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Oculus Innovative Sciences Announces Positive Results from Abstract Evaluating the Use of Microcyn(R) Technology in Treatment of Atopic Dermatitis

-- Peer-reviewed poster presented at the Third Congress of the World Union of Wound Healing Societies held in Toronto, Ontario

-- Oculus Announces Annual Meeting of Stockholders

PETALUMA, Calif.--(BUSINESS WIRE)--

Oculus Innovative Sciences, Inc. (Nasdaq:OCLS) announced that an abstract relating to the efficacy of Microcyn(R) Technology for the treatment of atopic dermatitis was peer reviewed and presented at the Third Congress of the World Union of Wound Healing Societies held in Toronto, Ontario on June 4-8. The conference, which occurs once every four years and is considered one of the premier wound healing events in the world, is a showcase for the latest advances in wound care.

The study, "Anti-inflammatory effects of an oxychlorine compound in a murine model of passive cutaneous anaphylaxis" was conducted by researchers at the Pharmacobiology Department of the Center for Research and Advanced Studies (Cinvestav) in Mexico City, Mexico; the University of California at San Francisco and researchers employed by Oculus Innovative Sciences in Petaluma, California. The objective of the study was to test the effect of the Microcyn Technology on a murine (mouse) model of atopic dermatitis, by evaluating the reduction of passive cutaneous anaphylaxis (PCA) reaction after a single, as well as repetitive, topical applications of the technology.

Atopic dermatitis is a common inflammatory skin disease characterized by childhood onset, severe pruritus and chronically relapsing course. Pathogenesis is unknown, but the disease seems to be the result of genetic susceptibility, epidermal barrier dysfunction and immune hypersensitivity related to mast cell degranulation in response to diverse allergens, also known as antigens. In relation to the latter, it had been previously shown that Microcyn Technology is able to diminish mast cell-dependent secretion of inflammatory mediators, such as histamine and cytokines, in vitro (Medina, et al., Int Immunopharmacol, 2007). It was therefore necessary to prove if the technology would be able to stop mast cell mediated-allergic and inflammatory reactions in vivo. For this purpose, the murine PCA model was selected.

In the study, ears from one group of mice were intradermally sensitized with monoclonal anti DNP IgE (i.e. study group), while the ears from a second group of mice were not sensitized

(control group treated with a saline solution). After 18 hours of sensitization, a single topical application of saline solution or Microcyn was performed in the control and study ears of the same animal. Thirty minutes after the saline or Microcyn application, allergen (antigen) dissolved in Evans blue was intravenously injected and PCA reaction was monitored by Evans blue extravasation to the ear tissue. This same approach was also used in a repeated application of either saline or Microcyn every six hours for three days. The higher the concentration of blue dye extravasated in the ears, the stronger the anaphylaxis that was induced. Results indicated that even a single application of the Microcyn oxychlorine solution was able to significantly diminish the passive anaphylactic reaction in mice, in comparison to no response in the control ears treated with saline only.

The conclusion of the researchers as stated in the poster was: "This oxychlorine-containing solution (Microcyn Technology) could potentially be used to ameliorate the inflammatory process induced by IgE-antigen-induced mast cell degranulation or chemical irritation of the skin in atopic eczema. Considering the also documented antimicrobial activity of the solution (Microcyn), oxidative agents like this could become a new type of drug for the comprehensive treatment of diverse inflammatory conditions of skin and soft tissues, including wound care."

Andres A. Gutierrez M.D., Ph.D., director of medical affairs of Oculus Innovative Sciences and one of the researchers in the study, said, "In addition to successful treatment of wounds in over 25 clinical studies worldwide, we are now also exploring potential new applications for the Microcyn Technology in the treatment of various allergic and inflammatory conditions including upper respiratory infections, dental, ophthalmology and dermatology. We believe that Microcyn has demonstrated a highly unique combination of safe antimicrobial activity in concert with various wound-healing capabilities, including reduction of inflammation and increased blood flow to a wound site. We also believe that existing antibiotics and antiseptics are typically prone to side effects and do not provide the same level of wound healing benefits."

About Atopic Dermatitis

Atopic dermatitis, also known as atopic eczema, is an atopic, hereditary, and non-contagious skin disease characterized by chronic inflammation of the skin. The skin of a patient with atopic dermatitis reacts abnormally and easily to irritants, food, and environmental allergens and becomes red, flaky and very itchy. It also becomes vulnerable to surface infections caused by bacteria. The skin on the flexural surfaces of the joints (for example inner sides of elbows and knees) are the most commonly affected regions in people. Although there is no cure for atopic eczema and its causes not well understood, it can be treated very effectively in the short term through a combination of prevention (learning what triggers the allergic reactions) and drug therapy. Pharmacological treatment is complex requiring moisturizers, occlusion, soaks, skin protection agents, antihistamines, antidepressants, antibiotics, corticosteroids, leukotriene inhibitors, immunesuppressors and even antineoplastics.

According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), about 15 million people in the United States have one or more symptoms of atopic dermatitis. It accounts for 15 to 20 percent of all visits to dermatologists. The National Institutes of Health (NIH) estimates that atopic dermatitis costs U.S. health insurance companies more than $1 billion every year. Bernice R Krafchik, MBChB, FRCPC, professor emeritus, department of pediatrics at the University of Toronto has written on emedicine.com

that the prevalence rate of atopic dermatitis internationally "is as high as 18% and is rising, especially in developed countries."

Psoriasis is yet another inflammatory condition of the skin in which mast cells also play a role. In written testimony to the House Labor-Health and Human Services Appropriations Subcommittee, Gail Zimmerman, CEO of the National Psoriasis Foundation, noted, "According to the NIH, as many as 7.5 million Americans have psoriasis." In addition, "Each year, Americans with psoriasis lose approximately 56 million hours of work and spend $2 billion to $3 billion to treat the disease."

Oculus Annual Meeting

Separately, Oculus announced that it will conduct its annual meeting of stockholders at 10:00 a.m. (EDT) on Wednesday August 27, 2008 at NASDAQ MarketSite located at 4 Times Square, New York, New York 10036.

About Oculus

Oculus Innovative Sciences is a biopharmaceutical company that develops, manufactures and markets a family of products based upon the Microcyn(R) Technology platform, which is intended to help prevent and treat infections in chronic and acute wounds. The Microcyn Technology platform is a biocompatible, shelf-stable solution containing active oxychlorine compounds that is currently commercialized outside the United States (Europe, India and Mexico) for the treatment of infected wounds. The solutions derived from the Microcyn Technology platform have demonstrated, in a variety of research and investigational studies, the ability to treat a wide range of pathogens, including antibiotic-resistant strains of bacteria (including MRSA and VRE), viruses, fungi and spores.

In addition to the company's existing and under-development therapeutic products, Oculus also develops, manufactures and markets a number of 510k devices and products for both professional and consumer. Oculus recently announced the filing of a patent for its Oculus MDD (Microcyn Delivery Device) for dressing-free treatment of both chronic and acute wounds. Dermacyn Wound Care is currently being test marketed in the U.S. for the moistening and debriding of wounds.

A recently completed U.S. Phase II clinical trial of Microcyn Technology met the primary endpoints of safety and efficacy for the treatment of mildly infected diabetic foot ulcers.

Oculus' principal operations are in Petaluma, California, and it conducts operations in Europe, Latin America and Japan through its subsidiaries, Oculus Innovative Sciences Netherlands B.V., Oculus Technologies of Mexico, S.A. de C.V. and Oculus Japan K.K. Oculus' website is www.oculusis.com.

Forward-Looking Statements

Except for historical information herein, some matters set forth in this press release are forward-looking within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including statements about Microcyn's safety, efficacy and wound healing capabilities, and the ability of Microcyn to become a new type of drug for comprehensive treatment of diverse inflammatory conditions. These forward-looking

statements are identified by the use of words such as "believe," "conclude," "potentially," "could," "suggest," and "may," among others. Forward-looking statements in this press release are subject to certain risks and uncertainties inherent in the Company's business that could cause actual results to vary, including risks inherent in the development and commercialization of potential products, the risk that regulatory clinical and guideline developments may change, the risk that scientific data may not be sufficient to meet regulatory standards or receipt of required regulatory clearances or approvals, the risk that clinical results may not be replicated in actual patient settings, the risk that protection offered by our patents and patent applications may be challenged, invalidated or circumvented by our competitors, the risk that present trends will continue and that the available market for our products will not be as large as expected, the risk that our products will not be able to penetrate one or more targeted markets, the risk that revenues will not be sufficient to fund further development and clinical studies, the Company's future capital needs, and its ability to obtain additional funding and other risks detailed from time to time in the Company's filings with the Securities and Exchange Commission including the annual report on Form 10-K for the year ended March 31, 2008. Oculus Innovative Sciences disclaims any obligation to update these forward-looking statements.

Source: Oculus Innovative Sciences