological and/or psychological stress. An increase in Substance P levels are known to stimulate immune cells – particularly mast cells. Known to be involved not only in allergic conditions, mast cells are also related to inflammatory diseases. Interestingly, in this study mast cells were significantly increased in the papillary dermis of study participants who also often experienced chronic urticaria – an inflammatory skin condition. Furthermore, located perivascularly adjacent to neurons both in the skin and in the brain, activated mast cells secrete numerous nuerosensitizing and pro-inflammatory mediators that contribute to inflammatory-related symptoms, including pain. Among the pro-inflammatory mediators secreted by mast cells is Tumor Necrosis Factor (TNFa). In fact, mast cells are the only immune cells to store TNFa and will secrete it rapidly when stimulated, such as with the increase in Substance P levels as explained above. Chronic high levels of TNFa are tied to several inflammatory diseases including Rheumatoid arthritis, Chron's disease, Ulcerative colitis, Ankylosing Spondylitis and many others including cancer. According to lead researcher, Dr. Theoharis C. Theoharides of Tufts University, Celergen is the "only known molecule that can reduce blood levels of Substance P in any disease." Thereby reducing the level of mast cells and the accompanying over secretion of TNFa.

CONCLUSION

There is a direct correlation between inflammatory markers Substance P, TNFa and the symptoms experienced. Therefore, it is of no surprise that Celergen - if taken daily - will not only reduce the abnormal proinflammatory markers of Substance P and TNFa on a significant level, but their symptoms as well.

CELERGEN
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