BIOGRAPHICAL SKETCH

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NAME Moiseyev, Gennadiy	POSITION TITLE Assistant Professor of Research
eRA COMMONS USER NAME GMOISEYEV	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Moscow Physical Technical Institute, USSR	M.S.	1977	Physics
Institute of Molecular Biology, USSR	Ph.D.	1984	Chemistry
Department of Ophthalmology, Medical University of South Carolina	Postdoc	1999	Ophthalmology

A. Positions and Honors.

RESEARCH AND/OR PROFESSIONAL EXPERIENCE:

1977-1979 Research Assistant, All-Union Institute of Applied Microbiology, Serpukhov, USSR.
1979-1982 Graduate student, Institute of Molecular Biology USSR Academy of Sciences, Moscow, USSR.
1982-1990 Research Scientist, Laboratory of Stereochemistry of Enzyme Reactions, Institute of Molecular Biology USSR Academy of Sciences, Moscow, USSR
1990-1999 Senior Research Scientist, Laboratory of Nucleases Enzymology, Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, Russia
1999-2003 Postdoctoral Fellow, Department of Ophthalmology, Medical University of South Carolina, Charleston, SC.
2003-2005 Instructor, Department of Medicine, Endocrinology, University of Oklahoma Health Science Center, Oklahoma City, OK.
2006- Assistant Professor of Research, University of Oklahoma Health Science Center, Department of Medicine , Endocrinology.,Oklahoma City, OK

SPECIAL HONORS AND POSITIONS:

FEBS Fellowship, University of Groningen, The Netherlands, 1994.
NATO fellowship, University of Verona, Italy, 1995.
Human Frontier Science Program Fellowship and NATO grant, Free University of Brussels, Belgium, 1996.
Presidential investigator award for outstanding scientists, Moscow, Russia, 1997.
Fellowship of Spanish Ministry of Education and Culture, Free University of Barcelona, Spain, 1998.

B. Other support.

Active research support:

1) R01EY12231 (PI Ma, J.X.) 05/01/2006- 04/30/2010 30%
NIH/NEY
Studies of RPE65
Major goal is to study the functional role and mechanism of RPE65
Role: Co-PI

2) 1 R43 EY017229-01 (PI Moiseyev, Gennadiy) 01/01/2006- 04/30/2007 30%
NIH/NEY
Cocktail of Angiogenic Inhibitors for the Treatment Diabetic Macular Edema
The goal of this project is to determine the synergistic effect of the cocktail of angiostatin and kallistatin on retinal vascular leakage in STZ-diabetic rats.

Completed Research Support

1 R43EY016298-01 (PI Moiseyev, Gennadiy) 08/01/2005- 02/01/2007 30%
NIH/NEY
Treatment of Retinal Vascular Leakage Using Angiostatin
The goal of this project is to develop and optimize a trans-sclera delivery of angiostatin to treat retina vascular leakage in diabetic rats and to determine the long-term effect of sustained release of angiostatin on retinal vascular leakage in diabetic rats.

Pending Research support:

Foundation Fighting Blindness (PI Moiseyev, Gennadiy) 06/01/07 – 05/31/10 20%

Mechanism for RPE65 mutations to impair the isomerohydrolase activity and to lead to retinal dystrophies

Planned application before anticipated Oklahoma Health Research Support: None.

List of recent peer-review publications pertinent to this application:

Takahashi Y., **Moiseyev, G**., Chen Y. and Ma J.X., (2006) The roles of three palmitoylation sites of RPE65 in its membrane association and isomerohydrolase activity, Invest Ophthalmol Vis Sci, 47(12):5191-6

Takahashi Y, Chen Y., **Moiseyev G.,** Ma JX. Two point mutations of RPE65 from patients with retinal dystrophies decrease the stability of RPE65 protein and abolish its isomerohydrolase activity. J Biol Chem. 2006 Jun 5; [Epub ahead of print].

Chen Y.**, Moiseyev G.,** Takahashi‡, Ma JX . RPE65 gene delivery restores isomerohydrolase activity and prevents early cone loss in Rpe 65-/- mice. Invest. Ophthalmol. Vis. Sci, 2006 47 (3), 1177-84

Moiseyev G‡**,** Takahashi‡, Y., Chen‡ Y.,Gentleman S§, Redmond T.M.§, Crouch R.K., and Ma J RPE65 Is an Iron(II)-dependent Isomerohydrolase in the Retinoid Visual Cycle. J Biol Chem. 2006 Feb 3;281(5):2835-40. Epub 2005 Nov 30

Takahashi Y., **Moiseyev G.,** Chen Y., Ma. JX. Identification of conserved histidines and glutamic acid as key residues for isomerohydrolase activity of RPE65, an enzyme of the visual cycle in the retinal pigment epithelium.FEBS Lett. 2005 Sep 27[Epub ahead of print]

Moiseyev G, Chen Y., Takahashi Y., Wu, B.X., Ma J. (2005) RPE65 is the isomerohydrolase in the retinois visual cycle. Proc. Natl. Acad. Sci. USA 102(35) 12413- 8

Wu BX, **Moiseyev G**, Chen Y, Rohrer B, Crouch RK, Ma JX (2004) Identification of RDH10, an All-trans Retinol Dehydrogenase, in Retinal Muller Cells. Invest Ophthalmol Vis Sci. 45(11):3857-62 .

Peshenko IV, **Moiseyev GP**, Olshevskaya EV, Dizhoor AM (2004) Factors that Determine Ca(2+) Sensitivity of Photoreceptor Guanylyl Cyclase. Kinetic Analysis of the Interaction between the Ca(2+)-Bound and the Ca(2+)-Free Guanylyl Cyclase Activating Proteins (GCAPs) and Recombinant Photoreceptor Guanylyl Cyclase 1 (RetGC-1). Biochemistry.43(43):13796-13804

Marneros AG, Keene DR, Hansen U, Fukai N, Moulton K, Goletz PL, **Moiseyev G**, Pawlyk BS, Halfter W, Dong S, Shibata M, Li T, Crouch RK, Bruckner P, Olsen BR (2004) Collagen XVIII/endostatin is essential for vision and retinal pigment epithelial function. EMBO J. 23(1):89-99.
Fan J., Rohrer B., **Moiseyev G**., Ma, JX., Crouch R.K. (2003) Isorhodopsin rather than rhodopsin mediates rod function in RPE65 knockout mice Proc Natl Acad Sci U S A 100, 13662-13667

Chen Y., **Moiseyev G**., Wu B.X., Ma, J., Crouch, R.K. (2003) Visual cycle retinoid processing proteins are present in HEK293S cells Vision Res. 43, 3037-3044

Moiseyev, G., Crouch, R.K., Goletz, P., Oatis, J., Redmond, T.M., and Ma, J. (2003) Retinyl esters are the substrate for isomerohydrolase. Biochemistry. 42(7):2229-2238

Znoiko, S.L. , Crouch, R.K., **Moiseyev, G.P**., and Ma J. (2002) Identification of the RPE65 protein in mammalian cone photoreceptors. Investigative Ophthalmology & Visual Science, 43, 1604-1609

Ma, J. , Zhang, J., Othersen, K.L., **Moiseyev, G.P**., Ablonczy, Z., Redmond, T.M., Chen, Y. and Crouch, R.K. (2001) Expression, purification, and MALDI analysis of RPE65. Investigative Ophthalmology & Visual Science, 42, 1429-1435.