



New and Advanced Therapy for Chronic Inflammatory Disease



The pharmaceutical industry and scientific researchers are developing new and improved drugs for the treatment of chronic inflammatory diseases. According to statistics, there are approximately 300 million people who suffer from asthma worldwide. There are an additional 600 million who live with chronic pneumonia. Nearly 30% of the global population suffers from allergic rhinitis.

Chronic inflammatory diseases can be a cause for concern because they can have a negative impact on other organs and parts of the body. These include the development of colitis ulcerosa, rheumatoid arthritis, scleroderma and/or arteriosclerosis. Nuvo Research Inc., a Canadian pharmaceutical company has developed a new product that is designed to assist local wound healing. The drug has already been approved in several countries. In Thailand, it is being used for the treatment of a variety of chronic diseases.

Scientists at the Fraunhofer Institute for Cell Therapy and Immunology IZI in Leipzig are working with the German subsidiary of Novo Research Inc. and the Translational Centre for Regenerative Medicine TRM at Leipzig University to better understand this formulation. Their goal is to understand how it works and how its use can be optimised to ensure easy administration and tolerance. The team also wants to further develop derivatives of this drug to be able to combat a broader range of chronic illnesses. All this effort will also help the company better prepare itself for drug approval in the Canadian and European markets.

Scientists at TRM are investigating the way selected immune cells respond to the drug while researchers at IZI are evaluating its effect on the organism as a whole. This research and investigation is essential because the drug authorities in both Europe and North America demand comprehensive studies to gauge the safety, tolerability and effectiveness of a drug.

The team at IZI is testing the medication on mice as they display similar symptoms as patients with chronic inflammatory diseases. According to Dr. Franziska Lange, head of the Inflammation Models and Immunodiagnostics Unit at IZI, "my working group focuses on three conditions: asthma, smoker's lung and scleroderma, an autoimmune connective tissue disease. We established 20 different model systems with which we are able to simulate different aspects of inflammatory diseases. This enables us to record the effects and side-effects of different doses of the drug on mice."

By cooperating with each other, these three partners are actively working to prove the effectiveness and safety of this new drug. Their goal is to not only evaluate its safety, tolerability and effectiveness but also to improve the method of application. For now, the drug is available as an infusion and requires patients to visit the clinic five days in a row for several hours at a time. The long-term goal of this research and development effort is to develop a formulation that can be easily injected by family doctors.

Source: AlphaGalileo
Image credit: Fraunhofer/IZI

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