**Charles A. Easley, Ph.D.**

Department of Environmental Health Science

University of Georgia College of Public Health

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***Education***

2008 Virginia Commonwealth University, Richmond, Virginia Ph.D., Biochemistry

2005 Virginia Commonwealth University, Richmond, Virginia M.S., Biology

2002 College of William and Mary, Williamsburg, Virginia B.S., Biology

***Positions***

2016-present Assistant Professor, Tenure Track, Department of Environmental Health Science,

 University of Georgia College of Public Health, Athens, GA

2015-2016 Assistant Professor, Research Track, Department of Cell Biology

 Emory University School of Medicine, Atlanta, GA

2012-2015 Instructor, Department of Cell Biology

 Emory University School of Medicine, Atlanta, GA

2012-2015 Faculty Supervisor, Laboratory of Translational Cell Biology

Emory University School of Medicine, Atlanta, GA

***Research Training***

2008-2012 Postdoctoral Fellow, Magee Womens Research Institute, University of Pittsburgh

 Pittsburgh, PA, with Prof. Gerald Schatten

2004-2008 Graduate Student, Virginia Commonwealth University

 Richmond, VA, with Prof. Robert Tombes

***Awards and Fellowships***

2013 Cell Press Cell Reports Best of 2012, paper of the year

2011 L50 NIH Educational Loan Repayment Program in Contraception and Infertility (Easley, C. A.) Utilizing Induced Pluripotent Stem Cells to Restore Fertility in Sterile Primates: A Model for Re-establishing Male Fertility Following Rigorous Oncological Treatment (renewed in 2013 and in 2015)

2010 Magee Womens Research Institute and Foundation Postdoctoral Fellowship

2007 Phi Kappa Phi Honor Society

***Research Grants as Principal Investigator***

2016 NIH/NIEHS R01 (PI: Easley) 07/2017-06/2022

Effects of Flame Retardant Exposure on Sperm and Future Generations (In submission)

2016 (Active) Bill and Melinda Gates Foundation GCE (PI: Easley) 11/2016-05/2018

Developing a novel in vitro screening model to assess male contraceptives

2015 (Active) NIH/OD R21 (MPI: Easley and Chan) 04/2015-03/2017

“Using Non-human Primate Pluripotent Stem Cells to Treat Male-factor Infertility”

2015 (Active) NIH/NIEHS K22 (PI: Easley) 05/2015-04/2018

Transition to Independent Health Research Career Development Award (K22): Assessing Reproductive Toxicity of Various Environmental Toxicants with a Novel In Vitro Spermatogenesis Model

2015 Emory University Research Committee Grant (PI: Easley) 05/2015-04/2016

Effects of Flame Retardant Exposure on Human Spermatogenesis Using a Novel in vitro Model (ACTSI/URC) (completed)

***Research Grants as Contributor***

2014 NIH/NINDS R21 (PI: Faundez) 07/2014-06/2016

Genetic Analysis of Copper Toxicity Mechanisms in iPSC-derived Human Neurons

2014 NIH/NICHD U54 (PI: Richter, Project PI: Bassell) 07/2014-06/2019

U54 Center Grant: Rescuing the Fragile X Syndrome by Resetting Translational Homeostasis

***Formal Teaching:***

1. **NIH-sponsored Special Topics Courses**
* Faculty Member- Frontiers in Aging and Regeneration Research, Xavier University, New Orleans LA (May 2013, 2016), Morehouse University School of Medicine (May 2014), Marine Biological Labs, Woods Hole, MA (May 2015)
* Faculty Member- REMEDY, Morehouse University School of Medicine (June 2014)
* Faculty Member - Frontiers in Stem Cells and Cancer, Howard University, Washington DC (March 2011, May 2012) and Ponce School of Medicine and Health Sciences, Puerto Rico (February 2013, February 2015)
* Faculty Member - Frontiers in Embryonic Stem Cells, Amman, Jordan (April 2011)
* Faculty Member - Frontiers in Embryonic Stem Cells, Tel Aviv University, Israel (July 2010)
* Faculty Member - Frontiers in Stem Cells and Regeneration, Marine Biological Labs, Woods Hole, MA (October 2009-present)
1. **Graduate Program**
* Human Toxicology, Emory University Rollins School of Public Health, graduate students- 1 lecture on Reproductive and Developmental Toxicology (Fall 2014 and Fall 2015)
* Foundations of Medicine, ETC, Emory University School of Medicine, medical students- 1 lecture on Pluripotent Stem Cells (Fall 2013-Fall 2015)
* IBS 556: Basic Biological and Biomedical Sciences II, Emory University School of Medicine, graduate students- 1 lecture on Stem Cells (Spring 2013-Spring 2015)
* BIO 675: Physiology of the Cell for Biology/Biochemistry, Virginia Commonwealth University, graduate students- 4 lectures on Focal Adhesions and Rho/Rac signaling for Cell Motility (Spring 2007)
* BIOC 501/523: Biochemistry for Dentistry/Pharmacy School, Virginia Commonwealth University- 2 lectures on Oxidative Phosphorylation (Fall 2006/Fall 2007)
1. **Undergraduate Program**
* BIOL1215: Human Anatomy and Physiology Lab, Robert Morris University: 14 lab lectures and lab sessions (Spring 2012).
* BIOL 212: Cell and Molecular Biology, Duquesne University: 13 lectures in an undergraduate introductory cell biology course (Spring 2011)
* BIO 300: Biotechniques, Virginia Commonwealth University- Lab Instructor and 1 lecture on protein separation (Spring 2005)
* BIO 152: Introduction to Biology for Life Sciences Majors Lab, Virginia Commonwealth University- Lab Instructor (Summer 2004- Fall 2004)
* BIO 101: Introduction to Biology for Non-majors Lab, Virginia Commonwealth University- Lab Instructor (Spring 2004- Summer 2004)
1. **Other**
* High School Biology, Chemistry, and Anatomy: (August 2002- August 2003)
* Upward Bound Program Science Instructor: (July 2003, summer session)

***Mentoring***

2015- Alyse Steves, Emory University Genetics and Molecular Biology Ph.D. Program

 Co-mentor, Ph.D. Thesis

2015-2016 Danielle Clarkson-Townsend, Emory University Rollins School of Public Health

 M.P.H Program, Co-mentor

2016 Krista Symosko, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2016 Kristen Fowler, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2016 Paige Estave, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2015 Shannon K. Thompson, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2014 Chelsea Rickman, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2014 Amber Moser, Intern, Intern, Frontiers in Aging and Regeneration Research

 NIH Fellowship Training Course, Mentor

2013-2015 Chao Ji, Emory University Undergraduate, Mentor

***University Service***

2016- present Admissions Committee for Environmental Health Sciences Ph.D. and M.S. Programs

***Previous University Service at Emory University***

* Developed the Laboratory of Translational Cell Biology (LTCB), a collaborative core to promote human induced pluripotent stem cell models for neurological diseases
* Oversaw the day-to-day operations of the LTCB
* Under my leadership, the LTCB developed over 50 new human iPS (induced pluripotent stem cell) lines, helped obtain new funding for investigators just entering the human iPS field, and was co-author on publications
* Served as Faculty Supervisor of the LTCB from August 2012-June 2015
* Served on the Emory University Human Embryonic Stem Cell Research Oversight Committee (Spring 2014-Summer 2016)

***National Service***

2012-present Executive Committee for Public Policy Member, American Society for Cell Biology

2004-present ASCB Capitol Hill Lobbying Efforts with the Congressional Liaison Committee/Joint Steering Committee for Public Policy-educate Congress on behalf of increased funding for NIH and NSF

***Journal Reviewer***

 Nature Communications

 Stem Cell Research

 Cell Reports

 Stem Cell Reports

***Society Memberships***

2012-presentAmerican Society for Reproductive Medicine

2012-present Coalition for Life Sciences Public Policy

2009-present International Society for Stem Cell Research

2004-present American Society for Cell Biology

***Invited Presentations***

2016 University of Massachusetts Boston Department of Biology Seminar Series

2016 Northeastern University Department of Biology Seminar Series

2016 Mercer University Department of Biology Seminar Series

2015 American Society for Cell Biology Panel Discussion on Developing Local Student Advocacy Groups

2015 University of Florida Genetics Institute Seminar Series

2015 University of Georgia Department of Environmental Health Sciences Seminar Series

2015 American Society for Reproductive Medicine Panel Discussion of Stem Cell Therapies for infertility (Session Chair and Lead Presenter)

2015 P01 Program Project Grant: Basic Biology of Human Pluripotent Stem Cells' Scientific Retreat

2015 Wayne State University Department of OB/GYN Seminar Series

2014 Emory University HERCULES Data Club Seminar Series

2014 University of Georgia Regenerative Bioscience Center Seminar Series

2014 Emory University Department of Urology Grand Rounds

2013 Virginia State University STEAM-H Seminar Series

2012 Emory University Department of Neurosurgery Grand Rounds

2011 Magee Womens Research Institute Work-in-Progress Seminar Series

2010 Virginia Commonwealth University Department of Biology Seminar Series

2010 Magee Womens Research Institute Annual Research Day Symposium

2007 Integrative Cell and Molecular Signaling Seminar Series

2006 34th Annual John C. Forbes Research Colloquium sponsored by VCU School of Medicine

2006 Integrative Cell and Molecular Signaling Seminar Series

***Publications***

1. Holler CJ, Taylor G, McEachin ZT, Deng Q, Watkins WJ, Hudson K, **Easley CA**, Hu WT, Hales CM, Rossoll W, Bassell GJ, Kukar T. Trehalose upregulates progranulin expression in human and mouse models of GRN haploinsufficiency: a novel therapeutic lead to treat frontotemporal dementia. Mol Neurodegener. 2016 Jun 24;11(1):46. doi: 10.1186/s13024-016-0114-3. PMID: 27341800
2. **Easley IV CA,** Bradner JM, Moser A, Rickman CA, McEachin ZT, Merritt M, Hansen JM and Caudle WM. Assessing Reproductive Toxicity of Environmental Toxicants with a Novel in vitro Human Spermatogenic Model. Stem Cell Res. 2015 Mar 25;14(3):347-355. doi: 10.1016/j.scr.2015.03.002. PMID: 25863443
3. Gokhale A, Mullin AP, Zlatic SA, **Easley IV CA**, Merritt ME, Raj N, Larimore J, Gordon DE, Peden AA, Sanyal S and Faundez V. NSF Acts Downstream of the Schizophrenia Susceptibility Factor, Dysbindin, to Regulate Synaptic Homeostasis. J Neurosci. 2015 May 13;35(19):7643-53. doi: 10.1523/JNEUROSCI.4724-14.2015. PMID: 25972187
4. **Easley IV CA,** Simerly CR, Schatten GP. [Gamete derivation from embryonic stem cells, induced pluripotent stem cells or somatic cell nuclear transfer-derived embryonic stem cells: state of the art.](http://www.ncbi.nlm.nih.gov/pubmed/25472048) Reprod Fertil Dev. 2014 Dec;27(1):89-92. doi: 10.1071/RD14317. PMID: 25472048
5. Nguyen DC, Hookway TA, Wu Q, Jha R, Preininger MK, Chen X, **Easley CA**, Spearman P, Deshpande SR, Maher K, Wagner MB, McDevitt TC and Xu C.Microscale Generation of Cardiospheres Promotes Robust Enrichment of Cardiomyocytes Derived from Human Pluripotent Stem Cells. Stem Cell Reports. Published online July 3 2014. DOI: http://dx.doi.org/10.1016/j.stemcr.2014.06.002
6. Sherman SL, Curnow EC, **Easley CA**, Jin P, Hukema RK, Tejada MI, Willemsen R, Usdin K. Use of model systems to understand the etiology of fragile X-associated primary ovarian insufficiency (FXPOI). J Neurodev Disord. 2014;6(1):26. doi: 10.1186/1866-1955-6-26. Epub 2014 Aug 13. PMID: 25147583. PMCID: PMC4139715
7. **Easley IV CA,** Simerly CR and Schatten GP. Direct Differentiation of Human Pluripotent Stem Cells into Advanced Spermatogenic Cells: In Search of an *in vitro* System to Model Male Factor Infertility. Springer Publication Proceedings for Virginia State University STEAM-H. Accepted Feb. 2014
8. **Easley IV CA,** Latov DR, Simerly CR and Schatten GP. Adult Somatic Cells to the Rescue: Nuclear Reprogramming and the Dispensability of Gonadal Germ Cells. Invited Review. Fertility and Sterility. Fertil Steril. 2014 Jan;101(1):14-9. doi: 10.1016/j.fertnstert.2013.11.025. PMID: 24382340
9. **Easley IV CA,** Simerly CR, Schatten G. Stem Cell Therapeutic Possibilities: Future Therapeutic Options for Male-factor and Female-factor Infertility? Reprod Biomed Online. 2013 Mar 26. doi:pii: S1472-6483(13)00129-6.10.1016/j.rbmo.2013.03.003. [Epub ahead of print] PMID: 23664220
10. **Easley IV CA,** Phillips BT, Wu G, Schatten GP, and Simerly CR. Clinical Implications of Human Spermatogenesis Initiation *In Vitro*. Invited Review. Oct. 2012. Journal of Medical Sciences.
11. **Easley IV CA**, Phillips BT, McGuire, MM, Barringer JM, Valli H, Hermann BP, Simerly CR, Miki T, Orwig KE, and Schatten GP. Direct Differentiation of Human Pluripotent Stem Cells into Haploid Spermatogenic Cells. Online, Aug 2012, print edition Sept 2012. Cell Reports.
12. **Easley IV CA\*,** Miki T\*, Castro CA, Ozolek JA, Minervini CF, Ben-Yehudah A and Schatten GP. Human Amniotic Epithelial Cells are Reprogrammed More Efficiently by Induced Pluripotency than Adult Fibroblasts. Cellular Reprogramming. 2012 Jun;14(3): 193-203.
13. Shweiki D, Ben-Yehudah A, Redinger C, **Easley IV C,** Doron S, and Schatten G. Sexually Dimorphic Gene Expression in Non-human Primate ESCs. Biochemical and Biophysical Research Communications. 2011 Oct 28;414(3) 631-634.
14. Varum S, Rodrigues A, Moura M, Momcilovic O, **Easley C**, Ramalho-Santos J, Van Houten B and Schatten G. Energetic Metabolism of Human Pluripoten Stem Cells and Their Differentiated Counterparts. PLoS ONE. 2011:6(6): e20914.
15. Momcilovic O, Knoblach L, Fornsaglio J, Varum S, **Easley C,** Schatten J.DNA Damage Responses in Human Induced Pluripotent Stem Cells and Embryonic Stem Cells. PLoS One 2010 Oct 15:5(10):e13410
16. Ben-Yehudah A, **Easley IV CA**,Hermann B, Castro C, Simerly C, Orwig K, Mitalopov S, Schatten G. System Biology Discoveries Using Non-Human Primate Pluripotent Stem and Germ Cells: Novel Gene and Genomic Imprinting Interactions As Well As Unique Expression Patterns. Stem Cell Research and Therapy 2010 Aug 5;1(3):24.
17. **Easley IV CA**, Ben-Yehudah A, Redinger CJ, Oliver SL, Varum ST, Eisinger V, Carlisle D, Donovan PJ and Schatten GP. mTOR-mediated Activation of p70 S6K Induces Differentiation of Pluripotent Human Embryonic Stem Cells. Cellular Reprogramming 2010 12;3.
18. Rothschild SC, **Easley CA**, Francescatto L, Lister JA, Garrity DM and Tombes RM. Tbx5-mediated β2 CaMK-II Expression is Required for Heart Looping and Pectoral Fin Development. Dev Biol. 2009 Jun 1;330(1):175-84. Epub 2009 Apr 1.
19. **Easley CA**, Brown CM, Horwitz AF and Tombes RM. CaMK-II Promotes Focal Adhesion Turnover and Cell Motility by Inducing Tyrosine Dephosphorylation of FAK and Paxillin. Cell Mot. And Cyto. 2008 Aug; 65(8); 662-674.
20. Seward ME, **Easley CA**, McLeod JJ, Myers AL and Tombes RM. Flightless-I, a Gelsolin Family Member and Transcriptional Regulator, Preferentially Binds Directly to Activated Cytosolic CaMK-II. FEBS Letters. 2008 Jul 23; 582(17); 2489-2495.
21. **Easley CA**, Faison MO, Kirsch TL, Lee JA, Seward ME and Tombes RM. Laminin Activates CaMK-II to Stabilize Nascent Embryonic Axons. Brain Res. 2006 May 30: 1092(1); 59-68.

***Conference/Poster Presentations***

* Society of Toxicology- 2 poster presentations by graduate students (March 2016)
* International Society for Stem Cell Research- 1 poster presentation (June 2014)
* American Society for Cell Biology- 1 poster presentation (December 2013)
* International Society for Stem Cell Research- 2 poster presentations (June 2012)
* American Society for Cell Biology- 2 poster presentations (December 2011)
* International Society for Stem Cell Research- poster presentation (June 2011)
* Magee Womens Research Institute Annual Research Day Symposium- poster presentation (May 2011)
* American Society for Cell Biology- poster presentation (December 2010)
* International Society for Stem Cell Research- 2 poster presentations (June 2010)
* American Society for Cell Biology- poster presentation (December 2009)
* International Society for Stem Cell Research- poster presentation (July 2009)
* Daniel T. Watts Day Symposium hosted by Dept. of Biochemistry and Molecular Biology- poster presentation (October 2007)
* American Society for Cell Biology- poster presentation (December 2007)
* American Society for Cell Biology- poster presentation (December 2006)
* American Society for Cell Biology- poster presentation (December 2005)
* Daniel T. Watts Day Symposium hosted by Dept. of Biochemistry- poster presentation (November 2005)
* American Society for Cell Biology- poster presentation (December 2004)
* Daniel T. Watts Day Symposium hosted by Dept. of Biochemistry- poster presentation (November 2004)
* Massey Cancer Center Retreat- poster presentation (October 2004)