

For Immediate Release

Novel, naturally-based formula outperforms benchmark drug in University of Chicago hair loss study

Discovery Could Lead to More Effective Treatments

Dateline: Chicago, IL, October 1, 2016:

In the current issue of the peer-reviewed medical journal, *Phytotherapy Research*, investigators have shown that a new, novel, naturally-based formula, CXJ15a, has outperformed benchmark drug (finasteride) in reducing a number of gene expression markers linked to common pattern hair loss and benign prostatic hyperplasia (BPH).

Link To New Hair Growth Formula Study

<http://www.ncbi.nlm.nih.gov/pubmed/26990224>

Comparison to Finasteride

Finasteride, marketed in 1 mg dosage under the trade name Propecia™ and in 5 mg dosage under the trade name Proscar™ constitutes the most widely prescribed oral drug for both pattern hair loss and BPH, respectively. While shown to be clinically effective, finasteride has also been associated with serious negative side effects, and the medication is not available for use by females.

The new study, undertaken at University of Chicago, and conducted with collaborators from Advanced Restoration Technologies Inc. Houston, TX, (ART), tested ART's proprietary composition CXJ15a and found it superior to finasteride in reducing a number of gene expression markers linked to both disorders. "The idea of developing safer, more effective treatments represents a very important goal, particularly in hair loss where a dearth of viable options has long been the case" said the study's lead investigator, Yan Chun Li.

Corresponding author Geno Marcovici concurs with Li, noting that "our company's mission has been to create safe and increasingly effective treatments against hair loss, via the highest level of scientifically valid testing methodology possible, yet free from the negative side effects commonly associated with the drug-based alternatives."

Novel Dual-Mechanism of Action

Because chronic inflammation is considered a contributing factor in the progression of pattern hair loss and also BPH, the study investigators sought to measure the test material's ability to block key markers of pathologic inflammation by using well-validated molecular assays representative of hair follicles and prostate tissue. Specifically, the research team found that the test compound not only outperformed finasteride in all parameters measured, but strongly suppressed gene expression of several inflammatory chemokines linked to both disorders.

In addition to anti-inflammatory substances, CXJ15a was formulated with a subset of botanically derived, highly potent 5 alpha-reductase (5AR) inhibitors. 5AR catalyzes the conversion of testosterone (T) to its more pathological metabolite dihydrotestosterone (DHT). DHT is a well-known trigger of pattern hair loss. Thus, by combining targeted anti-inflammatory agents with potent 5AR inhibitors the test composition has been designed to offer enhanced clinical efficacy over conventional hair loss monotherapy.

Lead scientist for the study Yan Chun Li Ph.D. has been at the forefront of molecular research authoring original research ranging from vitamin D regulation of the renin-angiotensin system to mechanisms of vitamin D receptor regulation of the hair growth cycle. First author, Li Chen, M.D., Ph.D. brings a wealth of basic science expertise to the project with a number of published studies describing novel gene transcription and protein expression profiles in the wnt and VDR pathways.

Corresponding author Geno Marcovici, Ph.D. has been active in the hair loss field for more than two decades. Explaining the importance of validating ART's proprietary formulations Marcovici notes that "[a]side from ART's own HairGenesis® brand of products, the naturally-derived hair treatments commercially available typically offer little or no objective evidence that they work. On the other hand, the drug-based treatments that do work come with potentially serious negative side effects. This tends to render HairGenesis® a unique proposition in the category." Marcovici adds "what we learn in the lab and test in the clinic we are then able to incorporate into our HairGenesis® product line – ultimately to the benefit of our longtime users".

About HairGenesis®

Combining scientific validation with the safety of natural ingredients, ART's HairGenesis® formula represents a unique therapeutic platform in the category. Hair Genesis® is noteworthy as the first naturally derived hair loss treatment supported by published 3rd party, peer-reviewed clinical and basic science research. HairGenesis®, first released in 1995, is now in its seventh generation of development.

About Advanced Restoration Technologies, Inc. (ART)

Prior to focusing on basic science research, ART established a 10-year track record as a surgical center for IRB-monitored clinical investigation, testing new drugs as well as medical devices. The company's published studies include those undertaken on behalf of Organogenesis, Canton, MA and Procyte Corporation, Kirkland, WA.

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