

Paul Joseph DeMarco, Jr.

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December 21, 1961

The University of Alabama at Birmingham B.S. 1984
Major: Bachelor of Science in Psychology with Honors in Psychology
Minor: Computer Science
Honors Advisor: Michael Sloane, Ph.D.

Vanderbilt University
Department of Psychology
Major Area: Experimental Psychology
Thesis Advisor: Maureen Powers, Ph.D.

Vanderbilt University
Department of Psychology
Major Area: Experimental Psychology
Minor Area: Neuroscience
Thesis Advisor: Maureen Powers, Ph.D.

University of Chicago
Department of Ophthalmology and Visual Sciences
Post-Doctoral Fellow (NIH-NRSA Postdoctoral Fellowship)
Advisors: Vivianne Smith, Ph.D. and Joel Pokorny, Ph.D.

Degree Titles

Master's Thesis: *Spectral sensitivity of ERG components from dark-adapted goldfish treated with APB.*

Doctoral Dissertation: *Spectral sensitivity of ON and OFF responses from the optic nerve of goldfish.*

Research Interests

Visual neurophysiology, color vision, sensory coding, parallel processing in the visual system, non-invasive assessment of clinical visual disorders, bio-prosthetic and organic methods for restoration of vision.

Employment History / Professional Experience

- 2018-present Acting Vice Provost for Graduate Affairs and Acting Dean, School of Interdisciplinary and Graduate Studies
- 2009-2018 Associate Dean, School of Interdisciplinary and Graduate Studies
University of Louisville
- 2009-present Professor of Psychological and Brain Sciences, University of Louisville
- 2007-2009 Assistant Dean, Graduate School, University of Louisville
- 2005 Acting Chair, Department of Psychological and Brain Sciences, University Louisville
(Fall Semester)
- 2003-2005 Member, Executive Committee, Department of Psychological and Brain Sciences, University of Louisville
- 2001-2003 Director of Undergraduate Studies, Department of Psychological and Brain Sciences, University of Louisville
- 1999-2009 Associate Professor of Psychological and Brain Sciences University of Louisville
- 1995-Present Associate Appointment, Dept. Ophthalmology and Visual Sciences
University of Louisville
- 1995-2006 Research Health Scientist, VA Medical Center, Louisville, KY.
- 1995-1999 Assistant Professor of Psychology, University of Louisville
- 1993-1995 Appointment, Graduate Neuroscience Faculty, Loyola University Chicago.
- 1991-1995 Director, Neurovision Laboratory, Hines VA Medical Center.
Assistant Professor of Neurology, Loyola University Chicago
Stritch School of Medicine.
- 1989-1991 Post-doctoral Fellow, Department of Ophthalmology and Visual Science,

The University of Chicago.

- 1988-1989 Research Assistant, Department of Ophthalmology, Vanderbilt University.
- 1985-1986 Teaching Assistant, Department of Psychology, Vanderbilt University.
- 1984-1989 Research Assistant, Department of Psychology, Vanderbilt University.
- 1984 Undergraduate Representative for Psychology, Student-Faculty Relations Committee,
The University of Alabama at Birmingham.
- 1983-1984 Senior Honors Research Student, Department of Psychology,
University of Alabama at Birmingham.

Service, University of Louisville

- 2017-present Faculty co-sponsor and co-director, Bachelor of Science in Neuroscience Program
- 2012-present Member, University Research Advisory Council
- 2012-present Member, University Task Force on Tuition and Fee Setting
- 2014-present
- 2014-2017 Member, Departmental Resource Committee
- 2016-2017 Representative to ACC/Smithsonian Festival for Innovation and Creativity
- 2016-2017 Representative for APLU/Gates Foundation Adaptive Learning Grant, Awarded to
Delphi Center for Teaching and Learning
- 2015 Member, Committee to Assess Impact of Affordable Care Act on Student Workers
- 2014 Faculty Panelist, “Strategies for Motivating Your Students’ Learning through
Lecture”, Delphi Center of Teaching and Learning Conference
- 2013 Chair, Psychological and Brain Sciences Neuroscience/fMRI Search Committee
- 2012-2013 Member, Psychological and Brain Sciences Personnel Committee
- 2008-2012 Member, Psychological and Brain Sciences Plans and Policies Committee
- 2002-2009 Chair, Psychological and Brain Sciences Resource Committee
- 2005-2006 Member, Steering Committee for Creation of a Neuroscience Ph.D. Program,
University of Louisville.
- 2005-2006 Member, Committee to Restructure Graduate Training in Psychology
- 2002-2003 Member, Provost’s Committee for Restructuring Undergraduate Advising
- 2003 Member, Exemplary Advising Award Committee
- 2002 Social Sciences Representative, Pre-Med Advising Committee
- 1999-2000 Chair, Committee to Restructure Introduction to Psychology Course

- 1998 Department of Psychology Visiting Professor Search Committee
- 1999 Department of Psychology Y2K Liaison to the College of Arts & Sciences
- 1999-2000 Department of Psychological and Brain Sciences Resource Committee
- 1999-2003 Undergraduate Curriculum Committee
- 1996-1998 Department of Psychology Personnel Committee
- 1996 Representative for Department of Psychology, Seminar on “Academic Compliance Issues for the Americans with Disabilities Act”

Service, Other Institutions

- 1993-1995 Research Achievement Conference, Department of Neurology, Loyola University Chicago and Hines VA Medical Center.
- 1992-1995 Library Committee, Loyola University Chicago Medical Center
- 1991-1995 Research Fellowship Committee Member, Department of Neurology, Loyola University Chicago and Hines VA Medical Center

Honors and Awards

- 2014 Distinguished Alumni Award for Scholarship, Department of Psychology, University of Alabama, Birmingham
- 2004 Athletes’ Favorite Faculty Award
- 2004 Faculty Award for Disability Awareness, University of Louisville
- 2003 Provost’s Exemplary Advising Award, University of Louisville
- 2003 NACADA National Award for Faculty Advising
- 1987-1989 Appointment, Visual Sciences Training Grant, Vanderbilt University.
- 1987 Graduate Research Travel Award, Vanderbilt University, \$200.
- 1984-1985 University Fellowship, Vanderbilt University.
- 1984 Senior Honors in Psychology, Graduation with Honors in Psychology, The University of Alabama at Birmingham.

Professional Service

National Organizations

Session Moderator “Clinical Electrophysiology”. Annual Meeting of The Association for Research in Vision and Ophthalmology, 2017.

Session Moderator “On Advancing Functional Assessment of the Visual System”. Annual Meeting of The Association for Research in Vision and Ophthalmology, 2013.
 Symposium Organizer, “Long-Range Interactions in the Visual System”. Annual Meeting of the Optical Society of America, 1998.
 Bylaws committee, American Academy of Clinical Neurophysiology, 1993-1994.

Community Service

Kentucky Regional High School Science Fair Judge, 2007-2016

Journal Editorial Service

Electroencephalography and Clinical Neurophysiology
Investigative Ophthalmology and Visual Science
Journal of the Optical Society of America
Ophthalmology
Vision Research
Visual Neuroscience

Grant Review Panels

Research Service, Department of Veterans Affairs:
 Member, Research and Development Committee
 Member, Scientific Review Committee A
 Ad hoc reviewer for National Science Foundation and National Institutes of Health

Membership in Professional Societies

American Psychological Society
 Association for Research in Vision and Ophthalmology
 Council of Graduate Schools
 Optical Society of America
 Sigma Xi

Graduate Student Committee Service (University of Louisville, unless otherwise noted)

<u>Student's name</u>	<u>Year</u>	<u>Degree Granted</u>
Luisa Roveri	1995	M.A. 1995 (Loyola University, chair)
Todd Purkiss	2000	Ph.D. (chair)
Alan Hughes	2000	Ph.D. (chair)
Jason McCarly	1996	M.A.
Tricia Callahan	1997	Ph.D.
James Prather	1997	Ph.D.
Lei Wang	1999	M.A.
Michael Sinai	1998	Ph.D.
Julie D'Arcy	2000	M.A.
Kevin Deford	2002	Ph.D.
Haidong Lu	2002	Ph.D.

Sasha Key	2002	Ph.D.
Leah Shepherd	2002	M.A.
Bruce Hansen	2004	Ph.D.
Tom Dawson	2004	Ph.D.
Bin Chen	2005	Ph.D.
Donald Ladwig	2006	M.A. (chair)
Gary Yarborough	2008	Ph.D.
Nikki Pratt	2008	Ph.D.
Regina Nobles	2010	Ph.D.
Shelley Hanaver-Torres	2010	M.A.
Yeonjin Kim	2010	Ph.D.
Eric Vukmanic	2010	M.A. (chair)
Nathan Johnson	2010	Ph.D.
Eric Brian	2010	Ph.D. (chair)
Tara Weatherholt	2011	Ph.D.
Eugene Brandwie	2012	Ph.D.
Pan Shi	2012	M.A. (chair)
Hillary Williams	2013	M.A.
Daniel Lemor	2013	M.A. (Univ. of Queensland)
Stewart Madon	2013	Ph.D. (Lakehead University)
Michelle Waugh	2013	Ph.D. (U. of Melbourne)
James Fransen	2013	Ph.D.
Yong Su	2014	Ph.D.
Katie Fransen	2024	Ph.D.
Jennifer Noel	2008-present	Ph.D.
April Schweinhart	2012-present	Ph.D.
Paul Anderson	2013-2015	Ph.D.
Wenhao Dang	2013-2015	Ph.D.
Jennifer Noel	2008-2016	Ph.D.
Kate Godwin	2011-2016	Ph.D. (chair)
Eleanor O'Keefe	2013-2014	M.A., Ph.D.
Eleanor O'Keefe	2014-2017	Ph.D. (chair)
Ashley Assgari	2016-2018	
Gregory Ellis	2016-2018	

Extramural Grant Support

Current projects

Project Title: "Cone Rescue in Retinitis Pigmentosa"

Role: Key Personnel

Funding Agency: NIH-NEI

Total Award: \$532,383

Funded Period: September 1, 2016 – October 31, 2020

Project Title: "Novel use of clinical drugs to prevent the major eye injury associated complication"

Role: Co-Investigator
Funding Agency: Department of Defense
Total Award: \$890,823
Funding Period: October 1, 2010 – May 14, 2014

Project Title: "P23H Rhodopsin Mutant Swine Model of Retinitis Pigmentosa".

Role: Co-Investigator
Funding Agency: NIH
Total Award: \$329,815
Funding Period: December 1, 2010 – November 30, 2012.

Project Title: "Functional Reconstruction of the Outer Retina"

Role: Co-Investigator
Funding Agency: Discovery Eye Foundation
Total Award: \$484,988
Period of Award: 4/1/2008-3/31/2009

Project Title: "Parallel Processing of Information in the Human Visual System".

Role: Principal Investigator
Granting Agency: Department of Veterans Affairs
Total Award: \$302,100
Period of Award: 10/1/2002-9/30/2006

Project Title: "Characteristics of retinal output and visual function resulting from
implantation of a retinal microphotodiode array device in rats blinded by
photoreceptor degeneration".

Role: Co-Principal Investigator
Funding Agency: Optobionics Inc.
Total Award: \$65,832
Period of Award: 2/1/2004 – 12/31/2006

Project Title: "Parallel Processing of Information in the Human Visual System".

Role: Principal Investigator
Granting Agency: Department of Veterans Affairs.
Total Award: \$255,800
Period of Award: 4/1/1998 - 3/31/2002

Project Title: "Color Processing in the Human Visual System".

Role: Principal Investigator
Granting Agency: Department of Veterans Affairs.
Total Award: \$308,000
Period of Award: 10/1/93 - 9/30/97.

Project Title: "Psychophysical Correlates of ON and OFF Pathways".

Role: Principal Investigator
Sponsor: Vivianne Smith, Ph.D., University of Chicago.

Granting Agency: National Eye Institute (Individual Post-doctoral Fellowship).
Total Award: \$39,000
Period of Award: 12/1/89 - 11/30/91.

Intramural Grant Support—Intramural

Project Title: “Designing and Evaluating a Novel Font Reading with Macular Degeneration”.

Role: Co-Investigator

Funding Agency: UofL Office of the Vice President for Research and Innovation

Total Award Requested: \$7,085

Funding Period: June 1, 2013 –May 31, 2014

Project Title: "Introduction of Personal Response Feedback System to Psychology 201".

Role: Co-Principal Investigator

Granting Agency: Deans Office, College of Arts and Sciences, University of Louisville

Total Award: \$4,000

Period of Award: 1/1/05 - 12/31/05

Project Title: "Disruption of cone pathways in a transgenic mouse model of retinal degeneration".

Role: Co-Principal Investigator

Granting Agency: Office of the Vice President for Research (Research Initiative Grant),
University of Louisville

Total Award: \$3,940

Period of Award: 1/1/00 - 12/31/00

Project Title: "Electrophysiological metrics of the ON- and OFF-pathways".

Role: Principal Investigator

Granting Agency: College of Arts and Sciences, University of Louisville

Total Award: \$2,035

Period of Award: 7/1/98 - 6/30/99

Project Title: "Sensitivity to scotopic increments and decrements of light".

Role: Principal Investigator

Granting Agency: Office of the Vice President for Research (Research Initiative Grant),
University of Louisville

Total Award: \$3,635

Period of Award: 1/1/96 - 12/31/96

Project Title: "Color Processing in the ON- and OFF-pathways of the Human Visual System".

Role: Principal Investigator

Granting Agency: College of Arts and Sciences, University of Louisville

Total Award: \$1,600

Period of Award: 7/1/97 - 6/30/98

Publications

- DeMarco, P.J., Nussdorf, J.D., Brockman, D.A. & Powers, M.K. (1989). APB selectively reduces visual responses by goldfish to high spatiotemporal frequencies. *Vis Neurosci.*, 2, 15-18.
- DeMarco, P.J. & Powers, M.K. (1989). Sensitivity of ERG components from dark-adapted goldfish retinas treated with APB. *Brain Res.*, 482, 317-323.
- DeMarco, P.J. & Powers, M.K. (1991). Spectral sensitivity of ON and OFF responses from the optic nerve of goldfish. *Visual Neurosci.*, 6, 207-217.
- DeMarco, P.J., Bilotta, J. & Powers, M.K. (1991). DL-2-Amino-4-phosphonobutyric acid does not eliminate "ON" responses in the visual system of goldfish. *Proc Natl Acad Sci USA.*, 88, 3787-3791.
- DeMarco, P.J., Pokorny, J. & Smith, V.S. (1992). Full spectrum cone sensitivity functions for anomalous trichromats. *J Opt Soc Am.*, 9, 1465-1476.
- DeMarco, P.J. & Powers, M.K. (1994). APB alters photopic spectral sensitivity of goldfish retina. *Vision Res.*, 34, 1-9.
- DeMarco, P.J., Smith, V.S. & Pokorny, J. (1994). Effect of sawtooth polarity on chromatic and luminance detection. *Visual Neurosci.*, 11, 491-499.
- Peachey, N.S., DeMarco, P.J., Ubilluz, R. & Yee, W. (1994). Short-term changes in the human visual evoked potential. *Vision Res.*, 34, 2823-2831.
- Celesia, G.G. & DeMarco, P.J. (1994). Anatomy and physiology of the visual system. *J Clin Neurophys.*, 11, 482-492.
- Bilotta, J., DeMarco, P.J. & Powers, M.K. (1995). The contributions of ON- and OFF-pathways to contrast sensitivity and spatial resolution in goldfish. *Vision Res.*, 35, 103-108.
- Celesia, G.G., Brigell, M. & DeMarco, P.J. (1995). Potenziali evocati visivi. In G. Comi (Ed.), *I Potenziali Evocati nella Sclerosi Multipla. Diagnosi, prognosi e monitoraggio* (pp. 33-47). Berlin: Springer-Verlag.
- Celesia, G.G., Peachey, N.S., Brigell, M. & DeMarco, P.J. (1996). Visual evoked potentials: recent advances. *Electroencephalogr Clin Neurophysiol Suppl.*, 46, 3-14.
- Brigell, M., Strafella, A., Parmeggiani, L., DeMarco, P.J. & Celesia, G.C. (1996). The effects of luminance and chromatic background flicker on the human visual evoked potential. *Visual Neurosci.*, 13, 265-275.
- Roveri, L., DeMarco, P.J. & Celesia, G.C. (1997). An electrophysiological metric of activity within the ON- and OFF-pathways in humans. *Vision Res.*, 37, 669-674.
- DeMarco, P.J., Brigell, M. & Gorden, M. (1997). The peripheral flicker effect: Desensitization of the luminance pathway by static and modulated light. *Vision Res.*, 37, 2419-2425.

- Hughes, A., Saszik, S., Bilotta, J., DeMarco, P. J. & Patterson, W. F. (1998). Cone contributions to the photopic spectral sensitivity of the zebrafish ERG. *Visual Neurosci.*, *15*, 1029-1037.
- DeMarco, P.J., Hughes, R.A. and Purkiss, T.J. (2000). Increment and decrement detection on temporally modulated fields. *Vision Res.*, *40*, 1907-1919.
- Purkiss, T.J., Hughes, A. & DeMarco, P.J. (2001) Processing of scotopic increments and decrements. *Visual Neurosci.*, *18*, 119-125.
- Purkiss, T.J. and DeMarco, P.J. (2002) Adaptation of spatiotemporal mechanisms by increment and decrement stimuli. *J Opt Soc Am A Opt Image Sci Vis.*, *19*, 1475-1483.
- Hughes, A. & DeMarco, P.J. (2003). Time course of adaptation to stimuli along cardinal lines in color space. *J Opt Soc Am A Opt Image Sci Vis.*, *20*, 2216-2227.
- Sagdullaev, B.T., DeMarco, P.J. & McCall, M.A. (2004). Improved Contact Lens Electrode for Corneal ERG Recordings in Mice. *Doc Ophthalmol.*, *108*, 181-184.
- Haider, N. B., DeMarco, P., Nystuen, A. M., Huang, X., Smith, R. S., McCall, M. A., et al. (2006). The transcription factor Nr2e3 functions in retinal progenitors to suppress cone cell generation. *Vis Neurosci.*, *23*, 917-929.
- DeMarco, P. J., Jr., Yarbrough, G. L., Yee, C. W., McLean, G. Y., Sagdullaev, B. T., Ball, S. L., et al. (2007). Stimulation via a subretinally placed prosthetic elicits central activity and induces a trophic effect on visual responses. *Invest Ophthalmol Vis Sci.*, *48*, 916-926.
- DeMarco, P. J., Jr., Katagiri, Y., Enzmann, V., Kaplan, H. J., & McCall, M. A. (2007). An adaptive ERG technique to measure normal and altered dark adaptation in the mouse. *Doc Ophthalmol*, *115*, 155-163.
- Wang, W., De Castro, J. F., Vukmanic, E., Zhou, L., Emery, D., DeMarco, P. J., Kaplan, H. J. & Dean, D. C. (2011). Selective rod degeneration and partial cone inactivation characterize an iodoacetic acid model of Swine retinal degeneration. *Invest Ophthalmol Vis Sci.*, *52*, 7917-7923.
- Noel, J. M., Fernandez De Castro, J. P., DeMarco, P. J., Jr., Franco, L. M., Wang, W., Vukmanic, E. V., Peng, X., Sandell, J. H., Scott, P. A., Kaplan, H. J. & Mccall, M. A. (2012). Iodoacetic acid, but not sodium iodate, creates an inducible swine model of photoreceptor damage. *Exp Eye Res.*, *97*, 137-147.
- Ross, J. W., De Castro, J. P., Zhao, J., Samuel, M., Walters, E., Rios, C., Bray-Ward, P., Jones, B. W., Marc, R. E., Wang, W., Zhou, L., Noel, J. M., Mccall, M. A., DeMarco, P. J., Prather, R. S. & Kaplan, H. J. (2012). Generation of an inbred miniature pig model of retinitis pigmentosa. *Invest Ophthalmol Vis Sci.*, *31*, 501-507.
- Fernandez de Castro, J.P., Scott, P.A., Fransen, J.W., Demas, J., DeMarco, P.J., Kaplan, H.J., McCall, M.A. (2014). Cone photoreceptors develop normally in the absence of functional rod

photoreceptors in a transgenic swine model of retinitis pigmentosa. *Invest Ophthalmol Vis Sci.*, 4, 2460-2468.

Vukmanic, E., Godwin, K., Shi, P., Hughes, A., DeMarco, P.J., Jr. (2014) Full-field electroretinogram response to increment and decrement stimuli. *Doc Ophthalmol.*, 129, 85-95.

Scott, P. A., de Castro, J. P., DeMarco, P. J., Ross, J. W., Njoka, J., Walters, E., Prather, R. S., McCall, M.A., Kaplan, H. J. (2017). Progression of Pro23His Retinopathy in a Miniature Swine Model of Retinitis Pigmentosa. *Transl Vis Sci Technol*, 6(2), 4. doi:10.1167/tvst.6.2.4

Published Abstracts

DeMarco, P.J., Sloane, M. (1984). Stroboscopic motion under fluorescent lights: a novel color effect. *Annual Meeting of the Southeastern Psychological Society, New Orleans.*

DeMarco, P.J., Nussdorf, J.D., Brockman, D.A. & Powers, M.K. (1987). The on channel is necessary for optokinetic nystagmus at high spatiotemporal frequencies. *Soc. Neurosci. Abstr.*, 13, 1053.

DeMarco, P.J. & Powers, M.K. (1987). Characteristics of the dark adapted goldfish electroretinogram in the absence of on channel activity. *Invest. Ophthalm. Vis. Sci. suppl.*, 28, 406.

Powers, M.K., DeMarco, P.J. & Bilotta, J. (1988). APB eliminates ERG b-wave but not optic nerve on responses in goldfish. *Invest. Ophthalm. Vis. Sci. suppl.*, 29, 104.

Bilotta, J., DeMarco, P. & Powers, M. (1989). APB alters contrast sensitivity in goldfish. *Soc. Neurosci. Abstr.*, 15, 122.

DeMarco, P.J. & Powers, M.K. (1989). Spectral sensitivity of ON and OFF responses from the optic nerve. *Invest. Ophthalm. Vis. Sci. suppl.*, 30, 69.

DeMarco, P.J. & Powers, M.K. (1990). APB alters photopic spectral sensitivity of goldfish. *Invest. Ophthalm. Vis. Sci. suppl.*, 31, 260.

DeMarco, P.J., Pokorny, J. & Smith, V.S. (1990) Full spectrum cone sensitivity functions for anomalous trichromats. *Opt. Soc. Amer. Tech. Digest*, 15, 245.

DeMarco, P.J., Smith, V.S. & Pokorny, J. (1991). Sensitivity to chromatic increments and decrements. *Invest. Ophthalm. Vis. Sci. suppl.*, 32, 1213.

DeMarco, P.J., Pokorny, J. & Smith, V.S. (1992). Detection of S-cone increments and decrements. *Invest. Ophthalm. Vis. Sci. suppl.*, 33, 702.

Peachey, N. S., DeMarco, P. J., Yee, W., Ubilluz, R., & Celesia, G. G. (1994). Short-term changes in the human VEP. *J Clin Neurophys.*, 11, 256.

- DeMarco, P. J., Parmeggiani, L., Peachey, N. S., & Celesia, G. G. (1994). Temporal response properties of the human VEP to luminance and chromatic modulation. *J Clin Neurophys.*, *11*, 256.
- Bilotta, J., DeMarco, P.J., LaJoie, A.S., Dieckmann, C.M., Chatman, S.J. & Cosby, S.E. (1994). Heterochromatic flicker photometry in goldfish. *Invest Ophthalmol Vis Sci, suppl.*, *35*, 2168.
- DeMarco, P.J., Brigell, M. & Gordon, M. (1994). Peripheral flicker simulates a foveal luminance pedestal. *Invest Ophthalmol Vis Sci, suppl.*, *35*, 2167.
- Roveri, L. & DeMarco, P.J. (1995). Analysis of on- and off-pathway inputs to the human visual evoked potential, *Invest Ophthalmol Vis Sci, suppl.*, *36*, 2167.
- Brigell, M., DeMarco, P.J., Roveri, L. & Celesia, G.C. (1995). Saccadic latency does not increase as a function of eccentricity for m-scaled targets. *Invest Ophthalmol Vis Sci, suppl.*, *36*, 596.
- DeMarco, P.J., Hughes, R.A. & Purkiss, T.J. (1997). Threshold vs contrast (TVC) functions for detection of luminance increments and decrements. *Invest Ophthalmol Vis Sci, suppl.*, *38*, 1781.
- Purkiss, T.J. DeMarco, P.J. & Hughes, R.A. (1997). Psychophysical sensitivity to scotopic increments and decrements. *Invest Ophthalmol Vis Sci, suppl.*, *38*, 4735.
- Hughes, R.A. DeMarco, P.J. & Purkiss, T.J. (1998). Detection of luminance increments and decrements on temporally modulated fields. *Invest Ophthalmol Vis Sci, suppl.*, *39*, 1908.
- Purkiss, T.J., DeMarco, P.J. & Hughes, R.A. (1998). Sensitivity to photopic and scotopic increments and decrements as a function of eccentricity. *Invest Ophthalmol Vis Sci, suppl.*, *39*, 1894.
- DeMarco, P.J., Hughes, R.A. & Purkiss, T.J. (1999). The morphology and sensitivity of electroretinogram responses associated with positive and negative flashes. *Invest Ophthalmol Vis Sci, suppl.*, *40*, 71.
- Hughes, R.A., Purkiss, T.J. & DeMarco, P.J. (1999). Chromatic detection on fields modulated in chromaticity. *Invest Ophthalmol Vis Sci, suppl.*, *40*, 1891.
- Purkiss, T.J., Hughes, R.A. & DeMarco, P.J. (1999). Two spatiotemporal mechanisms contribute to sawtooth adaptation effects. *Invest Ophthalmol Vis Sci, suppl.*, *40*, 244.
- Hughes, R.A., Purkiss, T.J. & DeMarco, P.J. (2000). The time course of adaptation for stimuli presented along cardinal lines in color space. *Invest Ophthalmol Vis Sci, suppl.*, *41*, 4293.
- Hughes, R.A., Purkiss, T.J. & DeMarco, P.J. (2001). S-cone increment and decrement detection during dynamic light adaptation. *Invest Ophthalmol Vis Sci, suppl.*, *42*, 265.
- McCall, M.A., Lukasiewicz, P.D., DeMarco, P.J. & Peachey, N.S. (2002) Elimination of the GABA_c receptor alters inner retinal signaling in the cone pathway. *Invest Ophthalmol Vis Sci, suppl.*, *43*, 896.

- DeMarco, P.J. & McCall, M.A. (2003). Functional consequences of photoreceptor ablation in transgenic mice. *Invest Ophthalmol Vis Sci*, suppl., 44, 1869.
- DeMarco, P.J. & McCall, M.A. (2004). The absence of GABAC Receptor Mediated Inhibition Alters Retinal Dark Adaptation. *Invest Ophthalmol Vis Sci*, suppl., 45, 790.
- McCall, M. A., DeMarco, P. J., Jr., Crosby, A. L., Sagdullaev, B. T., Yee, C. W., Ball, S. L., McLean, G. Y., Chow, A. Y. (2005). Visually evoked activity from a subretinally placed artificial silicon retina. *Invest Ophthalmol Vis Sci*, 46, ARVO e-abstract 1529.
- Ladwig, D., Lu, H., Vessey, K.A., DeMarco, P.J. Jr., & McCall, M.A. (2006). Absence of Retinal GABAC Receptor Expression Alters the Process of Dark Adaptation. *Invest Ophthalmol Vis Sci*, 46, ARVO e-abstract 395.
- Katagiri, Y., Row, B.W., Ladwig, D.H., Franco, L.M., Kaplan, H.J., McCall, M.A., DeMarco, P.J. & Enzmann, V. (2006). Neural Stem Cells Rescue Behavioral and Electrophysiological Responses in a Rat Model of Retinal Pigment Epithelium Loss, *Invest Ophthalmol Vis Sci*, 46, ARVO e-abstract 2879.
- Bilotta, J., Abo1, M.M., Thornberry, T.S. & DeMarco, P.J. Jr. (2006). ERG Responses of the Adult Zebrafish to Positive and Negative Flashes *Invest Ophthalmol Vis Sci*, 46, ARVO e-abstract 3098.
- Enzmann, V., Franco, L.M., Katagari, Y., Row, B.W., Kaplan, H.K., DeMarco, P.J., McCall, M.A. & Wolf, S. (2007). Sodium Iodate-Generated Retinal Pigment Epithelium Dystrophy - A Model of Induced Retinal Cell Damage. *Invest Ophthalmol Vis Sci*, 47, ARVO e-abstract 324.
- Franco, L.M., Katagari, Y., Rychwalski, P.J., Rodriguez, A., Sandell, J.H., Dean, D.C., McCall, M.A., DeMarco, P.J., Kaplan, H.K. & Enzmann, V. (2008). Preferential Loss of Cone Photoreceptors and Light-Adapted Cone Function in an Iodoacetic Acid Model of Photoreceptor Damage in the Rabbit Retina. *Invest Ophthalmol Vis Sci*, 48, ARVO e-abstract 3003.
- DeMarco, P.J., Vukmanic, E.V., Hughes, A., Nussdorf, J.D. (2008). Nonlinearities in the ERG Response to Positive and Negative Flashes. *Invest Ophthalmol Vis Sci*, 48, ARVO e-abstract 5817.
- DeMarco, P.J., Ross, J.W., McCall, M.A., Narfstrom, K., Prather, R.S., Samuel, M., Walters, E.M., Jianguo Zhao, J., Kaplan, H.J. Development and Assessment of a P23H Rhodopsin Transgenic Mini-Swine Model of Retinitis Pigmentosa. (2009). *Invest Ophthalmol Vis Sci*, 49, ARVO e-abstract 2289.
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