

## Jamie Jennifer Newman

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### CURRENT POSITION

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September 2019 – Present	Associate Professor, School of Biological Sciences Louisiana Tech University
September 2019 – Present	Associate Dean for Research and Graduate Studies College of Applied and Natural Science Louisiana Tech University
September 2014 - Present	Scott Weathersby Endowed Professor in Zoology/Premedicine

### APPOINTMENTS

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July 2017 – Present	Chair of Molecular and Biomedical Biology Section Louisiana Academy of Sciences
September 2016 – Present	Associate Director, Visual Integration of Science of Through Art (VISTA) & Pre-Medical Illustration Concentration, Louisiana Tech University
September 2013 – Present	Founder & Director of New Frontiers in Biomedical Research Seminar Series, Louisiana Tech University
January 2014 – Present	Adjunct Assistant Professor, LSUHSC-New Orleans, Department of Genetics
September 2013 – August 2019	Assistant Professor, School of Biological Sciences Louisiana Tech University

### EDUCATION

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September 2005 – May 2010	Massachusetts Institute of Technology Ph.D. in Biology “Control of Gene Regulation and Cell State in Embryonic Stem Cells” Laboratory of Dr. Richard A. Young
September 1999 – May 2003	Amherst College B.A. in Biology, Cum Laude with Distinction “The Role of DG17 in <i>Dictyostelium discoideum</i> ” Laboratory of Dr. David Ratner

### PUBLICATIONS

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Straub J, Venigalla S, **Newman JJ**. Mediator's Kinase Module: A Modular Regulator of Cell Fate. *Stem Cells & Development*. In press. November 2020. Cover.

Liu M, Logan, H, **Newman JJ**. Distinct Roles for Notch1 and Notch3 in Human Adipose-Derived Stem/Stromal Cell Adipogenesis. *Molecular Biology Reports*. September 2020.

Barnett HB, Pursell IA, Lee L, Cruz NG, Caldorera-Moore ME, **Newman JJ**. Combination of Soluble Factors and Biomaterial Scaffolds Enhance Human Adipose-Derived Stromal/Stem Cell Myogenesis. *Biochemical and*

*Biophyscial Research Communications*. In press. July 2020

Hodnett R, **Newman JJ**. The Journey of a Stem Cell. Illustrated by Maddie Dearman. Louisiana Tech University. March 2020. ISBN 978-1-7346259-0-5.

**Newman, JJ**. The Journey of Dr. John Stewart IV. Illustrated by Jacob Broussard. Louisiana Tech University. November 2019. ISBN coming.

Barnett H, Heimbuck A, Pursell I, Hegab R, Sawyer B, **Newman JJ**, Caldorera-Moore ME. Poly(ethylene glycol) hydrogel scaffolds with multiscale porosity for culture of human adipose-derived stem cells. *Journal of Biomaterials Science, Polymer Edition*. May 2019.

Beadle EP, Straub JA, Bunnell BA, **Newman JJ**. MED31 Involved in Regulating Self-Renewal and Adipogenesis of Human Mesenchymal Stem Cells. *Molecular Biology Reports*. July 2018.

Sandel DA\*, Liu M\*, Ogbonnaya N, **Newman JJ**. Notch3 Regulates Induction of Human Adipose Stem Cell Adipogenesis. *Biochimie*. April 2018  
\*Authors contributed equally to the work

Whitehead AK, Barnett H, Caldorera-Moore ME, **Newman JJ**. Poly (Ethylene Glycol) Hydrogel Elasticity Influences Human Mesenchymal Stem Cell Behavior. *Regenerative Biomaterials*. April 2018.

**Newman JJ**, Caldorera-Moore ME, Bustamante N. Digital Painting and an Introduction to Medical Illustration. Louisiana Academy of Science Proceedings. 2018. In press March 2018.

Patel NR, Whitehead AK, **Newman JJ**, Caldorera-Moore ME. Poly(ethylene glycol) Hydrogels with Tailorable Surface and Mechanical Properties for Tissue Engineering Applications. *American Chemical Society Biomaterials Science & Engineering*. August 2016

**Newman JJ** & Caldorera-Moore M. Interdisciplinary Seminar Series: Increasing Awareness for Research, Recognition of the University, and Professional Development Opportunities. American Society for Engineering Education Annual Meeting Conference Proceedings. 2016

**Newman JJ**, Patel N, Caldorera-Moore M. *Engineered Stem Cell-Based Scaffolds and Patches for Heart Disorders*. Chapter 14 in: Microscale Technologies for Stem Cells Engineering. Springer, 2016

Joshi C, Karumuri B, **Newman JJ**, DeCoster MA. Cell Morphological Changes Combined with Biochemical Assays for Assessment of Apoptosis and Apoptosis Reversal. Current Microscopy Contributions to Advances in Science and Technology. Ed. Mendez-Vilas A. p.756-762. Formatex Research Center. 2012.

Mullen AC, Orlando DA, **Newman JJ**, Loven J, Kumar RM, Bilodeau S, Reddy J, Guenther MG, DeKoter R, Young RA. Master Transcription Factors Determine the Gene Targets of the TGF- $\beta$  Pathway. *Cell*. October 2011.

**Newman JJ** and Young RA. Connecting Transcriptional Control to Chromosome Structure and Human Disease. *Cold Spring Harbor Symposia on Nuclear Structure and Function*. 2010.

Kagey MH\*, **Newman JJ**\*, Bilodeau S\*, Zhan Y, Orlando DA, van Berkum NL, Ebmeier CC, Goosens J, Rahl PB, Levine SS, Taatjes DJ, Dekker J, Young RA. Mediator and Cohesin Connect Gene Expression and Chromatin Architecture. *Nature*. August 2010.  
\*Co-first authors

Marson A, Levine SS, Cole MF, Frampton GM, Brambrink T, Johnstone S, Guenther MG, Johnston WK, Wernig M, **Newman J**, Calabrese M, Dennis LM, Volkert TL, Gupta S, Love J, Hannett N, Sharp PA, Bartel DP, Jaenisch R, Young RA. Connecting microRNA Genes to the Core Transcriptional Regulatory Circuitry of Embryonic Stem Cells. *Cell*. August 2008.

Cole MF\*, Johnstone SJ\*, **Newman JJ\***, Kagey MH, Young RA. Tcf3 is an Integral Component of the Core Regulatory Circuitry of Embryonic Stem Cells. *Genes and Development*. March 2008.

\*Co-first authors

Ventura A, Young AG, Winslow MM, Lintault L, Meissner A, Erkeland SJ, **Newman J**, Bronson RT, Crowley D, Stone JR, Jaenisch R, Sharp PA, Jacks T. Targeted Deletion Reveals Essential and Overlapping Functions of the miR 17-92 Family of miRNA Clusters. *Cell*. March 2008.

Ventura A, Kirsch DG, McLaughlin ME, Tuveson DA, Grimm J, Lintault L, **Newman J**, Reczek EE, Weissleder R, Jacks T. Restoration of p53 Function Leads to Tumor Regression in vivo. *Nature*. Feb 2007.

Flores ER, Sengupta S, Miller JB, **Newman JJ**, Bronson R, Crowley D, Yang A, McKeon F, Jacks T. Tumor Predisposition in Mice Mutant for p63 and p73: Evidence for Broader Tumor Suppressor Functions for the p53 Family. *Cancer Cell*. April 2005.

#### **PATENTS**

Mediator and cohesion connect gene expression and chromatin architecture. Richard A. Young, Michael H. Kagey, **Jamie J. Newman**, Steve Bilodeau. US20130109737A1. Filed February 9, 2011.

#### **FUNDED RESEARCH & EQUIPMENT PROPOSALS (PRINCIPAL INVESTIGATOR UNLESS OTHERWISE NOTED)**

Louisiana Space Consortium (LaSPACE) Graduate Student Research Assistantship 2019-2020. *The Role of Notch Signaling in Osteogenic Differentiation* (Student: John Bradley Cart)

**Funded: \$8,000 (August 2020-May 2021)**

Louisiana Space Consortium (LaSPACE) Graduate Student Research Assistantship 2019-2020. *Notch and Mediator Interact to Direct hASC Self-Renewal* (Student: Jaylen Mumphy)

**Funded: \$8,000 (August 2020-May 2021)**

Louisiana Space Consortium (LaSPACE) Research Enhancement Award Supplemental Funds. *Influence of External Environment on Osteogenic Differentiation*

**Funded: \$12,500 (February 2020-May 2020)**

Louisiana Space Consortium (LaSPACE) Graduate Student Research Assistantship (Student: Rebecca Hodnett) *Investigating the Role of MED12, Notch1, and Notch3 in hASCs and their Integrated use in Public Educational Materials*

**Funded: \$8,000 (August 2019-May 2020)**

Louisiana Space Consortium (LaSPACE) Undergraduate Research Assistantship (Student: John Bradley Cart) *The Role of Notch Signaling in Adult Stem Cell Self-Renewal and Myogenic Differentiation*

**Funded: \$6,000 (August 2019-May 2020)**

Louisiana Biomedical Research Network, Translational Award

*Comparing Treatment of Adipose Stem Cells for the Differentiation of Clinically Relevant Cells*

**Funded: \$50,000 (May 2019-April 2020)**

Louisiana Space Consortium (LaSPACE) Undergraduate Research Assistantship (Student: India Pursell) *Differentiation of Adipose-Derived Stem Cells on Biomimetic Hydrogels to Induce Myogenesis*

**Funded: \$6,000 (August 2018-April 2019)**

Louisiana Biomedical Research Network

*The Role of Mediator in Maintaining and Differentiating Human Mesenchymal Stem Cells*

**Funded: \$50,000 (May 2018-April 2019)**

Louisiana Space Consortium Research Enhancement Award

*Influences of Biomaterials in Directing Stem Cell Fate*

**Funded: \$30,500 (August 2017-July 2018)**

Louisiana Space Consortium (LaSPACE) Undergraduate Research Assistantship (*Student: Rachel Eddy*)  
*Optimization and Characterization of the Osteogenic Differentiation of Human Mesenchymal Stem Cells on Tailorable Hydrogel Scaffolds*  
**Funded: \$6,000 (August 2017-August 2018)**

Louisiana Biomedical Research Network  
*Imaging System Upgrade for the BioTek Cytation5 Plate Reader*  
**Funded: \$56,000 (April 2017)**

Louisiana Board of Regents Supervised Undergraduate Research Experience (SURE) (*Student: India Pursell*)  
*Differentiation of Mouse Embryonic Stem Cells into Cardiomyocytes for Tissue Engineering*  
**Funded: \$5,000 (January 2017-December 2017)**

Louisiana Space Consortium (LaSPACE) Graduate Research Assistantship  
*Differentiation of Pluripotent Stem Cells into Cardiomyocytes for Cardiac Tissue Engineering*  
**Funded: \$8,000 (August 2016-May 2017)**

Louisiana State University Health, Center for Cardiovascular Research  
*Optimization of Cardiac Muscle Generation for Replacement of Damaged or Weakened Tissue*  
*Co-PIs: Dr. Mary Caldorera-Moore and Dr. Paari Dominic*  
**Funded: \$25,000 (July 2016-May 2017)**

Louisiana Biomedical Research Network  
*Imaging System: BioTek Cytation5 Plate Reader*  
**Funded: \$45,000 (April 2016)**

Louisiana Space Consortium (LaSPACE) Undergraduate Research Assistantship (*Student: Anna Katherine Whitehead*)  
*Microtopographical Effects on the Differentiation of Mouse Embryonic Stem Cells into Cardiomyocytes*  
**Funded: \$6,000 (August 2015-August 2016)**

Louisiana Biomedical Research Network Summer Faculty Program  
*The Role of Mediator in Maintaining and Differentiating Human Mesenchymal Stem Cells*  
**Funded: \$300,000 (July 2015-June 2018)**

Louisiana Board of Regents Enhancement Grant  
*Fluorescence Imaging for Undergraduate Cell and Molecular Biology*  
*Co-PIs: Dr. Rebecca Giorno & Dr. Patrick Hindmarsh*  
**Funded: \$66,000 (June 2015-May 2016)**

Louisiana State University Health, Center for Cardiovascular Research  
*Optimization of Cardiac Muscle Generation for Replacement of Damaged or Weakened Tissue*  
*Co-PIs: Dr. Mary Caldorera-Moore and Dr. Paari Dominic*  
**Funded: \$25,000 (June 2015-May 2016)**

Louisiana Board of Regents Supervised Undergraduate Research Experience (SURE) (*Student: Demi Sandel*)  
*The Role of Notch Signaling in Mesenchymal Stem Cells*  
**Funded: \$5,000 (January 2016-December 2016)**

LaSPACE Minority Research Scholar for Undergraduate Student Research (*Student: Camtrang Tran*)  
*Cardiomyocyte Generation for Cardiac Tissue Repair*  
**Funded: \$4,500 (October 2014-April 2015)**

Louisiana Biomedical Research Network Summer Faculty Program  
*The Role of Mediator in Maintaining and Differentiating Human Mesenchymal Stem Cells*

**Funded: \$19,000 (May 2014-August 2014)**

Louisiana Board of Regents, Pilot Fund Proposal

*The Role of Mediator in Regulating the Cell State of Mesenchymal Stem Cells*

**Funded: \$10,000 (January 2014-December 2014)**

**FUNDED EDUCATION & PROFESSIONAL DEVELOPMENT PROPOSALS (PRINCIPAL INVESTIGATOR UNLESS OTHERWISE NOTED)**

Fall 2019	Lincoln Health Foundation <i>Nutrition Education</i> <b>Funded \$5,000</b> (Co-PI)
Summer 2016	Louisiana Tech University Lagniappe Ladies Award <i>Art &amp; Science Collaboration for Medical Illustration</i> <b>Funded \$5,000</b>
Summer 2015	Lincoln Health Foundation Grant <i>Community Lectures on Cancer &amp; Diabetes</i> <b>Funded \$3,020</b>
Fall 2014	Lincoln Health Foundation Grant <i>Community Lectures on Cancer &amp; Diabetes</i> <b>Funded \$2,121</b>
Fall 2014	ADVANCEing Women in Science Networking Grant <i>Co-PI: Dr. Mary Caldorera-Moore</i> <b>Funded \$1,305</b>
Fall 2013	Louisiana Tech University Innovative Instruction Grant "Graduate Student Research Ethics Course" <i>Co-PI: Dr. Erica Murray</i> <b>Funded: \$1,935</b>
Fall 2013	Lincoln Health Foundation Grant <i>Community Lectures on Cancer</i> <b>Funded \$5,630</b>
Fall 2013	ADVANCEing Women in Science Networking Grant <i>Co-PI: Dr. Teresa Murray</i> <b>Funded \$2,570</b>

**REVIEWER**

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2016-2018	NSF Graduate Research Fellowship Program (GRFP) Reviewer
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**INVITED SEMINARS & POSTER PRESENTATIONS**

American Society for Cell Biology Annual Meeting. Poster Presentation. "Distinct Roles for Notch1 and Notch3 in Human Adipose-Derived Stem/Stromal Cell Adipogenesis." *Jamie J Newman presenter.* December 2020.

American Society for Cell Biology Annual Meeting. Poster Presentation. "Combination of soluble factors and biomaterial scaffolds enhance human adipose-derived stem/stromal cell myogenesis." *Haley H Barnett presenter.* December 2020.

Louisiana Biomedical Research Network Annual Meeting. "Comparing Treatment of Adipose Stem Cells for the

Differentiation of Clinically Relevant Cells” January 2020

National Associate for Free and Charitable Clinics Annual Meeting. “University-Community Partnership to Enhance Public Health Communication” October 2019

International Society for Disease Surveillance Conference. “University-Community Partnership to Enhance Public Health Communication” January 2019

Louisiana Biomedical Research Network Annual Meeting. “MED12 is a Transcriptional Regulator of Adipogenesis” January 2019

Louisiana Biomedical Research Network Annual Meeting. “The Role of Mediator in Regulating Stem Cell State” January 2018

Louisiana Space Consortium Annual Meeting. “Influence of Biomaterials on Cell State” November 2017

Louisiana Biomedical Research Network Annual Meeting. “The Role of Med31 in Regulating Stem Cell State” January 2017

Girls Learning About Math & Sciences (GLAMS). “Learning about DNA” April 2016

Louisiana Biomedical Research Network Annual Meeting. “The Role of Mediator in Mesenchymal Stem Cells” January 2016

International Federation of Adipose Therapeutics and Science, New Orleans, LA “The Role of Mediator in Regulating Stem Cell State” November 2015

Industry Day, Shreveport, LA “Optimization of Cardiac Muscle Generation for Replacement of Damaged or Weakened Tissue” September 2015

Girls Learning About Math & Sciences (GLAMS). “Learning about DNA” April 2015

LBRN Annual Meeting. “The Role of Mediator in Mesenchymal Stem Cells” January 2015

LA SiGMA Professional Development Workshop for Community College Teachers. “Stem Cells & Gene Expression.” October 2013.

Rotary Clubs of Ruston, LA. “Stem Cells: Their Potential in Research & Medicine.” March 2013

University of Mississippi Medical Center Cancer Institute. “The Role of Environment on Genome Structure & Function.” November 2012.

Distinguished Lecture Series. Center for Biomedical Engineering & Rehabilitation Sciences, Louisiana Tech University. “Understanding & Manipulating Murine Embryonic Stem Cells.” May 2012.

Northwestern State University Scholar’s College. “Control of Aromatase Expression in Breast Cancer.” April 2011

Louisiana State University Health Sciences Center, Shreveport. Cellular Biology and Anatomy Department Seminar. “Transcriptional Control of Aromatase: The Role of SIRT1 in Breast Cancer.” November 2010.

Amherst College Biology Department Seminar. “Using Embryonic Stem Cells to Understand Gene Regulation and Cell Fate.” September 2009.

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#### **UNIVERSITY, DEPARTMENTAL, AND PROFESSIONAL SERVICE**

June 2020 – Present

Member of Tech Next Committee, Louisiana Tech University

December 2019 – Present	Faculty Advisor for MAPS, Louisiana Tech University
December 2019 – Present	Sigma Xi Chapter Secretary, Louisiana Tech University
November 2018 – Present	Faculty Advisor for Student Ambassadors for School of Biological Sciences, Louisiana Tech University
September 2018 – Present	School of Biological Sciences Director's Advisory Committee
September 2018 – Present	Graduate Council, Louisiana Tech University
September 2017 – Present	Co-Founder and Associate Director of VISTA Center, Louisiana Tech University
September 2017 – Present	Section Chair, Molecular and Biomedical Research, Louisiana Academy of Sciences
September 2017 – Present	Work-Life Policy Committee, Louisiana Tech University
September 2015 – Present	Waggoner Center Fellow, Louisiana Tech University
September 2013 – Present	Founder New Frontiers in Biomedical Research Seminar Series, Louisiana Tech University
February 2020 –April 2020	Search Committee: Associate Dean for Undergraduate Studies, College of Applied and Natural Sciences Louisiana Tech University
May 2019 – August 2019	Strategic Planning Committee for TECH 2030, Louisiana Tech University
September 2018 – December 2018	Strategic Planning IMPACT Subcommittee for TECH 2030 Strategic Planning, Louisiana Tech University
December 2017 – March 2018	Search Committee: Health Information and Informatics Director Position
September 2016 – January 2018	Biological Sciences Tenure-Track Faculty Search Committee
September 2015 – August 2018	Sigma Xi Chapter Treasurer, Louisiana Tech University
Summer 2015	Search Committee: Biological Sciences Lecturer
September 2014-August 2016	Faculty Advisory Council to the Dean, College of Applied and Natural Sciences, Louisiana Tech University
January 17-19, 2014	Junior Sciences & Humanities Symposium Louisiana State University, Baton Rouge Judge at state high school science competition
September 2013- August 2015	Sigma Xi Chapter President, Louisiana Tech University
November 2012 – May 2013	Stem Cells & Biomedical Research Seminar Series Organized seminar series with speakers from Louisiana Louisiana Tech University Department of Biomedical Engineering

**SCIENTIFIC SOCIETY MEMBERSHIP**

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2014-Present	Member, American Society for Biochemistry and Molecular Biology
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2010-Present Full Member, Sigma Xi

2003-2010 Associate Member, Sigma Xi

#### **AWARDS**

2020	Nominated by College of Applied and Natural Sciences for <b>Louisiana Tech University Foundation Professorship Award</b>
2018	Louisiana Tech University <b>Virgil Orr Undergraduate Junior Faculty Award</b> Recipient
2018	Nominated by College of Applied and Natural Sciences for <b>Virgil Orr Undergraduate Junior Faculty Award</b>
2018	<b>Best Full Project Presentation</b> , Louisiana Biomedical Research Network
2017	<b>National Recognition Award</b> , College of Engineering and Science, for enhancing recognition of the University through the New Frontiers in Biomedical Research Seminar Series
2017	Nominated by College of Applied and Natural Sciences for <b>Virgil Orr Undergraduate Junior Faculty Award</b>
2017	<b>Scholarly Activity Award</b> , College of Applied and Natural Sciences, Louisiana Tech University
2016	Nominated by College of Applied and Natural Sciences for <b>Virgil Orr Undergraduate Junior Faculty Award</b>
2016	<b>Research Award</b> , College of Applied and Natural Sciences, Louisiana Tech University
2015	<b>Teaching Award for 300 Level and Above Courses</b> , College of Applied and Natural Sciences, Louisiana Tech University

#### **GRADUATE STUDENTS MENTORED**

NAME	DEGREE	YEARS	CURRENT STATUS
CAROLINE RINDERLE	MS, BIOLOGY	2020-PRESENT	
JOHN BRADLEY CART	MS, MSNT	2020-PRESENT	
JAYLEN MUMPHREY	MS, BIOLOGY	2019-PRESENT	
ONYEKACHI IDIGO	MS, BIOLOGY	2019-PRESENT	
REBECCA HODNETT	MS, MSNT	2018-PRESENT	
JOSEPH STRAUB	PHD, MSNT	2015-PRESENT	
MENGCHENG LIU	PHD, MSNT	2016-2020	
HALEY BARNETT (Co)	PHD, MSNT	2016-2020	VISITING ASSISTANT PROFESSOR, LOUISIANA TECH UNIVERSITY
ANNA KATHRYN WHITEHEAD	MS, MSNT	2015-2016	MD/PHD LSUHSC-NO
NGOZI OGBONNAYA	MS, MSNT	2014-2016	ENTERED PHD LSUHSC-NO, DECEASED 2017
NEHAL PATEL (Co)	MS, MSNT	2014-2016	PHD TULANE UNIVERSITY
ERIK BEADLE	MS, MSNT	2014-2016	PHD VANDERBILT UNIVERSITY

#### **TEACHING EXPERIENCE (\* DEVELOPED NEW COURSE)**

- The History of Cancer (LA Tech BISC450C/516C)\*



- Stem Cell Biology (LA Tech BISC429/529)\*
- The Human Genome (LA Tech BISC450C/516C)\*
- Medical Ethics/Bioethics (LA Tech BISC470/570, MSNT657)
- Undergraduate Senior Seminar (LA Tech BISC480)
- Graduate Research Methods (LA Tech BISC/MSNT 502)
- Stem Cells & Regenerative Medicine (LA Tech BIEN 450C/557 & BISC 450C/516C)\*