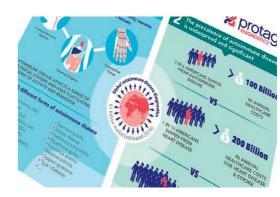
Protagen AG, headquartered in Dortmund, Germany, is dedicated to the development of powerful diagnostic tools that aid successful therapeutic development and better treatment strategies for some of the most severe autoimmune diseases such as Rheumatoid Arthritis, Multiple Sclerosis and Systemic Lupus Erythematosus (SLE).

SLE is clinically and serologically the most diverse systemic autoimmune disease and is currently incurable. The disease spectrum ranges from subtle symptoms through to life-threatening organ failure. Tissue damage mostly occurs in the heart, joints, skin, lungs, blood vessels, liver, kidneys and nervous system. "SLE is an autoimmune disease with a wide range of clinical manifestations making it difficult to diagnose. Misdiagnosis of SLE is partly due to unpredictable flares and remissions," explained Dr Stefan Müllner, CEO and co-founder of Protagen. "Yet, with the exception of Benlysta, no new drug has been approved for SLE by the FDA in 50 years."

In a normal immune system, B cells – a type of white blood cell – produce proteins called antibodies that protect us against foreign pathogens such as viruses and bacteria. However, the bad version of B cells, called autoreactive B cells, produces autoantibodies that attack the body's own proteins and antigens. These

autoantibodies have a number of intrinsic qualities that make them ideal as potential biomarkers. The identification of autoantibodies in autoimmune diseases and their subsequent use in clinical diagnostic tests has dramatically improved the management and treatment of autoimmune diseases.

Dr Müllner explained how his company's unique protein library and platform will drastically improve treatment for SLE: "Protagen has focused on identification of more specific biomarkers by detecting SLE-specific autoantibody signatures in patient serum." The Protagen SeroTag® process helps to understand complex autoimmune diseases on a molecular basis. Utilizing diagnostic magnifying Protagen has developed NavigAID SLE. "This innovative diagnostic technology for the first time separates and defines subgroups in SLE and as such it enables new approaches to successful drug development and should be integrated in any SLE clinical development program."



The identification of patient subgroups has become essential for developing medicines that target smaller numbers of patients and work effectively for each individual. In addition, the repositioning of marketed drugs according to response rates or side effects is a key industry initiative that is supported by clinicians, patients and regulatory bodies alike.

Protagen uses its proprietary SeroTag® biomarker platform to identify disease specific autoantibodies and is on target to become the leading provider of autoimmune diagnostic products, specifically targeting diseases with an unmet need for effective diagnostics. With pioneering bioscience techniques, extensive scientific expertise and a broad patent portfolio, Protagen works to develop its own diagnostic pipeline and partners with other organizations to develop and implement new companion diagnostic tools for better personalised treatment strategies.





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