

DaShawn Antwane Hickman

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Education

Case Western Reserve University, Cleveland, OH

Doctor of Philosophy (Ph.D) expected May 2017

Doctor of Medicine (M.D.) expected May 2019

Yale University, New Haven, CT

Bachelor of Science, Biomedical Engineering Awarded May 2009

A.C. Flora High School, Columbia, SC

High School Diploma Awarded May 2005

International Baccalaureate Diploma Awarded May 2005

Research Experience

Department of Biomedical Engineering, Case Western Reserve University, *Graduate Student*

Cleveland, OH, May 2013-August 2015

- Principle Investigator: Erin Lavik, ScD
- Synthesize polymer based hemostatic nanoparticles
- Characterize nanoparticles using dynamic light scattering and ultra performance liquid chromatography
- Validate efficacy and safety of treatments in rodent and porcine animal models
- Investigate the immune response (CARPA) to hemostatic nanoparticles

Department of Internal Medicine/Gastroenterology and Hepatology, University of Arkansas for Medical Sciences, *Research Technician*

Little Rock, AR, Feb 2011-May 2011

- Principle Investigator: Jonathan Dranoff, MD
- Perform functional and molecular studies on bile duct epithelia and portal fibroblast
- Develop models examining the interaction of bile duct epithelia and portal fibroblast
- Independent Literature Review
- Present research in formal lab meetings

Department of Internal Medicine/Digestive Diseases, Yale University, *Postgraduate Associate*

New Haven, CT, July 2009- Jan 2011

- Principle Investigator: Jonathan Dranoff, MD
- Perform functional and molecular studies on bile duct epithelia and portal fibroblast
- Develop models examining the interaction of bile duct epithelia and portal fibroblast
- Independent Literature Review
- Present research in formal lab meetings

Department of Molecular Biophysics and Biochemistry, Yale University, *Student Researcher*

New Haven, CT, Jan 2008-May 2009

- Principle Investigator: Scott Strobel, PhD
- Traveled to Ecuadorian Rainforest to collect plants from which endophytes were isolated.
- Independently designed project based on research in current natural product drug discovery.
- Isolate microorganisms and characterize using DNA sequencing and phylogenetic analysis.
- Perform solvent extractions and fractionations to isolate compounds.
- Present progress in formal lab meetings.
- Developing new media for easy isolation of fungi and bacteria

Department of Molecular Cellular and Developmental Biology, Yale University, *Student Researcher*

New Haven, CT, May 2006- Aug 2006

- Principle Investigator: Martin Garcia-Castro PhD
 - Characterized protein Pax7 in comparison to Sox2
 - Performed microsurgery on chicken and quail embryos, node grafting, probe synthesis, immunohistochemistry, polymerase chain reactions, and fluorescent imaging
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**Papers
Published**

- **Hickman DA**; Gaurav S, Fausther M, Lavoie EG, Goree J, Storrie B, Dranoff JA. 2014. MCP-1 downregulates mmp-9 export via vesicular redistribution to lysosomes in rat portal fibroblast, *Physiol Rep.* 2(11):e12153
- Dranoff JA, Bhatia N, Fausther M, Lavoie EG, Granell S, Baldini G, **Hickman DA**, Sheung N. 2013. Posttranslational regulation of tissue inhibitor of metalloproteinase-1 by calcium-dependent vesicular exocytosis, *Physiol Rep.* 1(6):e00125
- Saiman Y, Afarwal R, **Hickman DA**, Fausther M, El-Shamy A, Dranoff JA, Friedman SL, Bansal MB. 2013. CXCL12 induces hepatic stellate cell contraction through a calcium-independent pathway, *Am J Physiol Gastrointest Liver Physiol.* 305(5):G375-82
- Russell JR, Huang J, Anand P, Kucera K, Sandoval AG, Dantzler KW, **Hickman D**, Jee J, Kimovec FM, Koppstein D, Marks, DH, Mittermiller PA, Núñez SJ, Santiago M, Townes MA, Vishnevetsky M, Williams NE, Vargas MP, Boulanger LA, Bascom-Slack C, Strobel SA. 2011. Biodegradation of polyester polyurethane by endophytic fungi, *Applied Environmental Microbiology.* 77(17):6076-84

**Poster
Presentations**

- **Hickman DA**, Shoffstall A, Groynom R, Shoffstall E, Bolger M, Uppal N, Mishra D, Lavik E. Overcoming CARPA while stopping internal bleeding with hemostatic nanoparticles, *2014 Biomedical Engineering Society Annual Meeting, San Antonio, TX 2014*
- **Hickman DA**, Shoffstall A, Groynom R, Shoffstall E, Bolger M, Uppal N, Mishra D, Lavik E. Overcoming CARPA while stopping internal bleeding with hemostatic nanoparticles, *2014 American Chemical Society, San Francisco, CA 2014*
- **Hickman DA**, Shoffstall A, Groynom R, Everhart L, Shoffstall E, Varley M, Bolger M, Schick A, Lavik E. Stopping internal bleeding with hemostatic nanoparticles, *12th U.S.-Japan Symposium on Drug Delivery Systems, Lahaina, Maui, HI 2013*
- **Hickman DA**, Yu J, Kearney M, Dranoff DA. Monocyte chemoattractant protein-1 blocks release of matrix metalloproteinase-9 from portal fibroblast via alterations in vesicular trafficking, *Digestive Diseases Week 2011, Chicago, IL 2011*
- Bhatia NK, Kearney M, **Hickman DA**, Dranoff DA. Vesicular trafficking and secretion of Tissue Inhibitor Metalloproteinase-1 in LX-2 cells and implications for liver fibrosis, *American Association for the Study of Liver Disease 2010 Annual Meeting, Boston, MA 2010*
- Agarwal R, Saiman Y, **Hickman DA**, Krugalov E, Dranoff DA, Bansal MB. SDF-1 α induces hepatic stellate cell contraction through a calcium independent pathway, *American Association for the Study of Liver Disease 2010 Annual Meeting, Boston, MA 2010*

Extracurricular

Student National Medical Association – National Chair, Regional Director, Regional Director to the Executive Committee, CWRU Chapter Co-President
Latino Medical Student Association – CWRU Chapter Co-President
CWRU Committee of Student Representatives – Treasurer
Peer Handoff – Coordinator
CWRU SOM Admissions – Student Interviewer, Tour Guide
Horizons – Mentor
MSTP Council – MSTP entering c/o 2015 Rep, Faculty Council Representative
Doc Opera – Director, Choreographer, Dancer

Skills

Word, Excel, Photoshop, PowerPoint, MATLAB, FACS, Polymerase Chain Reaction, Gel Electrophoresis, Electron Microscope, Thin Layer Chromatography, Light Microscopy, immunohistochemistry, Fluorescent imaging, DNA sequencing, Polymer Scaffold Synthesis, Cell Maintenance and Seeding, Rheometry, Instron Testing, High Performance Liquid Chromatography, Rat Handling, Pig Handling, Animal Surgical Techniques, Some Spanish