

**RESEARCH FUNDED BY THE BENIGN ESSENTIAL BLEPHAROSPASM RESEARCH  
FOUNDATION, INC.**

January 2012	Tatiana Fuchs, PhD and Laurie Ozelius, PhD Mount Sinai School of Medicine, New York, NY <b><i>Identification of a Primary Blepharospasm Gene Using Exome Sequencing</i></b>	\$51,000
January 2011	Cristopher Bragg, PhD, Massachusetts General Hospital, Harvard Medical School, Boston, MA <b><i>Investigating the Effects of the DYT6 Dystonia Protein, THAP 1, on Par-4 and the D2 Dopamine Receptor</i></b>	\$35,000
January 2011 (2 <sup>nd</sup> Year)	Andrew Harrison, M.D., Linda McLoon, Ph.D., and Michael Lee, M.D., University of Minnesota, Minneapolis, MN <b><i>Potentiating Botulinum Toxin A Effectiveness Using Co-Treatments</i></b>	\$35,000
January 2011	Alfredo Berardelli, MD, Department of Neurology And Psychiatry, Sapienza, University of Rome, Italy <b><i>A Family Study of Increased Blinking in Primary Blepharospasm: Epidemiological and Neurophysical Aspects</i></b>	\$30,000
January 2011	Allan D. Wu, MD, Department of Neurology, David Geffen School of Medicine, UCLA, Los Angeles, CA <b><i>Modulation of the Blink Reflex with Alternating Trigeminal Nerve Stimulation in Blepharospasm</i></b>	\$53,000
January 2011	David A. Peterson, PhD, Institute for Neural Computation, University of California, San Diego, CA <b><i>The Interaction of Ophthalmic and Dopaminergic Factors in the Pathogenesis of Blepharospasm</i></b>	\$31,884.00
January 2010	Andrew Harrison, M.D., Linda McLoon, Ph.D., and Michael Lee, M.D., University of Minnesota, Minneapolis, MN <b><i>Potentiating Botulinum Toxin A Effectiveness Using Co-Treatments</i></b>	\$50,000
January 2010	Giovanni Defazio, M.D., University of Bari, Bari, Italy (BEBRF funded half of the amount of the grant in partnership with the Dystonia Coalition) <b><i>Development and Validation of Clinical Diagnostic Guidelines and a Novel Severity Rating Scale for Primary Blepharospasm</i></b>	\$12, 500
January 2008	Dr. Angelo Quartarone, University of Messina Messina, Italy <b><i>Role of Corneal Sensitivity in the</i></b>	\$49,000.00

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*Pathophysiology of Blepharospasm*

December 2007 Complete Report in <i>Neurology</i> March 8, 2011	Jill L. Ostrem, M.D. and Philip A. Starr, M.D., Ph.D., University of California San Francisco, San Francisco, CA <b><i>Subthalamic Nucleus Deep Brain Stimulation For the Treatment of Cranial-Cervical Dystonia (Meige Syndrome)</i></b>	\$50,000.00
December 2006 Complete	Giovanni Defazio, M.D., Ph.D., University of Bari, Bari, Italy <b><i>Non-Conventional Imaging Studies in Benign Essential Blepharospasm</i></b>	\$30,000.00
December 2006	Laurie J. Ozelius, Ph.D., Mt. Sinai School of Medicine, New York, New York <b><i>Whole Genome Association Studies to Identify A Blepharospasm Gene</i></b>	\$80,000.00
December 2006 Complete	Kirsten E. Zeuner, M.D., Schleswig-Holstein University, Kiel, Germany <b><i>Probing the Plasticity of the Blink Reflex Circuit in Patients with Blepharospasm</i></b>	\$60,000.00
September 2006 Complete	Mark Hallett, M.D., NINDS, NIH, Bethesda, MD Workshop to take place in Houston, TX <b><i>Blepharospasm Workshop</i></b>	\$65,000.00
December 2004	University of California at San Diego David Kleinfeld, Ph.D. <b><i>Blepharospasm as a Result of Excitatory Sensorimotor Feedback</i></b>	\$55683.00
December 2004 Complete	University of Rochester, Rochester, NY Jianhua Wang, M.D., Ph.D. and Steven Feldon, M.D., MBA <b><i>Tear Dynamics of Blepharospasm</i></b>	\$50780.00
December 2003 Complete (Pub. 11/06 and 3/09 <i>Journal of the Movement Disorder Society</i> )	Mattie Lou Koster Fellowship Established Dr. Elizabeth Ulrich Peckham under the Following Mentors: Andrew Singleton, M.D and Mark Hallett, M.D., NIH, Bethesda, MD <b><i>Characterization and Collection of Families With Blepharospasm; Facilitating the Identification of Genetic Defect(s) Causing Blepharospasm</i></b> <i>*BEBRF Board of Directors voted to fund this Fellowship but NIH decided to fund it entirely.</i>	\$60,000.00*

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December 2003 Complete	University of Utah, Salt Lake City, Utah Bradley J. Katz, M.D., Ph.D. and Kathleen B. Digre, M.D. <b><i>FL-41 Tinted Spectacles in the Management of Blepharospasm</i></b>	\$15,193.00
December 2003 Complete	Tokyo Metropolitan Institute Of Gerontology Tokyo, Japan Motohir Kiyosawa, M.D. <b><i>Study of Cerebral Glucose Metabolism and Benzodiazepine Receptors in Patients With Essential Blepharospasm</i></b>	\$60,788.00
December 2002 Incomplete*	Smith-Kettlewell Eye Research Institute San Francisco, CA Alan B. Scott, M.D. <b><i>Removal of Motor Neurons With a Novel Immunotoxin</i></b> <i>*This project was not completed due to unforeseen circumstances. The unused funds were returned to the Foundation.</i>	\$41,095.00
December 2002 Complete	University of Kentucky, Lexington, KY Philip H. Bonner, Ph.D. <b><i>Long-term Reduction of Muscle Function Through Chemomyectomy and Inhibition of Regeneration</i></b>	\$64,661.00
December 2002 Complete	University of Minnesota, Minneapolis, MN Andrew R. Harrison, M.D., Stephen Christiansen, M.D. and Linda K. McLoon, Ph.D. <b><i>Novel Immunotoxin Therapy for Muscle Spasm Disorders</i></b>	\$68,554.00
December 2001 Complete (this work will continue funded by V.A.	University of Maryland , Baltimore, MD Paul S. Fishman, M.D., Ph.D. <b><i>Permanent Motor Chemodenervation with a Tetanus- Diphtheria Hybrid Neurotoxin</i></b>	\$58,300.00
December 2001 Complete	University of Kentucky, Lexington, KY Robert S. Baker, M.D. <b><i>Functional MRI in Benign Essential Blepharospasm Mapping of Cortical and Subcortical Areas Involved in Spontaneous and Reflex Blinking</i></b>	\$41,704.64
December 2001	University of Bari, Bari, Italy	\$36,600.00

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Complete - this Will continue w/other funding	Giovanni DeFazio, M.D. <i>Genetics of Blepharospasm</i>	
December 2001 Complete	University of Utah, Salt Lake City, UT Kathleen B. Digre, M.D. <i>Photophobia and Blepharospasm</i>	\$5,300.00
December 2000 Complete	Barrow Neurological Institute, Phoenix AZ Padma Mahant, M.D. <i>Risk Factors and Familial Occurrence of Blepharospasm</i>	\$35,000.00
December 2000 Complete	University of Kentucky, Lexington, Kentucky Philip H. Bonner, Ph.D. <i>Inhibition of Axon Sprouting After Botulinum Toxin</i>	\$51,203.11
November 2000 Complete	Mark Hallett, M.D., NINDS, NIH, Bethesda, MD <i>Blepharospasm Workshop</i>	\$65,000.00
December 1999 Complete	University of Tennessee, Memphis, Tennessee Mark S. LeDoux, M.D., Ph.D. <i>Eyelid Sensorimotor Networks in Rodents and Primates</i>	\$35,000.00
December 1999 Complete (This pilot study led to NIH grant for 5 yrs - thru year 20005	University of South Dakota, Vermillion, SD Robert J. Morecraft, Ph.D. <i>Cortical Control of the Upper Facial Musculature: Organization of Central Systems with Etiological Potential to Induce Involuntary Facial Spasms - 3<sup>rd</sup> year</i>	\$22,896.00
December 1998 Complete (report published Oct. 23, 2000	University of Barcelona, Barcelona, Spain Josep Valls-Sole, M.D., Ph.D. <i>The Role of Prepulse Modulation of the Blink Reflex in the Pathophysiology of Blepharospasm and Meige's Syndrome</i>	\$8,800.00
December 1998 Complete	University of South Dakota, Vermillion, SD Robert J. Morecraft, Ph.D. <i>Cortical Control of the Upper Facial Musculature: Organization of Central Systems with Etiological Potential to Induce Involuntary Facial Spasms - 2<sup>nd</sup> year</i>	\$40,450.00
December 1997 Complete	University of Mississippi, Jackson, MS Susan Warren, Ph.D. and Paul J. May, Ph.D. <i>Physiology of Blink Circuits in an Awake Behaving Monkey</i>	\$19,292.00
December 1997 Complete	University of Minnesota, Minneapolis, MN Linda McLoon, Ph.D., and Jonathan Wirtschafter, M.D. <i>Minimizing Inflammation and Maximizing Muscle Loss With Doxorubicin Chemomyectomy for Treatment of Blepharospasm</i>	\$14,443.00

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December 1996 Complete	University of Utah, Salt Lake City, UT John D. McCann, M.D., <i>Trial of Cervical Sympathetic Blockade for the Treatment of Benign Essential Blepharospasm</i>	\$13,000.00
February 1995 Complete Article Published in "Neurology"	Mark Hallett, M.D., NINDS, NIH, Bethesda, MD Robert B. Daroff, M.D., Case Western Reserve University, Cleveland, OH <i>Blepharospasm Workshop</i>	\$25,763.00
December 1994 Complete	Institut de Readaptation de Montreal, Quebec, Canada Robert Forget, Ph.D. <i>Clinical and Electrophysiological Characterization of Non-Paralytic Involuntary Eye Closure</i>	\$43,809.00
December 1994 Complete	New York University Medical Center Michael Hutchinson, M.D., Ph.D. <i>Neuroimaging of Blepharospasm</i>	\$62,325.00
December 1993 Complete	University of Michigan, Ann Arbor, MI Bartley R. Frueh, M.D. <i>Characterization of the Physiology and Biochemistry of Normal Human Adult Pretarsal Orbicularis Oculi Muscles</i>	\$11,700.00
December 1993 Complete	University of Medicine & Dentistry of New Jersey, Piscataway, NJ George M. Krauthamer, Ph.D. <i>Activation of Orbicularis Oculi Motoneurons by the Basal Ganglia</i>	\$20,000.00
December 1993 Complete	NYU Medical Center, New York, NY Jean Jacoby, Ph.D. <i>Use of CA-Channel Blockers to Reduce Eyelid Contractility in the Alert Rabbit</i>	\$32,733.00
December 1993 Complete	University of Kentucky, Lexington, KY Robert S. Baker, M.D. <i>Excitability of Blink Systems in the Blepharospasm Patient</i>	\$23,762.00
December 1993 Complete	University of Minnesota, Minneapolis, MN Linda K. McLoon, Ph.D., and Jonathan D. Wirtschafter, M.D.	\$ 7,879.00

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***Testing an Improved Doxorubicin Chemomyectomy  
Protocol in Monkeys: Reduction of Skin Ulceration  
and Increased Muscle Loss with Cyclosporin Co-  
Treatment***

December 1992 Complete (Funded by MLK Endowment)	UCLA School of Medicine, Los Angeles, CA John C. Mazziotta, M.D., Ph.D. (First Mattie Lou Koster Scholar) <b><i>PET Studies of Patients With Blepharospasm and Meige Syndrome</i></b>	\$67,242.00
December 1990 Complete (Funded by MLK Endowment) Project continued thru NIH grant	Washington University School of Medicine, St. Louis, MO Joel Perlmutter, M.D. <b><i>Task-Related Blood Flow Responses in Benign Essential Blepharospasm – PET Study</i></b>	\$30,000.00
December 1990 Complete	University of Utah, Salt Lake City, UT Kathy Alderson, M.D. <b><i>Reorganization of Neuromuscular Interactions Following Botulinum Toxin Injection for Therapy of Benign Essential Blepharospasm</i></b>	\$23, 495.00
December 1990 Complete	University of Kentucky, Lexington, KY John D. Porter, Ph.D. <b><i>Quantitative Assessment of the Effects of Oculinum on Eyelid Function: A Model for Evaluation of Improvements in Clinical Treatment of Blepharospasm</i></b>	\$20,000.00
December 1990 Complete	NYU Medical Center, New York, NY Jean Jacoby, Ph.D. <b><i>Effect of the CA Channel Blocker Diltiazem on Orbicularis Oculis Muscle Contractility</i></b>	\$20,000.00
December 1989 Complete	Hahnemann University, Philadelphia, PA Jay S. Schneider, Ph.D. <b><i>Neurochemical and Receptor Autoradiographic Assessment of a Possible Primate Model of Blepharospasm/Meige Syndrome</i></b>	\$15,000.00
December 1989 Complete	Baylor College of Medicine, Houston, TX Joseph Jankovic, M.D. and James Jerger, M.D. <b><i>Stapedius Muscle Reflex in Cranial Dystonia</i></b>	\$10,000.00
December 1989	University of Pittsburgh, Pittsburgh, PA	\$15,000.00

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Complete	Stewart N. Abramson, Ph.D. <i>Development of New Neuromuscular Blocking Agents for the Treatment of Blepharospasm</i>	
December 1989 Complete	Duke University, Durham, NC Janice Massey, M.D. <i>Study of the Remote Effects of Botulinum toxin</i>	\$20,000.00
November 1988 Complete	Smith-Kettlewell Visual Institute, San Francisco, CA Alan B. Scott, M.D. <i>Blepharospasm Treatment by Botulinum Toxins (Effects of B, D, F, &amp; G)</i>	\$20,000.00
November 1988 Complete	University of Utah School of Medicine Salt Lake City, UT Richard L. Anderson, M.D., et al <i>The Chronic Effects of Botulinum Toxin on the Neuromuscular Junction</i>	\$ 5,600.00
January 1988 Complete	University of Minnesota School of Medicine Minneapolis, MN Jonathan Wirtschafter, M.D. <i>Chemo-Myectomy with Adriamycin</i>	\$ 5,000.00
June 1987 Complete	Texas A & M School of Veterinary Medicine College Station, TX Gerald Bratton, DVM, Ph.D. and W. R. Klemm, DVD, Ph.D. <i>Development of an Animal Model for Research on Blepharospasm</i>	\$18,800.00
November 1987 Complete	Stanford University School of Medicine San Jose, CA John Hotson, M.D. <i>Blepharospasm Memory-Contingent Saccades</i>	\$14,972.00
October 1985 Complete	Baylor College of Medicine, Houston, TX Joseph Jankovic, M.D. <i>Research on Botulinum Toxin Injections to Relieve BEB/Meige and Related Disorders</i>	\$19,645.00
TOTAL RESEARCH FUNDED:		\$2,028,851.75