

Focused on your vision®

Acucela Inc. is a clinical-stage biotechnology focused on leveraging promising science in visual cycle modulation (VCM) to develop new methods for treating blinding eye diseases that affect tens of millions of people worldwide. The Company's orally delivered VCM therapies, which selectively target cells within the retina to protect visual acuity, have the potential to treat several devastating eye diseases, including dry age-related macular degeneration (dry AMD) — *which is the leading cause of blindness in people over 50 and for which there is no currently approved treatment*. Acucela, with partner Otsuka Pharmaceutical, is also developing OPA-6566 for glaucoma and rebamipide ophthalmic suspension for dry eye.

Acucela was founded in 2002 by eminent ophthalmologist Ryo Kubota, M.D., Ph.D., the discoverer of the gene that causes glaucoma. The Company's corporate headquarters are located in Seattle, Washington. For more information, please visit the Company's web site at: www.acucela.com.

Milestones

- Initiated a Phase 1/2 clinical trial for OPA-6566 in patients with open-angle glaucoma or ocular hypertension in the U.S.
- Entered into new co-development and co-promotion agreement with Otsuka Pharmaceutical for OPA-6566 for glaucoma in the U.S.
- Granted Fast Track status by the U.S. Food and Drug Administration for ACU-4429
- Initiated the ACU-4429 Phase 2 ENVISION Clarity Trial
- Entered into partnership with Otsuka Pharmaceutical for co-development of ACU-4429 for dry AMD and co-development of rebamipide for dry eye

Leadership

Ryo Kubota, M.D., Ph.D.
Chairman, President & CEO

Michelle Carpenter, JD, RAC
Senior Vice President, Regulatory Affairs & Development Operations

Hien DeYoung, S.P.H.R.
Vice President, Human Resources

David L. Lowrance, CPA
Chief Financial Officer

John Chandler, M.D.
Vice President, Clinical Affairs

Karin Ludwig, M.D.
Executive Director, Therapeutic Development

Keiko Mitsunobu
Executive Director, Alliance Management & Business Development

Sy-Shi Wang, Ph.D., CCRP
Executive Director, Clinical Operations

Investors

Acucela has raised more than \$40 million over three rounds of private financing, the most recent a \$25 million Series C in March 2007.

Pipeline Highlights

Visual Cycle Modulation (VCM) Programs

ACU-4429 for Dry Advanced Macular Degeneration (AMD)

In January 2010, Acucela launched the ENVISION (Evaluating a Novel **VISION** treatment for AMD) Phase 2 Clarity Trial. Dry AMD is a degenerative disease of the eye that affects the part of the retina responsible for fine visual acuity and color vision. There is no approved treatment for dry AMD. Positive data from the Company's first Phase 1 clinical trial have been presented at ARVO, Aegean Retina XI and ISOPT and published in *Retina: the Journal of Retinal and Vitrerous Diseases*.

Other VCM Programs

Acucela's VCM technology may provide therapeutic benefit for additional retinal disorders, such as:

Diabetic Retinopathy, the most common diabetic eye disease and a leading cause of blindness in American adults.

Retinopathy of Prematurity (ROP), a potentially blinding eye disease that can occur in premature infants. In ROP, abnormal blood vessels grow and spread throughout the retina. There is no approved treatment for ROP.

Stargardt Disease, a recessive, hereditary retinal disease that results in progressive loss of rod and cone photoreceptors, leading to loss of central vision.

Non-VCM Programs

OPA-6566 for Glaucoma

Glaucoma is a type of progressive or chronic optic neuropathy caused by intraocular pressure or by other factors of unknown origin. The compound has demonstrated the ability to lower intraocular pressure by stimulating aqueous humor outflow via trabecular meshwork through an activation of adenosine A2a receptor. Otsuka Pharmaceuticals and Acucela are co-developing this compound in the United States.

Rebamipide for Dry Eye

Dry Eye is usually caused by a problem with the quality of the tear film, the liquid layer that lubricates the cornea and conjunctiva. Rebamipide ophthalmic suspension is a product candidate for dry eye, a condition that affects over 20 million Americans. Rebamipide increases the level of mucin in the conjunctiva and cornea. It is expected to be effective in dry eye treatment by stabilizing the tear film and leading to the improvement of the corneal-conjunctival damage associated with the condition. Rebamipide is in clinical development in the United States, and has been cleared for marketing in Japan under the name Mucosta® ophthalmic suspension UD2%.

Scientific Advisor

Thomas A. Reh, Ph.D., Professor of Biological Structure at the University of Washington

Clinical Advisors

David G. Birch, Ph.D., Research Director, Retina Foundation of the Southwest, Director of the Rose-Silverthorne Retinal Degenerations Laboratory, Dallas

Karl G. Csaky, M.D., Ph.D., T. Boone Pickens Senior Scientist, Director, Harrington Molecular Laboratory, Member, Texas Retina Associates

Jeffrey S. Heier, M.D., Vitreoretinal Specialist, Ophthalmic Consultants of Boston

Frank G. Holz, M.D., Chairman & Professor of the Department of Ophthalmology, University of Bonn, Germany

Richard Alan Lewis, M.D., M.S., Professor, Department of Ophthalmology, Medicine, Pediatrics, and Molecular and Human Genetics and Faculty Associate, Huffington Center on Aging, Cullen Eye Institute, Baylor College of Medicine, Houston

Anne Linbald, Ph.D., Executive Vice President, The EMMES Corporation

Quan Dong Nguyen, M.D., M.Sc., Associate Professor of Ophthalmology, Diseases of the Retina and Vitreous, and Uveitis Wilmer Eye Institute Johns Hopkins University School of Medicine, Baltimore, Maryland

Philip J. Rosenfeld, M.D., Ph.D., Professor, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Bascom Palmer Eye Institute Palm Beach Gardens, University of Miami Miller School of Medicine

Jason Slakter, M.D., Clinical Professor of Ophthalmology at New York University School of Medicine

Janet S. Sunness, M.D., Medical Director of Hoover Rehabilitation Services for Low Vision and Blindness, Greater Baltimore Medical Center

Kang Zhang, M.D, Ph.D., Professor of Ophthalmology & Human Genetics, Shiley Eye Center, University of California San Diego

Eberhart Zrenner, M.D., Professor, Department of Ophthalmology, Director of the Institute for Ophthalmic Research, Centre for Ophthalmology, University of Tuebingen, Germany

Board of Directors

Ryo Kubota, M.D., Ph.D., Chairman, President & CEO

Yoshitaka Kitao, CEO, SBI Holdings, Inc.

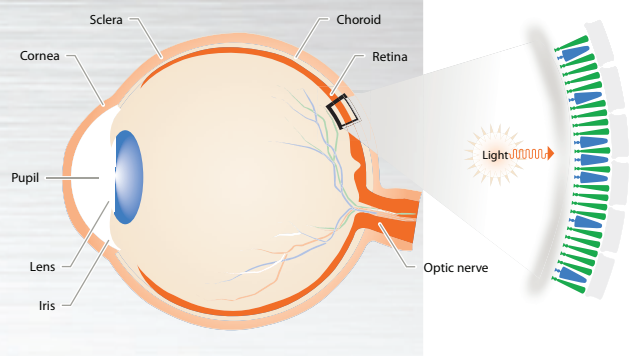
Peter Kresel, M.B.A., Senior Vice President of Global Regulatory Affairs at Allergan (retired)

Glen Y. Sato, J.D., M.B.A., Partner, Cooley Godward Kronish LLP

About the visual cycle

The visual cycle is the biological conversion of a photon into an electrical signal in the retina, which comprises light-receptor cells known as rods (responsible for night vision) and cones (responsible for day vision).

Cone cells, which allow the perception of color, have a critical role in detailed vision and central vision. Rod cells, which are more numerous than cone cells, are extremely fragile and ultrasensitive to light. Even when they are not being used for night vision, rod cells are sending essentially unused information to the brain. But they do play a critical function: they support cone cells, and thus our vision.



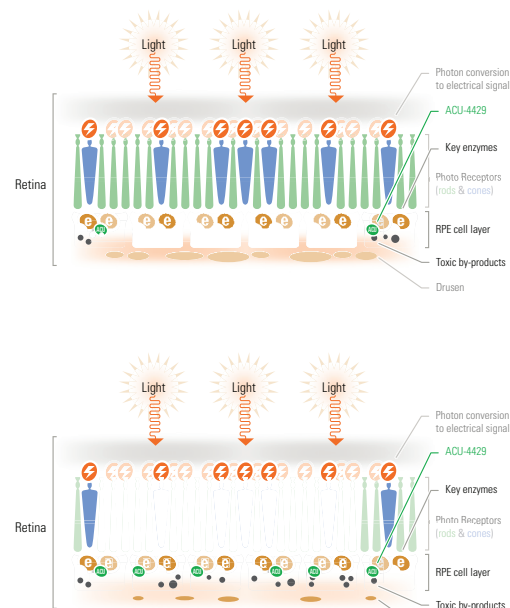
Acucela's Innovative Approach: Visual Cycle Modulation (VCM)

By selectively modulating the visual cycle to first protect rod cells, we believe that we can then ensure that cone cells — and by extension, visual acuity — can be preserved.

Studies have found that many more rod cells than cone cells are lost as our eyes age. Rod-cell deterioration is accepted as a component of both general visual decline and age-related diseases like AMD. Some research shows that environmental factors, such as smoking, nutrition, and exposure to sunlight, may influence the onset of AMD and the resulting visual decline.

Acucela's visual cycle modulators reduce the activity of the rod visual system, thereby relieving or "lightening" the metabolic load on the retina. Reducing the speed of the visual cycle has been shown to protect the retina from light damage, improve retinal vasculature (the arrangement of blood vessels) and reduce the accumulation of retinal-related toxic by-products, including A2E, which is implicated in AMD.

Acucela's VCM compounds have demonstrated safety and tolerability in both preclinical models and clinical studies: they are non-retinoid and able to be delivered orally, rather than by injection into the eye, which is the typical delivery method of many current eye therapeutics.



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