



Fresh Info Drops

Discovery of the Mechanism of Action of Echinaforce®

High technology methods reveal the Mechanism of Action of Echinaforce®

Effects of A.Vogel Echinaforce® – Research study at ETH Zurich shows how it Modulates the Immune System.

Roggwil / Zurich: Worldwide, millions of people rely on Echinacea products for the prevention and treatment of colds and infections. The reports published on investigations up to now either prove or question the effects. For the first time, a research team has succeeded in revealing the mechanisms of action taken by A.Vogel Echinaforce® herbal products. These researchers confirm: **The Echinacea fresh plant product stimulates immune system activity.**

Dr. Jürg Gertsch of the Institute for Pharmaceutical Sciences at the Swiss Federal Institute of Technology (ETH) Zurich was sceptical about doing the A.Vogel Echinaforce® research. In his experience, finding the molecular mechanisms of phytotherapeutic drugs is one of their most difficult tasks because this kind of product contains such a large number of ingredients.

The in vitro experiment (meaning that it is conducted in a test tube) should answer three basic questions: which of the substances in A.Vogel Echinaforce® take effect, where do they take effect, and what effects do they take?

Alkylamides stimulate the immune reaction

Immune cells taken from human blood were isolated and added to A.Vogel Echinaforce® in a low concentration. The subsequently simulated infection was to show what effects the fresh plant tincture had on the behavior of genes in the immune cells. It was clearly recognizable that the effects were concentrated on only one

gene of the immune cells, altering the alpha tumor necrosis factor (TNF- α), one of the most important messenger substances in the immune system. Further investigation showed that this effect was triggered by alkylamides contained in A.Vogel Echinaforce®.

To completely uncover the mechanisms of action, it had to be made clear how certain surface structures of the immune cells (receptors) are able to recognize the alkylamides. When alkylamides bind to these receptors on the cell wall, the cells receive a wide range of signals, which bring about the observed TNF- α modulation.

The expectation that this was the cannabinoid receptor (CB2 receptor) was confirmed and proven by way of molecular modeling. In this method, a model image of the receptor structure is run through a computer simulation to determine whether or not the substance and the receptor match one another. A detailed, complex investigation such as this is not usual except with synthetic drug products. This was the first time the method was employed for an Echinacea product.

Stimulation of the immune response – long and moderate

Infections trigger a cellular immune reaction, followed by a very quickly increasing and just as rapidly receding concentration of TNF- α in the bloodstream. There for the purpose of eradicating an "attacker" as fast as possible, a rapid decline of elevated TNF- α release is absolutely necessary, because these cells do not only attack foreign matter. They also attack the organism's own tissues. If the concentration of TNF- α in the bloodstream does not recede quickly enough, the situation can trigger autoimmune diseases, for example some forms of rheumatism and type I diabetes.

The ETH research shows that A.Vogel Echinaforce® moderates the immune response, but holds it longer. This happens when the alkylamides activate genes in the immune cells. Stimulated this way, immune cells react moderately as soon as the organism needs to combat an infection. The immune cells subsequently produce TNF- α as required for the immune response – but without excessive reaction and thus without risk.

Alfred Vogel, researcher of natural therapies, was convinced of this effect his whole life long and the experience with patients he treated confirmed it, but now it has been scientifically proven. The Echinaforce® fresh plant product raises the body's immune defence in that it modulates the major transmitter (TNF- α), and

doing so, it reduces vulnerability for the common cold and other infections.

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