

Matthew C. Mauck

EDUCATION

Xavier University:

Cincinnati, Ohio

Bachelor of Science in Chemistry

August 1999-May 2003

Summa Cum Laude

Medical College of Wisconsin:

Medical Scientist Training Program (MD/PhD)

August 2003-May 2009

Doctor of Philosophy, Cell Biology, Neurobiology, and Anatomy

Dissertation Title: "The Neural Circuit for Color Vision"

Doctor of Medicine

August 2003 - May 2010

Cold Spring Harbor Laboratories Course:

July 6-19, 2007

Structure, Function, and Development of the Visual System

MEDICAL RESIDENCY TRAINING

Transitional Year Residency

July 2010-July 2011

Aurora Health Care

Saint Luke's Medical Center

Milwaukee, WI

Anesthesiology Residency

July 2011-June 2014

Duke University Hospital

Durham, NC

Academic Chief Resident

July 2013-June 2014

Pain Management Fellowship

July 2014-present

Duke University Hospital

Durham, NC

LICENSING AND CERTIFICATION

North Carolina Medical License (#2014-00006)

Candidate in the Examination Process for Board Certification in Anesthesiology

GRANTS AND AWARDS

Research to Prevent Blindness

Medical Student Fellowship (Funds for salary and research support)

2005-2006

Cold Spring Harbor Laboratories Scholarship (tuition and board)

Structure, Function, and Development of the Visual System

July 2007

International Color Vision Society

Travel Award to Lyon, France

July 2005

National Eye Institute Travel Grant

Association for Research in Vision and Ophthalmology Annual Meeting

May 2006

International Color Vision Society

Travel Award to Belem, Brazil

July 2007

AQA Medical Honor Society

Stabenau Award

Medical College of Wisconsin

FAER Resident Scholar

Outstanding Resident Graduate, Duke University

May 2010

October 2013

June 2014

PROFESSIONAL SOCIETY MEMBERSHIPS

American Society of Anesthesiologists (ASA)

BIBLIOGRAPHY

Publications

Mauck, M., Van de Ven, T., Shaw, A.D. Epigenetics of chronic pain after thoracic surgery. *Curr Opin Anaesthesiol.* 27(1):1-5

K. Mancuso, Mauck, M. C., Kuchenbecker, J. A., Neitz, M., Neitz, J. A multi-stage color model revisited: implications for a gene therapy cure for red-green colorblindness. *Adv. Exp. Med. Biol.* **2010** 664:631-38.

Mancuso, K, Hauswirth, W. W., Li, Q., Connor, T. B., Kuchenbecker, J., Mauck, M. C., Neitz, J., Neitz, M. Colorblindness Cure: Gene Therapy Confers a New Sensation. *Nature* **2009** 461(7265):737-39.

Time Magazine's Top 10 Scientific Discoveries of 2009

Mauck, M. C., Mauncuso, K., Kuchenbecker, J., Connor, T.B., Hauswirth, W. W., Neitz, J., Neitz, M. Longitudinal evaluation of expression of virally delivered transgenes in gerbil cone photoreceptors. *Visual Neuroscience* **2008** 25(3):273-82.

Pawela, C.P., Hudetz, A.G., Ward B. D., Schulte M. L., Li, R., Kao D. S., Mauck, M. C., Cho Y. C., Neitz J., Hyde, J. S. Modeling of region-specific fMRI BOLD neurovascular response functions in rat brain reveals residual differences that correlate with the differences in regional evoked potentials. *Neuroimage*, **2008** 41(2):525-534.

Mancuso, K., Hendrickson, A. E., Connor, T. B., Mauck M. C., Kinsella, J. J., Hauswirth W. W., Neitz, J., Neitz, M. rAAV Targets Passenger gene Expression in Cones in Primate Retina. *Journal of the Optical Society of America – A*, **2007**, 25(5):1411-1416.

Rink, C.M.; Mauck, M.C.; Asif, I., Fenlon, E.E. Synthesis of Silatranyl- and Geratranyl-uridines. *Organic Letters.* **2005** 7(6) 1165-1168.

Davis, C. M.; Mauck M. C. Titrimetric Determination of Carbon Dioxide in Heterogeneous Sample ('Pop Rocks'). *Journal of Chemical Education.* **2003** 80(5) 552.

Black, C.A.; Ucci J.W.; Vorpagel, J.S.; Mauck, M.C.; Fenlon, E. E. Stereoselective and Improved Syntheses and Anticancer Testing of 3'-O-silatranylthymidines. *Bioorganic and Medicinal Chemistry Letters* **2002**, 12(24) 3521-3523.

Selected Abstracts

- (2005) M. C. Mauck; Levin, J.J.; Neitz, J.; Neitz, M. Normal L:M cone ratio variations and the acuity of color vision. *International Colour Vision Society Symposium*, Lyon France.
- (2005) M. C. Mauck; Levin, J.J.; Neitz, J.; Neitz, M. Normal L:M cone ratio variations and the acuity of color vision. *Graduate Student Poster Day, Medical College of Wisconsin*. Outstanding Poster Award
- (2006) M. C. Mauck, Neitz J., Connor, T. B., Hauswirth, W. W., Neitz, M. Longitudinal in vivo Characterization of Expression of Viral Delivered Genes for L-opsin and Green Fluorescent Protein in Cone Photoreceptors of Gerbils. *Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting*. Ft Lauderdale, Florida.
- (2006) M. C. Mauck, Neitz J., Connor, T. B., Hauswirth, W. W., Neitz, M. Longitudinal in vivo Characterization of Expression of Viral Delivered Genes for L-opsin and Green Fluorescent Protein in Cone Photoreceptors of Gerbils. *Medical Scientist Training Program Annual Symposium*. Keystone, Colorado.
- (2007) M.C. Mauck, Neitz, M., Neitz, J. Longitudinal evaluation of expression of virally delivered transgenes in gerbil cone photoreceptors. *International Colour Vision Society Symposium*. Belem. Brazil.
- (2007) M.C. Mauck, Kuchenbecker, J., Pawela, C., Hudetz, A., Hyde, J., Neitz, M., Neitz, J. Functional Magnetic Resonance Imaging of Neural Activity in Rat CNS in Response to Chromatic Stimuli. *Optical Society of America Fall Vision Meeting*. Berkley, California
- (2007) M. C. Mauck, Connor, T. B., Kinsella, J., Mancuso, K. Techniques and Instrumentation for Small Volume Subretinal Injection. *American Academy of Ophthalmology Annual Meeting*. New Orleans, Louisiana.
- (2008) M. C. Mauck, Salzwedel, A, Kuchenbecker, J., Pawela, C. P., Hudetz, A., Hyde, J. S., Neitz, J., Neitz, M. Probing Neural Circuitry for Blue-Yellow Color Vision Using High Resolution Functional Magnetic Resonance Imaging. *Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting* Ft Lauderdale, Florida.
- (2010) M. C. Mauck, DeGueme, A. M., Taintor, A. R., Jha, P. Cross-sensitivity of allopurinol and febuxostat induced Drug Rash with Eosinophilia and Systemic Symptoms (DRESS) syndrome. *American College of Physicians Annual Meeting*. Toronto, Canada.
- (2011) J. A. Kuchenbecker, Greenwald, S. H., Mancuso, K., Mauck, M. C., Neitz M., Neitz J. ON-OFF Electroretinogram Using S-Cone Isolating Stimuli Elucidates S-

Cone Circuitry in the Retina. *Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting*. Ft Lauderdale, Florida.

- (2012) M. C. Mauck, Lemm J., Peterson-Layne, C. Anesthetic Management of Parturient with Dural Ectasia due to Marfan's Syndrome: successful CSE. *Duke Anesthesiology Celebration of Research*. Durham, North Carolina. **Case Report: First Place Award.** Also presented at: *ASA Annual Meeting*. Washington, D.C.
- (2013) M. C. Mauck, Hopkins, T., Hsia, J., Huh, B. Technique for Repositioning Occipital Nerve Stimulator Leads after Migration: A Challenging Case Report. *Duke Anesthesiology Celebration of Research and ASA Annual Meeting*. San Francisco, CA.

Invited Lecture

- (2008) M. C. Mauck; J. Neitz. Using gene therapy to probe the neural circuit for color vision. *OSA Fall Vision Meeting*. Rochester, New York