



Exicure Announces Dosing of First Patient in Phase 1 Trial for the Treatment of Chronic Plaque Psoriasis

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SKOKIE, Ill., April 26, 2016 (GLOBE NEWSWIRE) -- Exicure, a pioneer in developing Spherical Nucleic Acid (SNA™) constructs as gene regulatory and immunotherapeutic agents, today announced the dosing of the first patient in a Phase 1 trial of its AST-005 gel for chronic plaque psoriasis, an inflammatory disease that results in red, scaly patches on the skin.

Current treatments for psoriasis are limited to biologics, which are generally administered systemically, orally administered drugs and a variety of non-drug solutions, including phototherapy, and non-targeted topical treatments. With AST-005, Exicure is taking advantage of the unique ability of SNA constructs to penetrate the skin when applied topically. As a consequence, AST-005 combines the targeted benefits of biologics with the ease of application of topical steroids.

AST-005 is a topically-applied SNA that targets tumor necrosis factor (TNF), a pro-inflammatory cytokine shown to be a key mediator of psoriasis. In preclinical studies, Exicure has demonstrated that topical application of AST-005 gel leads to robust TNF knockdown in viable human psoriatic skin samples.

The Phase 1 clinical trial will evaluate the safety, tolerability, and pharmacodynamics of AST-005 in patients with chronic plaque psoriasis. The study is expected to enroll 15 subjects. The primary endpoints of the study are safety and tolerability of AST-005, and secondary endpoints include *in situ* inflammatory infiltrate thickness and assessment of target knockdown in the treated psoriatic skin using gene expression analysis. Topline results are expected later this year.

"With the initiation of this Phase 1 trial, Exicure crosses an important milestone in the development of SNA technology as an approach to address the problem of chronic plaque psoriasis as well as other diseases in the skin," said Dr. David Giljohann, Chief Executive Officer of Exicure. "This clinical trial will enable our team to study safety and tolerability of AST-005 while demonstrating that the SNA technology can be used to treat diseases locally using a nucleic acid therapy. We are excited to bring this approach to patients in need."

About Spherical Nucleic Acids

SNAs are nanoscale, spherical arrangements of densely packed and radially oriented nucleic acids. This architecture overcomes one of the most difficult obstacles to nucleic acid based therapeutics: safe and effective delivery into cells and tissues of therapeutic importance without the need for additional physical or chemical methods or components. The SNAs can be designed to be extremely potent and highly targeted gene regulation and immune-modulatory agents.

About Exicure

Exicure is developing a new class of immunomodulatory and gene-silencing drugs against validated targets. Our 3-D, spherical nucleic acid (SNA™) architecture unlocks the potential of nucleic acid therapeutics in multiple organs. Our lead programs address diseases including inflammatory disorders and oncology.

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