

CURRICULUM VITAE

Date: July 15, 2020

Name: **Diego G. Espinosa-Heidmann, M.D.**

Profession: **Ophthalmologist, Vitreoretinal Specialist**

Academic Practice: **Department of Ophthalmology at the Medical College of Georgia, Augusta University**

American Board of Ophthalmology Certification: October 27, 2013

Office Address: 3685 Wheeler Road, Suite 201
Augusta, GA 30909

Office phone/ Fax: (706) 650-0061/ (706) 650-0064

PROFESSIONAL

08/2020 to present **Vitreoretinal Surgeon for Southeast Retina Center, Augusta, Georgia**

10/2018 to present **Associate Professor of Clinical Ophthalmology, Department of Ophthalmology, Medical College of Georgia, Augusta University, Augusta, GA.**

05/2017 to 09/2018 **Carolina Retina Center Vitreoretinal Specialist Associate, Columbia, SC.**

07/2011 to 04/2017 **Director of the Vitreo-Retinal, Uveitis and Ocular Immunology Services, Department of Ophthalmology, Medical College of Georgia, Augusta University, Augusta, GA**

07/2015 to 04/2017 **Associate Professor of Clinical Ophthalmology, Department of Ophthalmology, Medical College of Georgia, Augusta University, Augusta, GA.**

07/2011 to 06/2015 **Assistant Professor of Clinical Ophthalmology, Department of Ophthalmology, Medical College of Georgia, Georgia Regents University, Augusta, GA.**

07/2003 to 06/2005 **Lecturer, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami School of Medicine, Miami, FL.**

08/1998 to 11/1998 **Comprehensive Ophthalmology (Private Practice), Bogota, Colombia.**

01/1994 to 01/1995

Social Compulsory Year-Instructor, Department of Physiology, University of Cartagena, Cartagena, Colombia.

EDUCATION

07/2010 to 07/2011

Surgical Retina Fellowship, West Virginia Eye Institute, West Virginia University, Morgantown, WV.

07/2009 to 07/2010

Medical Retina Fellowship, Duke Eye Center, Duke University, Durham, NC.

07/2006 to 06/2009

Residency in Ophthalmology, Department of Ophthalmology, Medical College of Georgia, Augusta, GA.

06/2005 to 06/2006

General Surgery Internship, DeWitt Daughtry Family Department of Surgery, Jackson Memorial Hospital, Miami, FL.

07/2000 to 06/2003

Post-Doctoral Research Fellowship in Vitreoretinal Diseases, Department of Ophthalmology, Bascom Palmer Eye Institute, University of Miami School of Medicine, Miami, FL (Mentor: Scott W. Cousins, M.D.).

01/2000 to 06/2000

Pan-American Clinical Research Fellowship, Department of Ophthalmology, Bascom Palmer Eye Institute, Miami, Florida.

12/1998 to 12/1999

Fellowship in Vitreoretinal Surgery, Hospital General de las Fuerzas Armadas (FF.AA.) del Ecuador HG1, Quito, Ecuador (Mentor: Gustavo M. Alvira, M.D.).

08/1996 to 07/1998

Chief Resident, Department of Ophthalmology, Pontificia Universidad Javeriana, Bogota, Colombia.

08/1995 to 07/1998

Residency in Ophthalmology, Pontificia Universidad Javeriana, Bogota, Colombia.

02/1995 to 07/1995

M.D., Private practice and application process for residency.

08/1992 to 12/1993

Transitional Internship, University Hospital of Cartagena, Cartagena, Colombia.

01/1986 to 12/1993

Medicine and Surgery, Universidad de Cartagena, Cartagena, Colombia.

AWARDS/ HONORS

1985

Valedictorian, George Washington School-Southern Association of Colleges and Schools, Cartagena, Colombia.

1993

Salutatorian (2nd of 110), Medicine, University of Cartagena, Cartagena, Colombia.

1993	Best Intern , University Hospital of Cartagena, Cartagena, Colombia.
1993	8th Best Intern of Colombia , Colombian Association of Medical Faculties (ASCOFAME), Bogota, Colombia.
1993	Exchange Medical Student with Honors in Ophthalmology & Anesthesiology, Medical College of Wisconsin, Milwaukee, WI (USA).
1998	Commendation for Excellence in the Field of Ophthalmology , San Ignacio Hospital, Department of Ophthalmology, Pontificia Universidad Javeriana, Bogota, Colombia.
2000	Clinical Research Scholarship: Pan-American Fellowship , Bascom Palmer Eye Institute, Miami, FL (USA)
2002	Best Research Paper - “Medical Breakthroughs” , Bascom Palmer Eye Institute, Miami, FL (USA).
2005	National Interest Waiver: Extraordinary Ability
2008	2nd place - Best Resident Research Presentation at the MCG Ophthalmology Alumni Meeting, Augusta, GA (USA).
2009	Gayton Award - Best Resident Research Presentation at the MCG Ophthalmology Alumni Meeting, Augusta, GA (USA).

SCIENTIFIC AND PROFESSIONAL SOCIETIES

- Member of the Colombian Association of Medical Faculties (**ASCOFAME**)- 1993
- Member of the Colombian Association of Medicine and Surgery with Laser (**SOCOLASER**)- 1996
- Member of the Colombian Ophthalmology Society (**SCO**)- 1998
- Member of the Association for Research in Vision and Ophthalmology (**ARVO**)- 11/2000
- Member of Bascom Palmer Eye Institute (**BPEI**) Exalumni Association- 06/2003
- Fellow of the American Academy of Ophthalmology (**AAO**)- 07/2003
- Member of the American Society of Cataract and Refractive Surgery (**ASCRS**)- 06/2009
- Member of the Florida Society of Ophthalmology (**FSO**)
- Member of the Georgia Society of Ophthalmology (**GSO**)- 06/2009
- Member of GRU/MCG Exalumni Association- 07/2009
- Member of Duke Eye Center Exalumni Association- 07/2010
- Member of West Virginia University Exalumni Association- 07/2011
- Member of the Medical Association of Georgia (**MAG**)- 01/2012
- Member of the American Society of Retina Specialists (**ASRS**)- 02/2014
- Member of the Retina Society- 03/2015
- Member of the American Medical Association (**AMA**)- 2015

PUBLICATIONS IN NON-REFEREED JOURNALS

1. Escallon C, Garcia E, **Espinosa D**, et. al. Poliomyelitis: An actual threat? *Acta Medica de Cartagena* 1993;4(1):4-8.
2. Jimenez G, **Espinosa D**. Inferior conjunctival blepharoplasty with CO2 laser: Description of a surgical technique. *Universitas Medicas* 1996;37(3):148-150.

3. Latorre M, Segura M, Bermudez M, Duarte J, Robayo A, **Espinosa D**. Standardization protocol of conjunctival biopsy technique for the study of patients with Sjogren Syndrome at the Pontificia Universidad Javeriana. *Universitas Medicas* 1998;39(2):46-52.
4. Alvira G, Flor P, **Espinosa D**. Pars plana vitrectomy in the Military Hospital F.F.A.A. HG1 in Quito, Ecuador. *Vision* 1999; 13(2):10-15.

PUBLICATIONS IN REFEREED JOURNALS

5. **Espinosa-Heidmann DG**, Suner IJ, Hernandez EP, Frazier WD, Csaky KG, Cousins SW. Age as an independent risk factor for severity of experimental choroidal neovascularization. *Invest. Ophthalmol. Vis. Sci.* 2002 May;43(5):1567-1573.
6. Cousins SW, **Espinosa-Heidmann DG**, Alexandridou A, Sall J, Dubovy S, Csaky K. The role of aging, high fat diet and blue light exposure in an experimental mouse model for basal laminar deposit formation. *Exp. Eye Res.* 2002 Apr;75(5):543-553.
7. Cousins SW, Marin-Castano ME*, **Espinosa-Heidmann DG***, Alexandridou A, Striker L, Elliot S. Female gender, estrogen loss and subRPE deposit formation in aged mice. *Invest. Ophthalmol. Vis. Sci.* 2003 Mar;44(3):1221-1229. ***Shared 2nd authorship**
8. **Espinosa-Heidmann DG**, Suner IJ, Hernandez EP, Monroy D, Csaky KG, Cousins SW. Macrophage depletion diminishes lesion size and severity in experimental choroidal neovascularization (CNV). *Invest. Ophthalmol. Vis. Sci.* 2003 Aug;44(8):3585-3592.
9. **Espinosa-Heidmann DG**, Caicedo A, Hernandez EP, Cousins SW. Bone marrow-derived progenitor cells contribute to experimental choroidal neovascularization. *Invest. Ophthalmol. Vis. Sci.* 2003 Nov;44(11):4914-4919.
10. Suner IJ*, **Espinosa-Heidmann DG***, Marin-Castano ME, Hernandez EP, Pereira-Simon S, Cousins SW. Nicotine increases size and severity of experimental choroidal neovascularization. *Invest. Ophthalmol. Vis. Sci.*, 2004 Jan; 45(1):311-317. ***Shared 1st authorship**
11. **Espinosa-Heidmann DG**, Hernandez EP, Csaky KG, Cousins SW. Basal laminar deposit formation in APO B100 transgenic mice: Complex interactions between dietary fat, blue light, and vitamin E. *Invest. Ophthalmol. Vis. Sci.*, 2004 Jan; 45(1):260-266.
12. Cousins SW, **Espinosa-Heidmann DG**, Csaky KG. Monocyte activation in patients with AMD: A biomarker for choroidal neovascularization? *Archives of Ophthalmology*, 2004 Jul;122(7):1013-1018.
13. Miller DM, **Espinosa-Heidmann DG**, Legra J, Dubovy S, Suner I, Dix RD, Sedmak DD, Cousins SW. The association of prior cytomegalovirus infection with neovascular Age-related Macular Degeneration. *Am. J. Ophthalmol.*, 2004 Sep; 138(3):323-328.

14. **Espinosa-Heidmann DG**, Marin-Castano ME, Pereira-Simon S, Hernandez EP, Elliot SJ, Cousins SW. Gender and estrogen supplementation increases severity of experimental choroidal neovascularization. *Exp. Eye Res.*, 2005 Mar;80(3):413-423.
15. **Espinosa-Heidmann DG**, Reinoso MA, Piña Y, Csaky KG, Caicedo A, Cousins SW. Quantitative enumeration of vascular smooth muscle cells and endothelial cells derived from bone marrow precursors in experimental choroidal neovascularization. *Exp. Eye Res.*, 2005 Mar;80(3):369-378.
16. Caicedo A*, **Espinosa-Heidmann DG***, Hamasaki D, Piña Y, Cousins SW. Photoreceptor synapses degenerate early in choroidal neovascularization. *J Comp. Neurol.*, 2005 Mar;483(3):263-277.
***Shared 1st authorship**
17. Caicedo A, **Espinosa-Heidmann DG**, Piña Y, Hernandez EP, Cousins SW. Blood-derived macrophages infiltrate the retina and activate Muller glial cells under choroidal neovascularization. *Exp. Eye Res.*, 2005 Jul;81(1):38-47.
18. **Espinosa-Heidmann DG**, Suner IJ, Catanuto P, Hernandez EP, Marin-Castano ME, Cousins SW. Cigarette smoke-related oxidants and the development of sub-RPE deposits in an experimental animal model of dry AMD. *Invest. Ophthalmol. Vis. Sci.*, 2006 Feb;42(2):729-737.
19. Marin-Castano ME, Striker GE, Alcazar O, Catanuto P, **Espinosa-Heidmann DG**, Cousins SW. Repetitive nonlethal oxidant injury to retinal pigment epithelium decreased extracellular matrix turnover in vitro and induced sub-RPE deposits in vivo. *Invest. Ophthalmol. Vis. Sci.*, 2006 Sep;47(9):4098-4112.
20. Elliot SJ, Karl M, Berho M, Xia X, Pereira-Simon S, **Espinosa-Heidmann DG**, Striker GE. Smoking induces glomerulosclerosis in aging estrogen-deficient mice through cross-talk between TGF-beta 1 and IGF-I signaling pathways. *J. Am. Soc. Nephrol.*, 2006 Dec;17(12):3315-3324.
21. Bearelyly S, **Espinosa-Heidmann DG**, Cousins SW. The role of dynamic indocyanine green angiography in the diagnosis and treatment of retinal angiomatous proliferation. *Br J Ophthalmol.* 2008 Feb;92(2):191-6.
22. Elliot S, Catanuto P, Fernandez P, **Espinosa-Heidmann DG**, Karl M, Korach K, Cousins SW. Subtype specific estrogen receptor action protects against changes in MMP-2 activation in mouse retinal pigmented epithelial cells. *Exp Eye Res.* 2008 Apr;86(4):653-60.
23. Cousins SW, Bearelyly S, Reinoso MA, Chi SL, **Espinosa-Heidmann DG**. Dynamic indocyanine green angiography-guided focal thermal laser treatment of fibrotic choroidal neovascularization. *Graefes Arch Clin Exp Ophthalmol.* 2008 Dec;46(12):1677-83.
24. Catanuto P, **Espinosa-Heidmann DG**, Pereira-Simon S, Sanchez P, Salas, P, Hernandez E, Cousins SW, Elliot SJ. Mouse retinal pigment epithelial cell lines retain their phenotypic characteristics after transfection with human papilloma Virus: A new tool to further the study of RPE biology. *Exp Eye Res.* 2009 Jan;88(1):99-105.

25. Elliot SJ, Catanuto P, **Espinosa-Heidmann DG**, Fernandez P, Hernandez E, Saloupis P, Korach K, Karl M, and Cousins SW. Estrogen receptor β protects against *in vivo* injury in RPE cells. *Exp Eye Res.* 2010 Jan;90(1):10-6.
26. **Espinosa-Heidmann DG**, McMillan BD, Lasala PR, Stanley J, Larzo, CR. Candida Dubliensis endophthalmitis: First case in North America. *Int Ophthalmol.* 2012 Feb;32(1):41-45.
27. Kresch Z, **Espinosa-Heidmann DG**, Harper T, Miller GJ. Disseminated cryptococcus with ocular cryptococcoma in an HIV negative patient. *Int Ophthalmol.* 2012 Jun;32(3):281-4.
28. Cousins SW*, **Espinosa-Heidmann DG***, Miller DM, Pereira-Simon S, Hernandez EP, Chien H, Meier-Jewett C, Dix RD. Macrophage activation associated with chronic murine cytomegalovirus infection causes more severe experimental choroidal neovascularization. *PLoS Pathog.* 2012 Apr;8(4):e1002671. ***Shared 1st authorship**
29. **Espinosa-Heidmann DG***, Malek G*, Mettu PS, Caicedo A, Saloupis P, Gach S, Dunnon AK, Hu P, Spiga MG, Cousins SW. Bone marrow transplantation transfers age-related susceptibility to neovascular remodeling in murine laser-induced choroidal neovascularization. *Invest. Ophthalmol. Vis. Sci.*, 2013 Nov 13;54(12):7439-49 . ***Shared 1st authorship.**
30. Mysona BA, Matragoon S, Stephens M, Mohamed IN, Farooq A, Bartasis ML, Fouda AY, Shanab AY, **Espinosa-Heidmann DG**, El-Remessy AB. Imbalance of the nerve growth factor and its precursor as a potential biomarker for diabetic retinopathy. *BioMed Research International*, 2015; Volume 2015:571456.
31. Jinxian Xu¹, Xinglou Liu¹, Xinyang Zhang, Brendan Marshall, Zheng Dong, Yutao Liu¹, **Diego G. Espinosa-Heidmann**, Ming Zhang. Ocular cytomegalovirus latency exacerbates the development of choroidal neovascularization. *Journal of Pathology*, 2020; 251: 200-212.
32. Pachiappan Arjunan, Radhika Swaminathan, Jessie Yuan, Mohamed Al-Shabrawey, **Diego G Espinosa-Heidmann**, Julian Nussbaum, Pamela M Martin, Christopher W Cutler. Invasion of Human Retinal Pigment Epithelial Cells by Porphyromonas gingivalis leading to Vacuolar/Cytosolic localization and Autophagy dysfunction In-Vitro. *Scientific Reports*, 2020 May 4;10(1):7468. Doi: 10.1038/s41598-020-64449-8. Published online ahead of print.

BOOKS AND CHAPTERS

1. Cousins SW, Csaky KG, and **Espinosa-Heidmann DG**. Clinical Strategies for Diagnosis and Treatment of AMD: Implications from Research. In: Macular Degeneration. 1st ed. Berlin Heidelberg, Germany: Springer-Verlag; 2005: 167-200.
2. Cousins SW, Marin-Castano ME, Csaky KG, and **Espinosa-Heidmann DG**. Pathogenesis of Early Age-Related Macular Degeneration: A New Hypothesis. In: Focus on Eye Research. 1st ed. New York, NY: Nova Science Publishers, Inc.; 2005: 39-80.

3. **Espinosa-Heidmann DG**. Choroidal Detachment Following Glaucoma Surgery. In: Cataract Surgery in the Glaucoma Patient. 1st ed. New York, NY: Springer; 2009, XII: 119-127.

ABSTRACTS

1. **Espinosa-Heidmann DG**, Hernandez EP, Csaky KG, Cousins SW. Age as an independent risk factor for severity of experimental choroidal neovascularization (CNV). [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2001;42(4):S245. Poster nr 1326.
2. Alexandridou A, Elliot S, **Espinosa-Heidmann DG**, Hernandez EP, Csaky KG, Cousins SW. Gender differences in susceptibility of mice to sub-RPE deposit formation. [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2001;42(4):S223. Poster nr 1200.
3. **Espinosa-Heidmann DG**, Marin ME, Hernandez EP, Csaky KG, Cousins SW. Estrogen depletion decreases matrix metalloproteinase-2 expression and increases subRPE deposit accumulation in mice. [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2002. Poster nr 698.
4. Arango K, **Espinosa-Heidmann DG**, Monroy DC, Hernandez EP, Legra JM, Csaky KG, Cousins SW. Macrophage depletion diminishes lesion severity in experimental choroidal neovascularization. [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2002. Poster nr 1294.
5. Monroy DC, **Espinosa-Heidmann DG**, Legra JM, Hernandez EP, Csaky KG, Cousins SW. The role of estrogen status and lesion severity in experimental choroidal neovascularization. [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2002. Poster nr 1295.
6. Suner IJ, Tafur CM, **Espinosa-Heidmann DG**, Legra JM, Arango K, Hernandez EP, Monroy D, Csaky KG, Cousins SW. Nicotine increases severity of choroidal neovascularization. [ARVO Abstract]. Investig. Ophthalmol. Vis. Sci. 2002. Poster nr 1292.
7. **Espinosa-Heidmann DG**, Caicedo A, Hernandez EP, Csaky K, Cousins SW. Adult bone marrow derived progenitor cells contribute to choroidal neovascularization and modulate severity. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2003; 3936/B639.
8. Caicedo A, **Espinosa-Heidmann DG**, Cousins SW. Glutamate transporters at photoreceptor synapses are downregulated after experimental choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2003; 3935/B638.
9. Cousins SW, **Espinosa-Heidmann DG**, Marin-Castano ME. Smoking-related oxidants and RPE injury in vitro and in vivo. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2003; 1619/B515.
10. Suner IJ, **Espinosa-Heidmann DG**, Tafur CM, Caicedo A, Legra J, Hernandez EP, Csaky KG, Cousins SW. The effects of nicotine on choroidal neovascularization: Characterization of nicotinic receptors in choroid and reduction of choroidal neovascularization via receptor blockage [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2003; 3933/B636.
11. Miller D, Dubovy S, Dix R, Suner IJ, Legra J, **Espinosa-Heidmann DG**, Sedmak D, Cousins SW. Association of cytomegalovirus Infection with neovascular Age-Related Macular Degeneration. 2003 International CMV Congress. May 2003.

12. Suner IJ, **Espinosa-Heidmann DG**, Tafur CM, Hernandez EP, Csaky KG, Csaky KG, Cousins SW. Nicotine increases size and severity of experimental choroidal neovascularization. American Society of Retina Specialists, August 2003 & American Academy of Ophthalmology, November 2003.
13. Caicedo A, **Espinosa-Heidmann DG**, Cousins SW. Photoreceptor synapses are disrupted after experimental choroidal neovascularization. Society for Neuroscience. November 2003.
14. **Espinosa-Heidmann DG**, Caicedo A, Hernandez EP, Pereira-Simon S, Piña Y, Csaky KG, Cousins SW. Aged bone marrow transfers age-related pathology into young recipients in experimental choroidal neovascularization. [ARVO Abstract]. Invest Ophthalmol. Vis. Sci. 2004; 1853/B664.
15. Caicedo A, **Espinosa-Heidmann DG**, Piña Y, Hernandez EP, Cousins SW. Blood-derived macrophages infiltrate the retina and activate Muller glial cells in choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2004; 1791/B602.
16. Reinoso MA, Caicedo A, **Espinosa-Heidmann DG**, Csaky KG, Cousins SW. Blood-derived macrophages and bone marrow-derived progenitor cells contribute to intrachoroidal vascular changes in experimental choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2004; 3386.
17. Miller D, **Espinosa-Heidmann DG**, Pereira-Simon S, Sedmak D, Dix RD, Cousins SW. Persistent cytomegalovirus infection causes more severe experimental choroidal neovascularization in the mouse. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2004; 490/B463.
18. Suñer IJ, **Espinosa-Heidmann DG**, Gregori NZ, Hernandez EP, Cousins SW. Cigarette smoke related oxidants and the development of sub RPE deposits in an experimental mouse model. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2004; 1810/B621.
19. Gregori NZ, Cousins SW, Hernandez EP, Caicedo A, **Espinosa-Heidmann DG**. Upregulation of hypoxia induced genes in experimental branch retinal vein occlusion. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2004; 5227/B551.
20. **Espinosa-Heidmann DG**, Pereira-Simon S, Hernandez EP, Pina Y, Csaky KG, Cousins SW. Vascular precursor cells from aged mice transfer age-related pathology into young recipients. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2005; 1216/Paper presentation.
21. Reinoso MA, **Espinosa-Heidmann DG**, Catanuto P, Marin-Castano ME, Suner IJ, Csaky KG, Cousins SW. Periocular injection of the cigarette smoke-related oxidant hydroquinone (HQ), induces nonlethal RPE bebbing and subRPE deposits in vivo. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2005; 3016/B569.
22. Suner IJ, **Espinosa-Heidmann DG**, Pereira-Simon S, Pina Y, Cousins SW. Cigarette smoke increases severity of experimental choroidal neovascularization: Role of inflammation. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2005; 3507/Paper presentation.
23. Cousins SW, **Espinosa-Heidmann DG**, Pereira-Simon S, Miller DM, Dix RD. Macrophage activation associated with persistent cytomegalovirus infection causes more severe experimental choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2005; 3508/Paper presentation.

24. Cousins SW, Suner IJ, **Espinosa-Heidmann DG**. Bone marrow transplantation from smoke-exposed mice into non-exposed mice transfers increase severity of choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2006; 4172/B701.
25. Suner IJ, **Espinosa-Heidmann DG**, Cousins SW. Cigarette smoke and nicotine both increases recruitment of activated macrophages in early choroidal neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2006; 1531/Paper presentation.
26. Dix R.D., **Espinosa-Heidmann DG**, Pereira-Simon S, Miller DM, Cousins SW. Severe experimental choroidal neovascularization during chronic cytomegalovirus infection is not associated with productive virus infection of the choroid. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2006; 4158/B687.
27. Elliot S, Catanuto P, **Espinosa-Heidmann DG**, Fernandez P, Korach K, Cousins SW. Estrogen receptor B may protect against oxidant injury in RPE cells. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2006; 1383/B656.
28. Gross JD, **Espinosa-Heidmann DG**, Cousins SW. Role of dynamic indocyanine green angiography in visualizing choroidal neovascularization associated with pigment epithelial detachments. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2006; 5702/B796.
29. **Espinosa-Heidmann DG**, Saloupis P, Malek G, Huanh J-L, Cousins SW. Systemic Exposure to Inflammatory Stimuli Increases Severity of Experimental Choroidal Neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2007; 6017/Paper presentation.
30. Catanuto P, **Espinosa-Heidmann DG**, Cousins SW, Elliot S. Immortalization of Mouse Retinal Pigmented Epithelial Cell Lines: A New Tool to Further Age Related Macular Degeneration Research. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2007; 2520/B467.
31. Elliot S, Catanuto P, **Espinosa-Heidmann DG**, Fernandez P, Korach K, Cousins SW. Estrogen Receptor β Is Protective In Vivo and In Vitro Against Oxidant Induced ECM Dysregulation. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2007; 3030/B386.
32. **Espinosa-Heidmann DG**, G. Malek G, P. Saloupis P, Wu F, Csaky KG, Cousins SW. The Effect of Sistic Exposure to Inflammatory Stimuli on Neurosensory Retinal Degeneration Associated with Experimental Choroidal Neovascularization (CNV). [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2008; 5162/A188.
33. **Espinosa-Heidmann DG**, Malek G, Saloupis P, Cousins SW. Transplantation of Bone Marrow From Young Donors into Old Recipients Prevents Age-Related Increased Severity of Experimental CNV. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2009; 5656/D899.
34. **Espinosa-Heidmann DG**, Malek G, Wu K, Saloupis P, Cousins SW. Osteopontin Regulation of Choroidal Neovascular Fibrosis Through Macrophages. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2010; 4546.
35. Stanley Jonathan, Sarwari AR, Lasala PR, Larzo C, **Espinosa-Heidmann DG**, Ergas H, McMillan B. Candida Endophthalmitis in an Immunocompetent Patient. WV Chapter American College of Physicians Annual Scientific Meeting, 2010; Roanoke, West Virginia. 3rd place Abstract Poster Presentation.

36. Ong SS, Malek G, **Espinosa-Heidmann DG**, Wu K, Saloupis P, Spiga MG, Cousins SW. Osteopontin Drives Fibrosis in a Mouse Model of Neovascular Age Related Macular Degeneration. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2011; 942/A134.
37. Hollar MW, **Espinosa-Heidmann DG**, Saloupis P, Dunnon A, Hu P, Pridgen T, Koreen L, Crowell S, Cousins SW. Dietary Omega-3 Fatty Acids and Inflammation in a Mouse Model of Laser Induced Choroidal Neovascularization. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2011; 945/A137.
38. Koreen L, Wielgus AR, Spiga G, Saloupis P, **Espinosa-Heidmann DG**, Chan M, Sina Farsiu S, Cousins SW. Acute Periocular Exposure of Mouse Eyes to Hydroquinone Induces RPE Cytoskeletal Changes, F-actin Aggregates, and Early Deposit Formation. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2012.
39. Ong SS, Malek G, **Espinosa-Heidmann DG**, Wu K, Hu P, Saloupis P, Spiga G, Cousins SW. Osteopontin Drives Fibrotic Choroidal Neovascularization (CNV) via the Activation and Recruitment of Mesenchymal Cells. [ARVO Abstract]. Invest. Ophthalmol. Vis. Sci. 2012.

MEETINGS, COURSES, & CME CREDITS

1. **2011 Subspecialty Day: Retina**, American Academy of Ophthalmology, Orlando, FL, 10/22/11- 14.00 credits
2. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 8/8/11 through 12/31/11- 15.00 credits
3. **San Antonio Ophthalmology Course**, San Antonio, TX, 3/5/12- 39.00 credits
4. **17th Advanced Vitreous Surgery Course**, Duke University School of Medicine, Durham, NC, 5/3/12- 12.00 credits
5. **2012 Subspecialty Day: Retina**, American Academy of Ophthalmology, Chicago, IL, 11/20/12- 14.00 credits
6. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/23/12 through 12/31/12- 35.25 credits
7. **1st Annual Vit-Buckle Society (VBS) Meeting**, William Beaumont Hospital, Miami, FL, 4/11/13- 10.25 credits
8. **Ophthalmology Board Review Course**, The Osler Institute, Chicago, IL, 6/15/13- 30.00 credits
9. **2013 Subspecialty Day: Retina**, American Academy of Ophthalmology, New Orleans, LA, 11/15/13- 14.00 credits
10. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/7/13 through 12/31/14- 28.00 credits
11. **2nd Annual Vit-Buckle Society (VBS) Meeting**, William Beaumont Hospital, Las Vegas, NV, 3/13/14- 11.50 credits

12. **18th Advanced Vitreous Surgery Course**, Duke University School of Medicine, Durham, NC, 3/28/14- 12.50 credits
13. **American Association of Retina Specialists (AMRS) 32nd Annual Meeting**, AMRS, San Diego, CA, 8/9/14- 39.25 credits
14. **2014 Subspecialty Day: Retina**, American Academy of Ophthalmology, Chicago, IL, 10/18/14- 14.00 credits
15. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/27/14 through 12/31/14- 40.00 credits
16. **3rd Annual Vit-Buckle Society (VBS) Meeting**, William Beaumont Hospital, Miami, FL, 3/20/15- 10.50 credits
17. **The Retina Society 48th Annual Scientific Meeting**, Paris, France, 10/7/15- 17.75 credits
18. **2015 Subspecialty Day: Retina**, American Academy of Ophthalmology, Las Vegas, NV, 11/13/15- 14.00 credits
19. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/26/15 through 12/31/15- 44.50 credits
20. **4th Annual Vit-Buckle Society (VBS) Meeting**, William Beaumont Hospital, Miami, FL, 3/18/16- 11.25 credits
21. **The Retina Society 49th Annual Scientific Meeting**, William Beaumont Hospital, San Diego, CA, 9/14/16- 21.00 credits
22. **2016 Subspecialty Day: Retina**, American Academy of Ophthalmology, Chicago, IL, 10/14/16- 14 credits
23. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/4/16 through 12/31/16- 40.25 credits
24. **Professional Development CME Course for Physicians: Program for Distressed Physicians**, Vanderbilt University, Nashville, TN, 3/15/17- 25.75 credits
25. **Preventing Medical Errors for Physicians**, Accreditation Council for Continuing Medical Education (ACCME), Online Course, 10/22/17- 2.00 credits
26. **Florida HIV/AIDS review for Physicians**, Accreditation Council for Continuing Medical Education (ACCME), Online Course, 10/24/17- 2.00 credits
27. **2017 Subspecialty Day: Retina**, American Academy of Ophthalmology, New Orleans, LA, 11/10/17- 14.00 credits
28. **2017 ABO Quarterly Questions Enduring Material**, American Academy of Ophthalmology, Online Course, 12/14/17- 7.50 credits

29. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/9/17 through 4/31/17- 9.00 credits
30. **6th Annual Vit-Buckle Society (VBS) Meeting**, William Beaumont Hospital, Miami, FL; 3/22/18-12 credits
31. **2018 Subspecialty Day: Retina**, American Academy of Ophthalmology, Chicago, IL; 10/26/18-14.00 credits
32. **2018 ABO Quarterly Questions Enduring Material**, American Academy of Ophthalmology, Online Course, 12/10/18- 7.50 credits
33. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 10/1/18 through 12/31/18-12.00 credits
34. **Guidelines for Prescribing Controlled Substances & Addressing Opioid Abuse**, Accreditation Council for Continuing Medical Education (ACCME), Online Course, 1/29/19- 2.00 credits
35. **2019 Subspecialty Day: Retina**, American Academy of Ophthalmology, Chicago, IL; 10/12/19-14.00 credits
36. **Preventing Medical Errors for Physicians**, Accreditation Council for Continuing Medical Education (ACCME), Online Course, 11/16/19- 2.00 credits
37. **2019 ABO Quarterly Questions Enduring Material**, American Academy of Ophthalmology, Online Course, 11/24/19- 7.50 credits
38. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/7/19 through 12/31/19-38.25 credits
39. **Straight from the Cutter's Mouth Podcast (2020): Ep. 219: COVID-19 Update**, American Academy of Ophthalmology, Online Course, 4/10/20- 0.50 credits
40. **Straight from the Cutter's Mouth Podcast (2020): Ep. 221: COVID-19: Adjusting to Being a Front-Line Provider**, American Academy of Ophthalmology, Online Course, 4/10/20- 0.50 credits
41. **2020 ABO Quarterly Questions Enduring Material**, American Academy of Ophthalmology, Online Course, 05/05/20- 8.00 credits
42. **Augusta University CE Transcript**, Augusta University, Augusta, GA; 1/01/20 through 6/03/20-7.00 credits
CME credits for 2020: 16.00

OPHTHALMOLOGY RESIDENCY/ FELLOWSHIP EDUCATION

1. **Vitreous, Retina & Uveitis Training for the Ophthalmology Residency Program**, Department of Ophthalmology, Medical College of Georgia, Augusta University, August 2011 to April 2017- 18 Residents in Ophthalmology

2. **Medical Retina Fellowship Director**, Department of Ophthalmology, Medical College of Georgia, Augusta University, July 2015 to June 2016- 1 Fellow in Medical Retina

3. **Imaging Director for Fluorescein Angiography and OCT Training**, Department of Ophthalmology, Medical College of Georgia, Augusta University from August 2011 to April 2017- Residents and Medical Students

4. **Ophthalmic Ultrasound Training**, Department of Ophthalmology, Medical College of Georgia, Augusta University, 2019 - Residents and Ophthalmic Technicians

5. **Introduction to retina structure and function, retinal examination, and common retinal findings & disorders**, Department of Ophthalmology, Medical College of Georgia, Augusta University, 2019- Medical Students, PhD Students, Residents and Ophthalmic Technicians

EDITORIAL POSITIONS

Independently solicited peer reviewer for the journals of Investigative Ophthalmology & Visual Science and Archives of Ophthalmology. I have also contributed as a non-independent peer reviewer for Proc Natl Acad Sci U.S.A., Invest Ophthalmol Vis Sci., Arch Ophthalmol., and FASEB J.

FUNDED RESEARCH PERFORMED:

1. Inflammation, Muller Cells, and Visual Dysfunction in CNV
1 R01 NEI/NIH.
Role: Co-Investigator
PI: Alejandro Caicedo, Ph.D.
2. Immune Responses in Macular Degeneration II
1 R01 EY 13318 NEI/NIH Renewal
Role: Co-Investigator
PI: Scott W. Cousins, M.D. 04/01/2005 – 03/31/2010
3. Smoking-Related Oxidants, Hypertension, and Dry Macular Degeneration
1 R01 EY 015249 NEI/NIH
Role: Collaborator
PI: Maria E. Marin-Castaño, M.D., Ph.D. 12/31/2004 – 11/30/2009
4. Immune Responses in Macular Degeneration I
1 R01 EY 13318 NEI/NIH
Role: Co-Investigator
PI: Scott W. Cousins, M.D. 02/01/2001 – 01/31/2005
5. Aging and Vasculogenesis in Macular Degeneration
1 R03 EY 15292 NEI/NIH
Role: Co-Investigator
PI: Scott W. Cousins, M.D. 05/01/2004 – 06/30/2007

- | | |
|--|--------------------------------|
| <p>6. Inflammation, Smoking, and Blindness from Ocular Neovascularization
Flight Attendant Medical Research Institute (FAMRI)
Role: Co-Investigator
PI: Scott W. Cousins, M.D.</p> | <p>07/01/2004 – 06/30/2006</p> |
| <p>7. Prevention of Experimental Choroidal Neovascularization using Locally Administered Drugs Provided by REPLICor Inc.
Role: Co-Investigator
PI: Scott W. Cousins, M.D.</p> | <p>09/15/2004 – 03/15/2005</p> |
| <p>8. Novartis Pharma AG Study Using a Subcutaneous Administered Drug for the Prevention of Choroidal Neovascularization (CNV)
Role: Co-Investigator
PI: Scott W. Cousins, M.D.</p> | <p>07/30/2004 – 05/31/2005</p> |
| <p>9. Novartis Pharma AG Study Using an Orally Administered Drug for the Prevention of Choroidal Neovascularization (CNV)
Role: Co-Investigator
PI: Scott W. Cousins, M.D.</p> | <p>07/01/2003 – 09/30/2004</p> |

FUNDED RESEARCH ONGOING:

- | | |
|--|-------------------|
| <p>10. Randomized, Controlled, Multi-Center Study to Assess The Efficacy, Safety, and Tolerability of Intravitreal Aflibercept Compared to Laser Photocoagulation in Patients with Retinopathy of Prematurity
Short Title: Butterfleye
Sponsor: Regeneron Pharmaceuticals, Inc.
Role: Principal Investigator
Institution: Augusta University
Department: MCG Ophthalmology</p> | <p>03/01/2020</p> |
| <p>11. Role of ocular cytomegalovirus latency in the age-related macular degeneration
R01 EY031323-01
Role: Co-Investigator
PI: Ming Zhang, PhD</p> | <p>04/01/2020</p> |
| <p>12. A 96-week, two arm, randomized, single-masked, multicenter, Phase III study assessing the efficacy and safety of brolocizumab 6 mg compared to panretinal photocoagulation laser in patients with Proliferative diabetic retinopathy
Clinical Trial Protocol: CRTH258D2301
Sponsor: Novartis Research and Development
Role: Principal Investigator</p> | <p>09/21/2020</p> |

Institution: Augusta University
Department: MCG Ophthalmology

13. AMD and Oral Dysbiosis

R01 EY030954-01A1

Role: Co-Investigator

PI: Pachiappan Arjunan, PhD

14. Pharmacological and Metabolic impact of Bile Acids in
Complications of Prematurity

NIH-NEI : PA-20-184 (Parent R01 Basic Experimental Studies with
Humans Required)

Role: Co-Investigator

PI: Menaka Thounaojam, PhD

Diego G. Espinosa-Heidmann, M.D.