Dylan McCreedy, PhD

Department of Biology
Texas A&M University
College Station, TX 77843

EDUCATION

Ph.D., Biomedical Engineering 2008-2013
Washington University in St. Louis, MO
Advisor: Shelly Sakiyama-Elbert, PhD

B.S., Biomedical Engineering 2004-2008
University of Utah, Salt Lake City, UT
B.S. awarded Cum Laude

POSITIONS/RESEARCH EXPERIENCE

Assistant Professor of Biology, Texas A&M University 2019-

Post-Doctoral Fellow, University of California - San Francisco 02/15-01/19
Laboratory Medicine, Neurological Surgery, & The Gladstone Institutes
Advisors: Cliff A. Lowell, Linda J. Noble-Haeusslein, Steven D. Rosen, and Todd C. McDevitt
Project Title: L-Selectin as a Therapeutic Target for Mitigating Secondary Pathogenesis following Spinal Cord Injury.

Post-Doctoral Fellow, University of Michigan/Northwestern University 07/13-01/15
Department of Biomedical Engineering
Advisor: Lonnie D. Shea
Project Title: A New Semi-Automated Image Analysis Technique to Quantify Axon Regeneration and Myelination in PLG Biomaterial Spinal Cord Bridges

Graduate Research Assistant, Washington University in St. Louis 06/08-07/13
Department of Biomedical Engineering
Advisor: Shelly E. Sakiyama-Elbert
Project Title: Generating High Purity Mouse Embryonic Stem Cell-derived Cell Populations for Transplantation following Spinal Cord Injury

Participant, Spinal Cord Injury Research Training Program July 2009
Ohio State University

Undergraduate Research Assistant, University of Utah 2005-2008
Department of Biomedical Engineering

Advisor: Patrick A. Tresco
Project Title: Comparison of Foreign Body Responses Induced by Cell Transplantation in the Rat Brain

Undergraduate Research Assistant/Design Team Member, University of Utah 2007-2008
Department of Biomedical Engineering
Advisor: Robert Hitchcock
Project Title: Optically Guided Nasoenteric Feeding Device

FUNDING

Current

NIH F32 National Research Service Award - 1F32NS096883-01 2016-2019
Role: Postdoctoral Fellow
$179,982

Previous or declined

Craig H. Neilsen Foundation Postdoctoral Fellowship 2016
Role: Postdoctoral Fellow
Recommended for funding – application withdrawn to accept NIH F32 Award

NSF Graduate Research Fellowship Program Award - DGE-1143954 2010-2013
Role: Graduate Fellow
$123,500

PUBLICATIONS

1. Isaacson D, Shen J, Overland M, Li Y, Sinclair A, Cao M, **McCreedy DA**, Calvert M, McDevitt T, Cunha G, Baskin L. Three-Dimensional Imaging of the Developing Human Fetal Lower Urogenital-Genital Tract: Indifferent Stage to Male and Female Differentiation. *Differentiation*. 103: 14-23. 2018.

2. **McCreedy DA*#,** Lee S*, Sontag CJ, Weinstein P, Olivas A, Martinez AF, Fandel T, Trivedi A, Rosen SD, Noble-Haeusslein LJ. Early Targeting of L-selectin on Leukocytes Promotes Long-term Recovery after Spinal Cord Injury, Implicating Novel Mechanisms of Pathogenesis. *eNeuro.* 5(4): 0101-18, 2018. *Co-first authors. #Corresponding author.

3. Isaacson D, Shen J, **McCreedy DA**, Calvert M, Cunha G, McDevitt TC, and Baskin L. Lightsheet Fluorescence Microscopy of Branching Human Fetal Kidney. *Kidney International*. Feb;93(2): 525, 2018.

4. Isaacson D, Shen J, **McCreedy DA**, Calvert M, Cunha G, and Baskin L. Dichotomous Branching of Human Fetal Lung Demonstrated with Lightsheet Fluorescence Microscopy. *AJRCCM*. 196(11): 1476-1477, 2017.

5. Butts JC, **McCreedy DA**, Mendoza-Camacho N, Hookway TA, Taneja P, Noble-Haeusslein LJ, McDevitt TC. Differentiation of V2a Interneurons from Human Pluripotent Stem Cells. *PNAS*. 114(9): 4969-4974, 2017.

6. Margul DJ, Park J, Boehler RM, Smith DR, Johnson MA, **McCreedy DA,** He T, Ataliwala A, Kukushliev TV, Liang J, Sohrabi A, Goodman AG, Walthers CM, Shea LD, Seidlits SK. Reducing Neuroinflammation by Delivery of IL-10 Encoding Lentivirus from Multiple-Channel Bridges. *Bioeng & Trans Med*. 1(2):136-148, 2016.

7. **McCreedy DA,** Margul DJ, Seidlits SK, Antane JT, Thomas RJ, Sissman GM, Boehler RM, Smith DR, Kukushliev TV, Lamano JB, Vedia BH, He T, Shea LD. Semi-Automated Counting of Axon Regeneration in PLG Spinal Cord Bridges. *J Neurosci Methods*. 263: 15-22, 2016.

8. **McCreedy DA,** Wilems TS, Xu H, Butts JC, Brown CR, Smith AW, Sakiyama-Elbert SE. Survival, Differentiation, and Migration of High-Purity Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons in Fibrin Scaffolds after Sub-Acute Spinal Cord Injury. *Biomaterials Science*. 2: 1672-1682, 2014.

9. **McCreedy DA,** Brown CR, Butts JC, Xu H, Huettner JE, Sakiyama-Elbert SE. A New Method for Generating High Purity Motoneurons from Mouse Embryonic Stem Cells. *Biotechnol Bioeng*. 11(10): 2041-55, 2014.

10. Brown CR, Butts JC, **McCreedy DA**, Sakiyama-Elbert SE. Generation of V2a Interneurons from Mouse Embryonic Stem Cells. *Stem Cells Dev*. 23(15):1765-76, 2014.

11. Smith AW, Hoyne JD, Nguyen PK, **McCreedy DA**, Aly H, Efimov IR, Rentschler S, Elbert DL. Direct Reprogramming of Mouse Fibroblasts to Cardiomyocyte-like Cells using Yamanaka Factors on Engineered Poly(ethylene glycol) (PEG) Hydrogels. *Biomaterials*. 34: 6559-71, 2013.

12. **McCreedy DA**, Sakiyama-Elbert SE. Combination therapies in the CNS: Engineering the environment. *Neuroscience Letters*. 519: 115-121, 2012.

13. **McCreedy DA***, Silverman CR*, Gottlieb DI, Sakiyama-Elbert SE. Transgenic Enrichment of Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons. *Stem Cell Research*. 8: 368-378, 2012. *Co-first authors.

14. Johnson PJ, Tatara A, **McCreedy DA**, Shiu A, Sakiyama-Elbert SE. Tissue-engineered Fibrin Scaffolds Containing Neural Progenitors Enhance Functional Recovery in a Subacute Model of SCI. *Soft Matter*. 6: 5127-5137, 2010.

HONORS & AWARDS

Best Poster Award, Biomedical Engineering Society Annual Meeting 2017
Postdoctoral Career Advancement Award, J. David Gladstone Institutes 2017
Travel Award, National Neurotrauma Society 2017
Honorable Mention, DR Vision 3D Image Contest 2017
Best Mentor, Northwestern-Niles West Mentoring Program (MORE) 2014
Student Travel Achievement Recognition (STAR), Biomedical Engineering Society 2010
Honors Degree, University of Utah 2008
Honors and Research Scholar Distinctions, Utah College of Engineering 2008
Tau Beta Pi Undergraduate and Ariel Barrier Scholarship, University of Utah 2007-2008
Bard Medical and Sweet Candy Company Scholarships, University of Utah 2007-2008
Most Innovative Design Award, Utah BioDesign 2007
Biomedical Engineering Tuition Waiver Scholarship, University of Utah 2006-2007

PATENTS

1. Optically guided feeding tube, catheters, and associated methods. US8361041.

TEACHING AND MENTORING

Volunteer, Northwestern-Niles West Mentoring Program 2013-2104
Northwestern University
Responsibilities: Guidance for high school students performing science experiments

Volunteer, Writing Workshop for NSF Research Proposal 2010-2012
Washington University in St. Louis
Responsibilities: Provide feedback on NSF research statements for graduate students

Volunteer, Youth Exploring Science Program 2010-2012
Cognitive Computational and Systems Neuroscience Outreach Program
Washington University in St. Louis
Responsibilities: Anatomy and physiology science lessons for middle and high school students

Group Mentor, Senior Design, Biomedical Engineering Undergraduate Class 2011
Washington University in St. Louis
Responsibilities: Design mentor for a group of senior undergraduate students

Teaching Assistant, Discussion Section for Molecular Cell Biology for Engineers 2009
Washington University in St. Louis

PROFESSIONAL AFFILIATIONS

National Neurotrauma Society (NNS) 2016

Society for Neuroscience (SFN)	2015
International Society for Stem Cell Research (ISSCR)	2011
Biomedical Engineering Society (BMES)	2010
Society for Biomaterials (SFB)	2010
Tau Beta Pi Engineering Honor Society	2007

SELECTED CONFERENCE PRESENTATIONS

1. **McCreedy DA**, Rosen SD, Noble-Haeusslein LJ. Diclofenac Reduces Acute Oxidative Stress and Improves Long-term Recovery following Spinal Cord Injury. Oral and poster presentation. International Symposium on Neural Regeneration. November 2017. Asilomar, CA. ***Travel award recipient**

2. **McCreedy DA**, Mihaly E, Butts JC, Noble-Haeusslein LJ, McDevitt TC. Three-dimensional Neutrophil Distribution in the Acutely Injured Spinal Cord Revealed by Optical Clearing and Lightsheet Imaging. Poster presentation. BMES. October 2017. Phoenix, AZ. ***Poster award winner**

3. **McCreedy DA**, Rosen SD, Noble-Haeusslein LJ. L-selectin Mediates Neutrophil Recruitment and Activation after Spinal Cord Injury. Poster presentation. National Neurotrauma Society. July 2017. Snowbird, UT. ***Travel award recipient**

4. **McCreedy DA**, Sontag CJ, Lee SM, Martinez AF, Fandel TM, Rosen SD, Noble-Haeusslein LJ. The Role of L-selectin in Leukocyte Recruitment and Secondary Pathogenesis following Spinal Cord Injury. Poster presentation. Society for Neuroscience. October 2015. Chicago, IL.

5. **McCreedy DA**, Sakiyama-Elbert SE. Survival and Differentiation of High Purity Progenitor Motor Neurons in Fibrin Scaffolds for use as a Combination Therapy for Spinal Cord Injury. Oral presentation. Society for Biomaterials. October 2012. New Orleans, LA.

6. **McCreedy DA**, Sakiyama-Elbert SE. Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons for Transplantation after Spinal Cord Injury. Oral presentation. BMES. October 2010. Austin, TX. ***Student travel award recognition**