

Curriculum Vitae (2023 August)**Jeffrey H. Thomas**

**Associate Professor
 Department of Cell Biology and Biochemistry
 School of Medicine
 Texas Tech University Health Sciences Center**

Address:

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 Lubbock, TX 79430
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Education and Training:

University of Virginia	B.A.	1989	Biology
Massachusetts Institute of Technology	Ph.D.	1997	Biology
Princeton University	Post-doc	1997-2004	
Northwestern University	Post-doc	2004	

Academic Appointments:

School of Medicine, TTUHSC:
 Assistant Professor, 2005-2019
 Associate Professor, 2019-present

Graduate School of Biomedical Sciences, TTUHSC:
 Cell and Molecular Biology, Primary Appointment, 2005-2014
 Biochemistry and Molecular Genetics, Associate Appointment, 2005-2014
 Biochemistry, Cell and Molecular Biology, Primary Appointment, 2015-present
 Biotechnology, Joint Appointment, 2005-present

Fellowships:

Howard Hughes Medical Institute Predoctoral Fellowship, 1989-1994
 National Institutes of Health Postdoctoral Fellowship, 1997-2002
 Howard Hughes Medical Institute Postdoctoral Fellowship, 2002-2004

Honors:

Echols Scholar, 1985-1989
 Intermediate Honors, 1987
 Biological Honor Society of the University of Virginia, 1987
 Golden Key Honor Society, 1988
 Miller Scholarship, 1989

Phi Beta Kappa, 1989
 Graduated with Highest Distinction (summa cum laude), 1989
 Sigma Xi, The Scientific Research Honor Society, MIT Chapter, Associate Member, 1997
 President of the Graduate Faculty, Elected, 2020-2021
 Sigma Xi, The Scientific Research Honor Society, MIT Chapter, Elected to Full Membership, 2021

Awards:

Outstanding Faculty Mentor, TTU Center for Undergraduate Research, 2009
 Nominated for Outstanding Faculty Mentor, TTU Center for Undergraduate Research, 2011
 Unsung Hero Award, TTUHSC Dept. of Cell Biology and Biochemistry, 2014
 Nominated for 17th International Royan Award in Embryology, 2016
 Unsung Hero Award, TTUHSC Dept. of Cell Biology and Biochemistry, 2020
 Dean's Teaching Award in Biomedical Sciences, 2023

Professional Society Memberships:

Sigma Xi Research Association, MIT Chapter (elected), 1997 - present
 American Association for the Advancement of Science, 2000 - present
 New York Academy of Sciences, 2000 - present
 Genetics Society of America, 2006 - present
 Society for Developmental Biology, 2009 - present

Professional Service, Editor:

Review Editor, Editorial Board of Morphogenesis and Patterning, *Frontiers in Cell and Developmental Biology*

Professional Service, Journal Reviewer (*ad hoc*):

Biomechanics and Modeling in Mechanobiology
Fly
Journal of Biological Chemistry
Journal of Cell Science
Journal of the Royal Society: Interface
Journal of Visualized Experimentation
PLoS ONE

Professional Service, Book Reviewer:

Cambridge University Press, 2009, L.I. Held, *Quirks of Human Anatomy, An Evo-Devo Look at the Human Body.*
 Cambridge University Press, 2013, L.I. Held, *How the Snake lost its Legs: Curious Tales from the Frontier of Evo-Devo.*
 Cambridge University Press, 2020, L.I. Held, *Animal Anomalies: What Abnormal Anatomies Reveal About Normal Development.*

Professional Service, Grant Reviewer (*ad hoc*):

Wellcome Trust, London, United Kingdom, 2004.
TTUHSC Seed Grants, 2010

Professional Service, Advisory:

Board Member, Scientific Advisory Board, Tosk, Inc., 2012-present
Flybase Community Advisory Group, 2014-present
MIT Insight Forum, 2019-present

Professional Development:

Time Management Seminar, PI Leader: Making Every Minute Count, 2018
CME – Time Management Seminar, 2019
CME – Improving the Learning Environment, 2023

Community Service:

Consultant to elementary school student on science project (Shaunak Sathe, Wellington Elementary, Flower Mound, TX), Fall 2012-Spring 2013
Osher Lifelong Learning Institute at TTU, Class/Talk, “How Cells Generate the Shape of the Human Body,” Fall 2013
Introduction to Genetics and Laboratory Tour, for Sharp Academy (Lubbock, TX) Science Students (Special College Prep High School for Students with Dyslexia, ADHD or Related Learning Challenges), Fall 2015
Laboratory Tour, for Lubbock-Cooper High School students in the University Scholastic League program, Spring 2016
Laboratory Tour and Demonstrations, Summer Accelerated Biomedical Research (SABR), for Undergraduate Students, 2016-2019
Advised Kurt Caswell, author, TTU Honors college, on fruit flies for book on space exploration, 2016-2017
TTUHSC Science Camp, for STEM high school students in Lubbock, Texas, Laboratory Demonstration and/or Talk: Using Fruit Flies to Learn about Embryonic Development, Summer 2017-2019
Library Book Reader, All Saints Episcopal School, Preschool - Kindergarten, 2019-2020
Career: Scientists! All Saints Episcopal School, 04/25/2023 1st Grade Presentation and Demonstration, 2023

Administrative Service:

Website Committee, Departmental, 2005-2006
Space Committee, Departmental, 2005-2011, 2012-present
Chair, 2010-2011
M.D./Ph.D. Admissions Committee, School of Medicine (SOM) and Graduate School of Biomedical Science (GSBS), *ad hoc* interviewer for M.D./Ph.D. applicants, 2005-2008
M.D./Ph.D. Admissions Committee, School of Medicine (SOM) and Graduate School of Biomedical Science (GSBS), 2010-2015
Brochure and Recruiting Committee, Departmental, 2006
Computer Committee, Departmental, 2007-2010

Institutional Biohazards Committee (IBC), *ad hoc* Advisor, Institutional, 2007-2008

Institutional Biosafety Committee (IBC), Institutional, 2008-2019.

Genetics Advisor, for the IBC, NIH-required position, Institutional, 2008-2019.

Summer Accelerated Biomedical Research (SABR) Program Steering Committee, School (GSBS), 2008-2009

Program Review Committee for the Evaluation of the Pharmacology and Neuroscience Graduate Program, School (GSBS), 2008-2009

Imaging Center Design Committee, Institutional, 2009-2011

Stem Cell Oversight Committee, Institutional, 2011-2015

Dean's Representative for Student Defense, School (GSBS), 2011

Genetics Curriculum Committee, 2011-present, School (SOM), 2011-2015

Selection Committee for the 2012 GSBS Outstanding Student Award and 2012 Dean's Recognition Award, 2012

Program Review Committee for the Evaluation of the Graduate Program, School (GSBS), 2012-2013

Biophysics Interviewer, Department of Physics, (TTU), 2013

Graduate School Admissions Committee, School (GSBS), 2013-2014

Graduate School Ph.D. Selection Committee, School (GSBS), 2015-2019

Cell and Molecular Biology Program Committee, School (GSBS), 2013-2015
Chair, 2013-2015

Curriculum and Course Evaluation and Awards Committee, School (GSBS), 2013-present

Graduate Council, School (GSBS), 2013-present

Graduate Student Stipend Committee, School (GSBS), 2013-present

Advisory Committee for the Image Analysis Core (Institutional), 2013-2014

Hematology and Hematopoiesis Education Committee (SOM), 2013-2015

Biochemistry, Cell and Molecular Biology Faculty Evaluation Committee. (Departmental), 2015

TTUHSC Pharmaceutical Sciences Internal Review Committee (GSBS), 2016-2017

Evaluation Committee of Core Curriculum (Departmental), 2017

Master of Public Health Program Internal Review Committee, 2017-2018

Master of Public Health Program Internal Review Committee, 2017-2018
Chair, 2017-2018

General Biomedical Sciences Ph.D. Program Evaluation Committee, 2017-present

GSBS Catalogue Revision Review Committee, 2017

Departmental Core Curriculum Evaluation Review Committee, 2016-2017

Outstanding BCMB Graduating Student Selection Committee, 2019-present

Chair of the Graduate Faculty (GSBS, elected), 2020-2021
President (elected), 2020-2021

Biomedical Sciences Graduate Program Directors Committee, 2021

Student and Mentor Responsibilities and Privileges Task Force, 2021

Graduate School of Biomedical Sciences Internal Review Committee, 2021-2022

Graduate School of Biomedical Sciences Internal Review Committee, 2021-2022
Chair, 2021-2022

Evaluation of GSBS External Review Committee Report, 2022
 Evaluation of GSBS External Review Committee Report, 2022
 Chair
 GSBS Course Evaluation Committee, 2022-present
 GSBS Department Chairs Quarterly Meeting, 2022-present

Academic Administration:

Graduate Advisor, Cell and Molecular Biology Concentration, School (GSBS),
 2013-2015
 Graduate Advisor, Biochemistry, Cellular and Molecular Biology Concentration,
 School (GSBS), 2015-present
 Course Director, GCMB 6620 Advanced Cell Biology I, School (GSBS), 2009-
 present
 Course Director (as Graduate Advisor): GBCM 5130 Research Presentation
 Skills, Spring, 2015 - Present
 Course Director (as Graduate Advisor): GBCM 7000 Research, Texas Tech
 University Health Sciences Center, Spring, Summer and Fall, 2015 -
 Present
 Course Director (as Graduate Advisor): GBCM 7103 Seminar. Texas Tech University
 Health Sciences Center, Fall, 2015 - Present.
 Course Director (as Graduate Advisor): GBCM 7101 Seminar. Texas Tech
 University Health Sciences Center, Spring, 2015 - Present
 Course Director (as Graduate Advisor): GBCM 8000 Ph.D. Dissertation, Texas
 Tech University Health Sciences Center, Spring, Summer and Fall, 2015 –
 Present
 Head Teaching Assistant: 7.011 Experimental Biology Lab, MIT, 1993

Teaching Experience:

Teaching Assistant, MIT Biology Classes:

7.03 Genetics, Fall 1990.
 7.011 Experimental Biology Lab, Head Teaching Assistant, Spring 1993.

Course Director, TTUHSC Graduate School of Biomedical Sciences Classes:

GANM 6620 Advanced Cell Biology I, Co-Director, Fall 2009
 GCMB 6620 Advanced Cell Biology I, Director, Fall 2010, Spring 2012-present
 GCMB 6620 Advanced Cell Biology I, Director, Fall 2010, Spring 2012-present
 GBCM 5130 Research Presentation Skills, Course Director, 2015-Present
 GBCM 7000 Research, Course Director, 2015-Present
 GBCM 7103 Seminar, Course Director, 2015-Present.
 GBCM 7101 Seminar, Course Director, 2015-Present
 GBCM 8000 Ph.D. Dissertation, Course Director, 2015-Present

**Lecturer/Small Group Instructor, TTUHSC Graduate School of Biomedical
 Sciences Classes:**

GBTC 6301 Introduction to Biotechnology (3 hrs.), Fall 2005
 GBTC 6301 Introduction to Biotechnology (4.5 hrs.), Fall 2006-2007

GBTC 6301 Introduction to Biotechnology (3 hrs.), Fall 2008-2010
 GSBS 5373 Core III: Genes (3 hrs.), Fall 2011-2019
 GSBS 5373 Core III: Genes (5 hrs.), Fall 2020
 GSBS 5373 Core III: Genes (8 hrs.), Fall 2021
 GSBS 5373 Core III: Genes (8.5 hrs.), Fall 2022-present
 GANM 6620 Advanced Cell Biology I (Small Group) (6 hrs.), Fall 2006
 GANM 6620 Advanced Cell Biology I (Small Group) (12 hrs.), Fall 2008
 GANM 6620 Advanced Cell Biology I (Small Group) (14 hrs.), Fall 2009
 GCMB 6620 Advanced Cell Biology I (Small Group) (20 hrs.), Fall 2010
 GCMB 5313 Special Topics: Cell and Developmental Biology: Advanced Cell
 Biology (Small Group) (12 hrs.), Spring 2012
 GCMB 6320 Advanced Cell Biology I (Small Group) (12 hrs.), Spring 2013-2016
 GCMB 6320 Advanced Cell Biology I (Small Group) (9 hrs.), Spring 2017
 GCMB 6320 Advanced Cell Biology I (Small Group) (7.5 hrs.), Spring 2018
 GCMB 6320 Advanced Cell Biology I (Small Group) (12 hrs.), Spring 2019
 GCMB 6320 Advanced Cell Biology I (Small Group) (15 hrs.), Spring 2020
 GCMB 6320 Advanced Cell Biology I (Small Group) (15 hrs.), Spring 2021-
 present
 GANM 6340 Cell Structure and Function (3 hrs.), Spring 2007-2009
 GANM 6340 Cell Structure and Function (6 hrs.), Spring 2010-2011
 GSBS 5372 Core II: Cells (1.5 hrs.), Fall 2018-present
 GSBS 5275 Core V: Introduction to Biomedical Research, Fall 2018-present
 GANM 5313 Special Topics: Genetics I (45 hrs.), Spring 2008
 GANM 5313 Special Topics: Genetics II (45 hrs.), Summer 2008
 GBCH 6335 Topics in Biochemistry: Genetics I (45 hrs.), Spring 2010
 GCMB 5130 Research Presentation Skills (5 hrs.), Spring 2013-present
 GGMS 5001 Clinically-Oriented Anatomy (5 hrs.), Fall 2013-present
 GCMB 5510 Biology of Cells and Tissues (33 hrs.), Fall 2012
 GGMS 5002 Biology of Cells and Tissues (26.5 hrs.), Fall 2013-present
 GGMS 5005 Advanced Histology (Small Group) (11-16 hrs.), Fall 2013-2020
 GMES 5005 Advanced Histology Training (2 hrs.), Fall 2021- present
 GCMB 7102 001 Seminar (Grader) (6 hrs.), Spring 2011-2018
 GCMB 5130 Research Presentation Skills (6 hrs.), Spring 2014-2018
 GBTC 5020 Biotechnology Laboratory Methods: Targeted Gene Expression and
 RNAi Knockdown in Drosophila (3 hrs.), Fall 2021-present

Small Group Instruction, TTUHSC Graduate School of Biomedical Sciences

GGMS 5005 Advanced Histology (11 hrs.), Fall 2013-2019
 GMES 5005 Advanced Histology (14 hrs.), Fall 2020-present
 GMES 5005 Advanced Histology Training (2 hrs.), Fall 2021-present
 GSBS Core V BCMB Faculty Research Interests (1.5 hrs.), 2013-present
 GMES Advanced Histology (2 hrs.), Fall 2021-present

Lecturer/Small Group Instructor, TTUHSC School of Medicine Classes:

BLOCK I Clinically-Oriented Anatomy (Lecture: 5 hr.), Fall 2014-2017
 BLOCK I Clinically-Oriented Anatomy (Lecture: 4 hr.), Fall 2013

BLOCK I Clinically-Oriented Anatomy (Small Group: 1.5 hr.), Fall 2013
 BLOCK I Clinically-Oriented Anatomy (Lecture: 1 hr.), Fall 2012
 BLOCK I Clinically-Oriented Anatomy (Small Group: 4.5 hr.), Fall 2012
 BLOCK II Biology of Cells and Tissues (Lecture: 2 hrs.), Fall 2007-2010
 BLOCK II Biology of Cells and Tissues (Lecture: 6 hrs.), Fall 2011-2019
 BLOCK II Biology of Cells and Tissues (Lecture: 7 hrs.), Fall 2020-2020
 BLOCK II Biology of Cells and Tissues (Laboratory: 22 hrs.), Fall 2008-2011
 BLOCK II Biology of Cells and Tissues (Laboratory: 33 hrs.), Fall 2012-2014
 BLOCK II Biology of Cells and Tissues (Laboratory: 32 hrs.), Fall 2015
 BLOCK II Biology of Cells and Tissues (Laboratory: 18.5 hrs.), Fall 2016
 BLOCK II Biology of Cells and Tissues (Laboratory: 20.5 hrs.), Fall 2017-2020
 BLOCK III Structure and Function of Organ Systems (Laboratory: 13 hrs.),
 Spring 2009-2012
 BLOCK VIII: Systems Disorders II and Lifespan Issues (Lecture: 2hr.), Spring
 2012-2013
 AHE Anatomy, Histology and Embryology (Lecture: 2 hrs.), 2021-present
 AHE Anatomy, Histology and Embryology (Laboratory: 4 hrs.), 2021-present
 AHE Anatomy, Histology and Embryology (Review: 0.5 hrs.), 2021-present
 GPX General Principles (Lecture: 3 hrs.), 2021-present
 GPX General Principles (Review: 1.5 hr.), 2021-present
 OS1 Organ Systems 1 (Lecture: 1 hr.), 2021-present
 OS2 Organ Systems 2 (Lecture: 1 hr.), 2022-present
 OS2 Organ Systems 2 (Review 0.5 hrs.), 2022-present

Course Content Organizer, TTUHSC School of Medicine Classes:

BLOCK I Clinically-Oriented Anatomy, Embryology Section, Fall 2013

Special Educational Content and Groups, TTUHSC School of Medicine

Early Clinical Experiences I Honors Project: Group Advisor, 2009-2010
 P3 Stem Cells Study Cases and Knowledge Assessments, 2013-present
 BLOCK I Clinically-Oriented Anatomy: Embryology time comparison study aid
 BLOCK I Clinically-Oriented Anatomy: On-line Molecular Embryology lecture

Adjunct/Assistant Instructor, TTU Department of Biology Classes:

BIOL 4300 Undergraduate Research in Biology (Laboratory: 42 hrs.), Fall 2006,
 Spring 2007, Summer 2008, Fall 2010, Spring 2011, Spring 2013, Fall
 2013, Spring 2014
 BIOL 4100 Undergraduate Research in Biology (Lecture: 14 hr.), Fall 2009

Assistant Advisor, General Medical Sciences Second Year Projects:

Tristan Chaudhury, 2021
 Megan Murchison, 2021

Other Teaching Activities:

Advised on designing a Genetic Laboratory Class for TTU Undergraduates

Advisor, Post-doctoral Fellows:

Ashish Chougule, Ph.D. (2014-2016)
Namanh Buiphu, Ph.D. (2017-2020)
Subhash Kairamkonda, Ph.D. (2018-2019)

Advisor, Graduate Students:

Taylor Strong, M.S. Cell and Molecular Biology, 2007, (Fall 2005-Summer 2007)
Swetha Gadwala, M.S. Biotechnology, 2008, (Summer 2007-Summer 2008)
Tammy Carter, Ph.D. Cell and Molecular Biology, 2013, (Fall 2007-Fall 2013)
Ashish Chougule, Ph.D. Biochemistry and Molecular Genetics, 2014, (Fall 2009-Fall 2014)
Mahsa Servati, M.S. Physics (visiting Graduate Student), 2018, (Fall 2017-Summer 2018)
Christina Matl, M.S. Biotechnology, 2021, (Summer 2020-Spring 2021)
Alexis Rodriguez, M.S. Biotechnology, (Summer 2021-Spring 2022)
Abdul Shaik, Ph.D. Biochemistry, Cell and Molecular Biology (visiting Graduate Student), (Spring 2023-present)

Advisor, Rotation Students:

Taylor Strong: Summer 2005
Aya Ito: Fall 2005
Tammy Carter: Summer 2007
Michael Holliday: Summer 2007
Jaehyung Lee: Fall 2007
Gurvinder Kaur: Spring 2008
Ramya Vutukuru: Summer 2008
Ashish Chougule: Summer 2009
Jill Wright: Fall 2010
Kellsie Beasley, Spring 2015
Dylan Delaney, Spring 2017
Christina Matl, Spring 2020
Nghì (Skyler) Tran, Spring 2021
Alexis Rodriguez, Spring 2021
Ibrahim Shawky, Spring 2022
Alexis Rodriguez, Summer 2022 (for Ph.D.)
Nhi T. Nguyen, Summer 2022
Tanima Sharker, Fall 2022
Zachary Hurtado, Fall 2022
Devin Mangold, Spring 2023
Savannah Wysocki, Spring 2023

Advisor, Medical Students - Research:

Riley Junell: Summer 2017-2018

Advisor, Undergraduate Students - Research:

Karen Ng, Senior Thesis Supervisor 2001-2002 [Princeton University]

Chris Upton, Summer 2005 [TTU]
 Sashanda Russell, SABR 2005 [Voorhees College]
 Spencer Thomas, Summer 2006 - Summer 2008 [TTU]
 Brian Friesen, SABR 2006, 2007 [Oklahoma Baptist University]
 Bilal Siddiqui, SABR 2008, 2009 [Harvard University]
 Allison Spencer, HHMI and McNair Scholar, Summer 2008-Spring 2010 [TTU]
 Sishir Subedi, HHMI Scholar, Summer 2009-Spring 2011 [TTU]
 Stephanie Pleasant, HHMI Scholar, Summer 2012-Spring 2012 [TTU]
 Ryan Dean, Honors College, HHMI Scholar, Spring 2013-Summer 2014 [TTU]
 Victoria Young, SABR 2013 [TTU]
 Joe Bargo, 2014 [TTU]
 Alex Sanders, SABR 2014 [University of Central Arkansas]
 Jun Park, SABR 2019 [Cornell University]
 Jacob Moore, SABR 2021 [University of Texas, Austin]
 Hailey Hawkins, SABR 2022 [University of San Angelo]
 Satish Banjara, 2022 [University of Texas, Austin]

Advisor, High School Students - Research:

Carissa DeRanek, Clark Scholar, Summer 2014 [North Broward Prep. School,
 Coconut Creek, FL]
 Mirika Jambudi, Clark Scholar, Summer 2022 [The Pringly School, Basking
 Ridge, NJ]

Advisor, Volunteers - Research:

William Murray, 2018-2020

Dissertation, Thesis and Examination Committees:

Jin Yong Kim, Ph.D. 2005, Dissertation Defense, Advisor: Simon Williams, 2005
 Andrew Hockert, Qualifying Examination Committee, 2006
 Andrew Hockert, Ph.D. 2007, Advisor: Clinton MacDonald, 2005-2007
 Andrew Hockert, Dissertation Defense, Advisor: Clinton MacDonald, 2007
 Neha Kumari, M.S. 2009, Master's Committee, Advisor: Simon Williams, 2008-
 2009
 Jaehyung Lee, Ph.D. 2013, [TTU Biology], Advisor: Lauren Gollahon, 2009-
 2013
 Jaehyung Lee, Qualifying Examination Committee, 2009
 Jaehyung Lee, Dissertation Defense, [TTU Biology], Advisor: Lauren Gollahon,
 2013
 Huzefa Dungrawala, Ph.D. 2013, Advisor: Brandt Schneider, 2009-2012
 Huzefa Dungrawala, Dissertation Defense, Advisor: Brandt Schneider, 2012
 Leah Quisenberry, M.S. 2014, Ph.D. Candidate, Advisor: Joaquin Lado, 2009-
 2014
 Poonam Sonawane, Ph.D. 2013, Advisor: Min Kang, 2010-2013
 Poonam Sonawane, Dissertation Defense, Advisor: Min Kang, 2013
 Jill Wright, Ph.D. 2017, Advisor: Brandt Schneider, 2011-2017
 Armanjot Riar, Ph.D. 2014, Advisor: Lenin Mahimainathan and George

Henderson, 2011-2014
 Souvik Karmarkar, Ph.D. 2014, Advisor: Afzal Siddiqui, 2012-2014
 Souvik Karmarkar, Qualifying Examination Committee, Advisor: Afzal Siddiqui, 2013
 Brad Youngblood, Ph.D. 2014, Advisor: Clinton MacDonald, 2012-2014
 Brad Youngblood, Qualifying Examination Committee, Advisor: Clinton MacDonald, 2013
 Jessica Smith, Ph.D., 2018, Advisor: Brandt Schneider, 2014-2018
 Michael C. Holcomb, Ph.D. 2019 [TTU Physics], Advisor: Jerzy Blawdziewicz 2017-2019
 Hunter Edwards, Ph.D. Candidate [TTU Mechanical Engineering], 2017-2019
 Mahsa Servati, M.S. 2018, [TTU Physics], Advisor: Jerzy Blawdziewicz 2017-2018
 Kellsie Beasley, Ph.D., 2020, Immunology and Molecular Microbiology, Advisor: Gail Cornwall, Abdul Hamood, 2015-2020.
 Shawn Macha, Ph.D., Ph.D. Candidate, Advisor: Patrick Reynolds, 2021-2022
 Redowan Niloy, Ph.D. Qualifying Examination Committee [TTU Mechanical Engineering], Advisor: Jerzy Blawdziewicz, 2022.
 Alexis Rodriguez, Ph.D. Candidate, Advisor: Jannette Dufour, Summer 2023-present

Other Educational:

QEP Case Facilitator, Interprofessional Teamwork Symposium, October 25, 2013
 TTUHSC Student Research Week Judge, 2012
 TTU Undergraduate Research Conference, Judge, 2012
 TTUHSC Special Student Research Week Judge for Confidential Research, 2022
 Panelist for GSBS CV Workshop

Technology Licenses:

MIT Case #6397H: Negative Regulators of Growth Factor Receptors, 1994-2004.

Publications:

Redowan A. Niloy, Michael C. Holcomb, **Jeffrey H. Thomas** and Jerzy Blawdziewicz. (2023). The mechanics of cephalic furrow formation in the *Drosophila* embryo. bioRxiv/2023/524786. *Biophys. J.* (accepted)

Guo-Jie J. Gao, Michael Holcomb, **Jeffrey H. Thomas** and Jerzy Blawdziewicz. (2022). A Markov chain Monte Carlo model of mechanical-feedback-driven progressive apical constrictions captures the fluctuating collective cell dynamics in the *Drosophila* embryo. *Front. Phys.* 10:971112. doi: 10.3389/fphy.2022.971112.

Subhash Kairamkonda, Ashish B. Chougule, Kanika Sharma, Ming Yi, Giovanna Grandinetti Philip Liaw, Stephen Yanofsky, Solomon Ungashe, Mathew Holderfield, William Garland and **Jeffrey H. Thomas**. ETC Inhibitors Alter Oncogenic KRAS Signal Transduction. (submitted)

Michael C. Holcomb, Guo-Jie Jason Gao, Mahsa Servati, Dylan Schneider, Presley K. McNeely, **Jeffrey H. Thomas**, Jerzy Blawdziewicz. (2021). Mechanical feedback and robustness of apical constrictions in *Drosophila* embryo ventral furrow formation. *PLoS Comput. Biol.* 17(7): e1009173.

Tammy Y. Carter, Swetha Gadwala, Ashish B. Chougule, Nam P. N. Bui, Alex C. Sanders, Raghothama Chaerkady, Nathaly Cormier, Robert N. Cole and **Jeffrey H. Thomas**. (2019). Actomyosin Ring Contraction during Cellularization is Regulated in Part by Src64 Control of Actin 5C Protein Levels. *genesis* 57: e23297.

Guo-Jie Gao, Michael C. Holcomb, **Jeffrey H. Thomas** and Jerzy Blawdziewicz. (2016). Embryo as an active granular fluid: stress-coordinated cellular constriction chains. *J. Phys.: Condens. Matter* 28: 414021.

Online at: [arXiv:1601.02692](https://arxiv.org/abs/1601.02692) [cond-mat.soft]

<http://arxiv.org/abs/1601.02692>

*IOPselect article for novelty, significance, and potential future impact

**Selected for Journal Highlights 2016

(<http://iopscience.iop.org/journal/0953-8984/page/Highlights-of-2016>)

Ashish B. Chougule, Mary C. Hastert and **Jeffrey H. Thomas**. (2016). Drak is required for actomyosin organization during *Drosophila* cellularization. *G3: Genes, Genomes, Genetics* 6: 819-828.

Available online: doi:10.1534/g3.115.023515

Allison K. Spencer, Bilal Siddiqui and **Jeffrey H. Thomas**. (2015). Cell shape change and invagination of the cephalic furrow involves reorganization of F-actin. *Developmental Biology* 402: 192-207.

*Cover Image

Taylor C. Strong, Gurbinder Kaur and **Jeffrey H. Thomas**. (2011). Mutations in the catalytic loop HRD motif alter the activity and function of *Drosophila* Src64. *PLoS ONE* 6: e28100.

Taylor C. Strong and **Jeffrey H. Thomas**. (2011). Maternal and zygotic requirements for *src64* during *Drosophila* cellularization. *Genesis* 49: 912-918. First Published online 05 August 2011, DOI: 10.1002/dvg.20783

Jeffrey H. Thomas and Eric Wieschaus. (2004). *src64* and *tec29* are required for microfilament contraction during *Drosophila* cellularization. *Development* 131: 863-871.

Jeffrey H. Thomas*, Craig J. Ceol*, Hillel T. Schwartz and H. Robert Horvitz. (2003). New genes that interact with *lin-35 Rb* to negatively regulate the *let-60 ras* pathway in *Caenorhabditis elegans*. *Genetics* 164: 135-151.

*Co-first authors

Jeffrey H. Thomas and **H. Robert Horvitz**. (1999). The *C. elegans* gene *lin-36* acts cell autonomously in the *lin-35 Rb* pathway. *Development* 126: 3449-3459.

Other Publications:

Flybase gene description: *Src64* (Reference: Attrill, H., Falls, K., Goodman, J. L., Millburn, G. H., Antonazzo, G., Rey, A. J., & Marygold, S. J. (2016). FlyBase: establishing a Gene Group resource for *Drosophila melanogaster*. *Nucleic Acids Res*, 44(D1), D786-792. doi:10.1093/nar/gkv1046).

Holcomb, Michael C. et al. (2021), Data from: Mechanical feedback and robustness of apical constrictions in *Drosophila* embryo ventral furrow formation, Dryad, Dataset, <https://doi.org/10.5061/dryad.m7q37nv>

Abstracts:

Thomas, J.H. and H.R. Horvitz (1990). Synthetic Multivulva genes. East Coast *C. elegans* Meeting, Cambridge, MA.

Thomas, J.H. and H.R. Horvitz (1991). Synthetic Multivulva genes. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1992). Synthetic Multivulva genes. East Coast *C. elegans* Meeting, New York, NY.

Thomas, J.H. and H.R. Horvitz (1993). Synthetic Multivulva genes. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1994). *lin-36*, a class B synthetic Multivulva gene, encodes a novel protein. *Worm Breeder's Gazette* 13: 33.

Thomas, J.H. and H.R. Horvitz (1994). *lin-36*, a class B synthetic Multivulva gene, acts cell autonomously. *Worm Breeder's Gazette* 13: 34.

Thomas, J.H. and H.R. Horvitz (1994). Synthetic Multivulva genes. East Coast *C. elegans* Meeting, Baltimore, MD.

Thomas, J.H. and H.R. Horvitz (1994). A genetic and molecular analysis of the synthetic Multivulva genes: Genes involved in the specification of Cell fate in *Caenorhabditis elegans* vulval development. Predoctoral and Physician Postdoctoral Fellows Meeting, Chevy Chase, MD.

Thomas, J.H. and H.R. Horvitz (1995). The synthetic Multivulva genes may encode components of a cell signaling system, International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1996). Lineage analysis of synthetic Multivulva genes. East Coast *C. elegans* Meeting, Piscataway, NJ.

Lu, W.X., **J.H. Thomas**, and H.R. Horvitz (1997). Molecular analyses of the class B synthetic Multivulva genes *lin-37*, *lin-35* and *lin-53*. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and E. Wieschaus (1999). Loci controlling cephalic furrow formation. Annual Drosophila Research Conference 40, Seattle, WA.

Thomas, J.H. and E. Wieschaus (2000). Loci controlling cephalic furrow formation. Annual Drosophila Research Conference 41, Pittsburg, PA.

Thomas, J.H. and E.F. Wieschaus (2000). Genes controlling an epithelial invagination in Drosophila embryos. Molec. Biol. Cell 11 (Suppl.): 514a. 40th American Society for Cell Biology Annual Meeting, San Francisco, CA.

Hoang, R., T. Blankenship, J. Grosshans, P. Sung, **J. Thomas** and E. Wieschaus (2001). An ectopic expression approach to gastrulation. Annual Drosophila Research Conference 42, Washington, DC.

Thomas, J.H. and E. Wieschaus (2001). Genes controlling cephalic furrow formation in the Drosophila embryo, Annual Drosophila Research Conference 42, Washington, DC.

Thomas, J.H. and E. Wieschaus (2002). Analysis of a gene controlling cephalic furrow formation. Annual Drosophila Research Conference 43, San Diego, CA.

Thomas, J.H. and E. Wieschaus (2003). *src64* involvement in cellularization. Annual Drosophila Research Conference 44, Chicago, IL.

Thomas, J.H., K. Ng and E. Wieschaus (2005). Genes that control Drosophila cephalic furrow invagination. Morphogenesis and Regenerative Medicine Symposium, Charlottesville, VA.

Strong, T.C. and **J.H. Thomas** (2007). A Molecular Analysis of *src64* and its impact on cytoskeletal organization in the Drosophila embryo. Annual TTUHSC Student Research Week 19, Lubbock, TX.

Strong, T.C. and **J.H. Thomas** (2007). A molecular analysis of *Src64* during cellularization. Annual Drosophila Research Conference 48, Philadelphia, PA.

Thomas, J.H., T.C. Strong, R. Rosales and S. Thomas (2007). Drosophila Src64 and the cytoskeleton. Texas Tech Cancer Research Symposium, Lubbock, TX.

Carter, T.Y. and **J.H. Thomas** (2008). The role of *Csk* in regulating *src64* during *Drosophila* cellularization and microfilament ring contraction. Annual TTUHSC Student Research Week 20, Lubbock, TX.

Gadwala, S. and **J.H. Thomas** (2008). Role of tyrosine phosphorylated proteins in *Drosophila* embryo development. Annual TTUHSC Student Research Week 20, Lubbock, TX.

Carter, T.Y., N. Cormier and **J.H. Thomas** (2009). *Src64* signaling pathway during *Drosophila* cellularization. Annual TTUHSC Student Research Week 21, Lubbock, TX.

Spencer, A.K. and **J.H. Thomas** (2009) Visualizing the cephalic furrow formation during *Drosophila* gastrulation. Annual TTUHSC Student Research Week 21, Lubbock, TX.

Spencer, A.K. and **J.H. Thomas** (2009) Visualizing the cephalic furrow formation during *Drosophila* gastrulation. Annual TTU Undergraduate Research Conference, Lubbock, TX.

Carter, T.Y., S. Gadwala, N. Cormier and **J.H. Thomas** (2009). *src64* signaling in *Drosophila* embryos during cellularization. TTU Research Days Conference, Lubbock, TX.

Carter, T.Y., S. Gadwala, N. Cormier and **J.H. Thomas** (2009). *src64* signaling pathway in *Drosophila* Embryos during cellularization. Center for Cardiovascular Disease and Stroke Conference, Lubbock, TX.

Spencer, A.K., and **J.H. Thomas** (2009). Visualizing cephalic furrow formation during *Drosophila* gastrulation. UNTHSC Undergraduate Research Symposium, Fort Worth, TX.

Carter, T.Y., N. Cormier and **J.H. Thomas** (2010). *src64* signaling in *Drosophila* embryos during cellularization. Annual TTUHSC Student Research Week 22, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2010). Regulation of actomyosin contraction by *Src64* through *MLCK* and *Rok* during cellularization. Annual TTUHSC Student Research Week 22, Lubbock, TX.

Subedi, S. and J.H. Thomas (2010). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. TTU Undergraduate Research Conference, Lubbock, TX.

Carter, T.Y., S. Gadwala, N. Cormier and **J.H. Thomas** (2010). *src64* signaling in *Drosophila* embryos during cellularization. TTU Research Days Conference, Lubbock, TX.

Roh, J., H. Singh, A. Tarpara, M. Yim, Q. Zaidi, and **J.H. Thomas** (2010). Implementation of mobile clinic program in overcoming barriers to health care for treating Type II Diabetics in rural west Texas. School of Medicine Population Health Project EXPO, Lubbock, TX.

Thomas, J.H., Spencer, A.K., Siddiqui, B. and S. Subedi (2010). Multiple morphogenetic processes drive *Drosophila* cephalic furrow infolding. Society for Developmental Biology 2010 Southwest Regional Meeting, Austin, TX.

Subedi, S. and **J.H. Thomas** (2010). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. UNTHSC Undergraduate Research Symposium, Fort Worth, TX.

Thomas, J.H., T.C. Strong, G. Kaur and J. Lee (2010). Role of the catalytic loop HRD motif in Src activity and function. CPRIT Inaugural Innovations in Cancer Research and Prevention Conference, Austin, TX.

Carter, T.Y., N. Cormier, M. Zabet and **J.H. Thomas** (2011). *src64* signaling in *Drosophila* embryos during cellularization. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Subedi, S. and **J.H. Thomas** (2011). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. Annual TTU Research Days Conference, Lubbock, TX.

Subedi, S. and **J.H. Thomas** (2011). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. Annual TTU Research Days Conference, Lubbock, TX.

Subedi, S. and **J.H. Thomas** (2011). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. National Conferences on Undergraduate Research, Ithaca, NY.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. TTUHSC Annual Cancer Symposium, Amarillo, TX.

Thomas, J.H., R. Rosales and A.B. Chougule (2011). Src64 regulates myosin regulatory light chain during basal closure of the *Drosophila* cellular blastoderm. Society for Developmental Biology 70th Annual Meeting, Chicago, IL. *Abstract published in *Developmental Biology* (2011) 356: 108-109. **Presented as selected platform presentation, July 23, 2011.

Carter, T.Y., S. Gadwala, R. Cole, N. Cormier, M. Zabet and **J.H. Thomas** (2012). *src64* signaling in *Drosophila* embryos during cellularization. Annual TTUHSC Student Research Week 24, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2012). Regulation of actomyosin contraction by Src64 through Rok and MLCK during *Drosophila* cellularization. Annual TTUHSC Student Research Week 24, Lubbock, TX.

Chougule, A.B., R. Rosales, **J.H. Thomas** (2012). Regulation of actomyosin contraction during *Drosophila* cellularization. Model Organisms to Human Biology - Cancer Genetics Meeting (Genetics Society of America), Washington, D.C.

Thomas, J.H., A.B. Chougule and R. Rosales (2012). Regulation of nonmuscle myosin II during *Drosophila* cellularization. Society of Developmental Biology 71st Annual Meeting, Montreal, Quebec, Canada. *Abstract title published in *Developmental Biology* (2012) 368: 150.

Thomas, J.H., T.Y. Carter, M. Zabet-Moghaddam, R.N. Cole (2012). Identification of targets of a *Drosophila* homologue of *src*, a gene involved in breast cancer. Gender Specific Women's Health Conference, Lubbock, TX. October 2012.

Chougule, A.B., R. Rosales, **J.H. Thomas** (2013). Regulation of actomyosin dynamics by Rho kinase and myosin light chain kinases during *Drosophila* cellularization. Annual TTUHSC Student Research Week 25, Lubbock, TX., March 2013.

Thomas, J.H., T.Y. Carter, M. Zabet-Moghaddam, R.N. Cole (2013). New cellular roles for a *Drosophila* homologue of *src*, a gene involved in breast cancer. Gender Specific Women's Health Conference, Lubbock, TX. November 2013.

Chougule, A.B., M.C. Hastert, **J.H. Thomas** (2014). Drak is required for actomyosin assembly or organization during *Drosophila* cellularization. Annual *Drosophila* Research Conference 55, San Diego, CA.

Chougule, A.B., M.C. Hastert, R. Rosales, **J.H. Thomas** (2014). Regulation of actomyosin dynamics by Rho kinase and myosin light chain kinases during *Drosophila* cellularization. Annual TTUHSC Student Research Week 26, Lubbock, TX., March 2014.

Thomas, J.H., A. Spencer, A. and B. Siddiqui (2014). Formation of the cephalic furrow during *Drosophila* gastrulation. Society of Developmental Biology 73rd Annual Meeting, University of Washington, Seattle, WA.

Holcomb, M., G-J. Gao, **J. Thomas** and J. Blawdziewicz (2016). Embryo as an active granular fluid: stress-coordinated cellular constriction chains. 69th Annual Meeting of the APS Division of Fluid Dynamics. Portland, Oregon. November, 2016. *Abstract published in *Bulletin of the American Physical Society*, 61: 20, D30.00002.

Blawdziewicz, J., G-J. Gao, M. Holcomb and **J. Thomas** (2017). Stochastic phase of ventral furrow formation in the *Drosophila* Embryo: cellular constriction chains, mechanical feedback and robustness. American Physical Society, March Meeting. New Orleans, Louisiana. March, 2017.

Holcomb, M., Blawdziewicz, J., G-J. Gao and **Thomas, J.** (2018). Mechanical Feedback during Ventral Furrow Formation in *Drosophila*: Intercellular Coordination and Robustness. American Physical Society Physics Meeting. Los Angeles, California. March, 2018.

Servati, M., Blawdziewicz, J. and **Thomas, J.** (2018). Exploring Cellular Constriction Chain Dynamics in the *Drosophila* Embryo. American Physical Society Physics Meeting. Los Angeles, California. March, 2018.

Sharma, K., Y. Ming, A.B. Chougule, P. Liaw, S. Yanofsky, S. Ungashe, **J.H. Thomas**, W. Garland, F. McCormick, M. Holderfield (2018). KRAS and Metabolism: An Interesting Interplay. Targeting RAS-Driven Cancers Meeting. American Association for Cancer Research December, 2018.

Bui, A.P.N., T.Y. Carter, **J.H. Thomas** (2019). Maternal RNAi screening of potential Src64 targets in actomyosin ring contraction during cellularization. Genetics Society of America 60th Annual *Drosophila* Research Conference, Dallas, Texas, March, 2019.

Kairamkonda, S., A.B. Chougule, A. Lenneck, P. Liaw, S. Yanofsky, W. Garland, **J.H. Thomas** (2019). Screening for inhibitors of human oncogenic KRAS using a *Drosophila melanogaster* model. Genetics Society of America 60th Annual *Drosophila* Research Conference, Dallas, Texas, March, 2019.

Park J, **Thomas JH** (2019). Analysis of a Gene Involved in Tissue Folding in the Embryo. SABR Symposium, TTUHSC, August 2019

Blawdziewicz J, Holcomb MC, Gao GJJ, Servati M, Schneider D, Presley Mcneely P, **Thomas JH** (2019). Mechanical Feedback during Ventral Furrow Formation in the *Drosophila* embryo: Intercellular Coordination and Robustness. VI International Conference on Particle-based Methods. Fundamental and Applications. Particles 2019, Barcelona, Spain, October 2019

Redowan AN, **Thomas J**, Blawdziewicz J (2022). Vertex Modeling of Cephalic Furrow Formation. Mechanics of Cell and Tissues Session. American Physical Society – Physics, APS March Meeting, Chicago, IL, March 14-18, 2022.

Niloy RA, Holcomb MC, **Thomas JH**, Blawdziewicz J (2022). The Mechanics of Cephalic Furrow Formation Using an Advanced Vertex Model. US National Congress of Theoretical and Applied Mechanics, Austin, TX, Summer, 2022.

Holcomb MC, Gao GJJ, **Thomas JH**, Blawdziewicz J (2023). Capturing the Dynamics of Mechanical-feedback-driven Apical Constrictions in the *Drosophila* Embryo using a Markov Chain Monte Carlo Model. Texas Academy of Science 126th Annual Meeting, San Angelo, TX, March. 2023.

Poster Presentations:

Thomas, J.H. and H.R. Horvitz (1990). Synthetic Multivulva genes. East Coast *C. elegans* Meeting, Cambridge, MA.

Thomas, J.H. and H.R. Horvitz (1991). Synthetic Multivulva genes. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1992). Synthetic Multivulva genes. East Coast *C. elegans* Meeting, New York, NY.

Thomas, J.H. and H.R. Horvitz (1993). Synthetic Multivulva genes. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1995). The synthetic Multivulva genes may encode components of a cell signaling system, International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and H.R. Horvitz (1996). Lineage analysis of synthetic Multivulva genes. East Coast *C. elegans* Meeting, Piscataway, NJ.

Lu, W.X., **J.H. Thomas**, and H.R. Horvitz (1997). Molecular analyses of the class B synthetic Multivulva genes *lin-37*, *lin-35* and *lin-53*. International *C. elegans* Meeting, Madison, WI.

Thomas, J.H. and E. Wieschaus (1999). Loci controlling cephalic furrow formation. Annual *Drosophila* Research Conference 40, Seattle, WA.

- Thomas, J.H.** and E. Wieschaus (2000). Loci controlling cephalic furrow formation. Annual Drosophila Research Conference 41, Pittsburg, PA.
- Thomas, J.H.** and E.F. Wieschaus (2000). Genes controlling an epithelial invagination in Drosophila embryos. Molec. Biol. Cell 11 (Suppl.) 514a. 40th American Society for Cell Biology Annual Meeting, San Francisco, CA.
- Hoang, R., T. Blankenship, J. Grosshans, P. Sung, **J. Thomas** and E. Wieschaus (2001). An ectopic expression approach to gastrulation. Annual Drosophila Research Conference 42, Washington, DC.
- Thomas, J.H.** and E. Wieschaus (2001). Genes controlling cephalic furrow formation in the Drosophila embryo. Annual Drosophila Research Conference 42, Washington, DC.
- Thomas, J.H.** and E. Wieschaus (2002). Analysis of a gene controlling cephalic furrow formation. Annual Drosophila Research Conference 43, San Diego, CA.
- Thomas, J.H.** and E. Wieschaus (2002). Genes involved in cephalic furrow formation and actin-myosin contractility in the Drosophila embryo. Symposium in Honor of the Recipients of the 2002 Nobel Prize in Medicine or Physiology, Cambridge, MA. (No Abstract)
- Thomas, J.** and E. Wieschaus (2003). *src64* mediates actin-myosin contractility during Drosophila cellularization. Inaugural Morphogenesis and Regenerative Medicine Symposium, Charlottesville, VA. (No Abstract)
- Thomas, J.H.**, K. Ng and E. Wieschaus (2005). Genes that control Drosophila cephalic furrow invagination. Morphogenesis and Regenerative Medicine Symposium, Charlottesville, VA.
- Strong, T.C. and **J.H. Thomas** (2007). A Molecular Analysis of *src64* and its impact on cytoskeletal organization in the Drosophila embryo. Annual TTUHSC Student Research Week 19, Lubbock, TX.
- Strong, T.C. and **J.H. Thomas** (2007). A molecular analysis of *Src64* during cellularization. Annual Drosophila Research Conference 48, Philadelphia, PA.
- Carter, T.Y. and **J.H. Thomas** (2008). The role of *Csk* in regulating *src64* during Drosophila cellularization and microfilament ring contraction. Annual TTUHSC Student Research Week 20, Lubbock, TX. *Award: 3rd Place, Junior Ph.D. Division, Institutional.

Gadwala, S. and **J.H. Thomas** (2008). Role of tyrosine phosphorylated proteins in *Drosophila* embryo development. Annual TTUHSC Student Research Week 20, Lubbock, TX.

Carter, T.Y., N. Cormier and **J.H. Thomas** (2009). Src64 signaling pathway during *Drosophila* cellularization. Annual TTUHSC Student Research Week 21, Lubbock, TX. *Award: 2nd Place, Senior Ph.D. Student Division, Institutional.

Spencer, A.K. and **J.H. Thomas** (2009) Visualizing the cephalic furrow formation during *Drosophila* gastrulation. Annual TTUHSC Student Research Week 21, Lubbock, TX.

Spencer, A.K. and **J.H. Thomas** (2009) Visualizing the cephalic furrow formation during *Drosophila* gastrulation. Annual TTU Undergraduate Research Conference, Lubbock, TX.

Carter, T.Y., S. Gadwala, N. Cormier and **J.H. Thomas** (2009). *src64* signaling in *Drosophila* embryos during cellularization. TTU Research Days Conference, Lubbock, TX. *Award: 1st Place: Science I Division, TTU Institutional Poster Competition.

Carter, T.Y., S. Gadwala, N. Cormier and **J.H. Thomas** (2009). *src64* signaling pathway in *Drosophila* Embryos during cellularization. Center for Cardiovascular Disease and Stroke Conference, Lubbock, TX.

Spencer, A.K., and **J.H. Thomas** (2009). Visualizing cephalic furrow formation during *Drosophila* gastrulation. UNTHSC Undergraduate Research Symposium, Fort Worth, TX.

Carter, T.Y., N. Cormier and **J.H. Thomas** (2010). *src64* signaling in *Drosophila* embryos during cellularization. Annual TTUHSC Student Research Week 22, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2010). Regulation of actomyosin contraction by Src64 through MLCK and Rok during cellularization. Annual TTUHSC Student Research Week 22, Lubbock, TX.

Subedi, S. and J.H. Thomas (2010). A study of the *ImpE1* gene and its role in cephalic furrow formation in the *Drosophila* embryo. TTU Undergraduate Research Conference, Lubbock, TX.

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Roh, J., H. Singh, A. Tarpara, M. Yim, Q. Zaidi, and **J.H. Thomas** (2010). Implementation of mobile clinic program in overcoming barriers to health care for treating Type II Diabetics in rural west Texas. School of Medicine Population Health Project EXPO, Lubbock, TX.

Thomas, J.H., Spencer, A.K., Siddiqui, B. and S. Subedi (2010). Multiple morphogenetic processes drive Drosophila cephalic furrow infolding. Society for Developmental Biology 2010 Southwest Regional Meeting, Austin, TX.

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Thomas, J.H., T.C. Strong, G. Kaur and J. Lee (2010). Role of the catalytic loop HRD motif in Src activity and function. CPRIT Inaugural Innovations in Cancer Research and Prevention Conference, Austin, TX. (Selected Poster)

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. Annual GSBS Retreat, Lubbock, TX. (No Abstract)

Carter, T.Y., N. Cormier, M. Zabet and **J.H. Thomas** (2011). *src64* signaling in Drosophila embryos during cellularization. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Subedi, S. and **J.H. Thomas** (2011). A study of the *ImpE1* gene and its role in cephalic furrow formation in the Drosophila embryo. Annual TTUHSC Student Research Week 23, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2011). Regulation of actomyosin contraction by Src64 through Rok and MLCK during cellularization. Annual TTU Research Days Conference, Lubbock, TX.

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Subedi, S. and **J.H. Thomas** (2011). A study of the *ImpE1* gene and its role in cephalic furrow formation in the Drosophila embryo. National Conferences on Undergraduate Research, Ithaca, NY.

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Carter, T.Y., S. Gadwala, R. Cole, N. Cormier, M. Zabet and **J.H. Thomas** (2012). *src64* signaling in *Drosophila* embryos during cellularization. Annual TTUHSC Student Research Week 24, Lubbock, TX.

Chougule, A.B., R. Rosales and **J.H. Thomas** (2012). Regulation of actomyosin contraction by Src64 through Rok and MLCK during *Drosophila* cellularization. Annual TTUHSC Student Research Week 24, Lubbock, TX.

Chougule, A.B., R. Rosales, **J.H. Thomas** (2012). Regulation of actomyosin contraction during *Drosophila* cellularization. Model Organisms to Human Biology - Cancer Genetics Meeting (Genetics Society of America), Washington, D.C.

Thomas, J.H., A.B. Chougule and R. Rosales (2012). Regulation of nonmuscle myosin II during *Drosophila* cellularization. Society of Developmental Biology 71st Annual Meeting, Montreal, Quebec, Canada.

Thomas, J.H., T.Y. Carter, M. Zabet-Moghaddam, R.N. Cole (2013). New cellular roles for a *Drosophila* homologue of *src*, a gene involved in breast cancer. Gender Specific Women's Health Conference, Lubbock, TX. November 2013.

Thomas, J.H., A. Spencer, A. and B. Siddiqui (2014). Formation of the cephalic furrow during *Drosophila* gastrulation. Society of Developmental Biology 73rd Annual Meeting, University of Washington, Seattle, WA.

Holcomb, M., Gao, G-J., **Thomas, J.H.** and Blawdziewicz, J. (2016). *Drosophila melanogaster* Embryo as an Active Granular Fluid: Intercellular Coordination via Mechanical Feedback during Morphogenesis. AICHE Annual Meeting, San Francisco, November 2016.

Holcomb, M., Gao, G-J., **Thomas, J.H.** and Blawdziewicz, J. (2016). Embryo as an Active Granular Fluid: Stress-Coordinated Cellular Constriction Chains. 69th Annual Meeting of the American Physical Society Division of Fluid Dynamics, Portland, Oregon, November 2016.

Holcomb, M., Blawdziewicz, J., G-J. Gao and **Thomas, J.** (2017). Mechanical Feedback during Ventral Furrow Formation in *Drosophila*: Intercellular Coordination and Robustness. American Physical Society Physics Meeting. Los Angeles, California. March, 2017.

Holcomb, M., Blawdziewicz, J., G-J. Gao and **Thomas, J.** (2017). Mechanical Feedback during Ventral Furrow Formation in *Drosophila*: Intercellular

Coordination and Robustness. Meeting of the Texas Section of the American Physical Society, AAPT and Zone 13 of the Society of Physics Students. Richardson, Texas. October, 2017.

Blawdziewicz, J., Gao, G-J., Holcomb, M., and **Thomas, J. H.** (2017). Stochastic Phase of Ventral Furrow Formation in *Drosophila* Embryo: Cellular Constriction Chains, Mechanical Feedback and Robustness. American Physical Society Physics Meeting. New Orleans, Louisiana. March, 2017.

Servati, M., Blawdziewicz, J. and **Thomas, J.** (2018). Exploring Cellular Constriction Chain Dynamics in the *Drosophila* Embryo. American Physical Society Physics Meeting. Los Angeles, California. March, 2018.

Servati, M., Holcomb, M.C., Gao, G-J.J., Schneider, D., Blawdziewicz, J. and **Thomas, J.H.** (2018). Exploring Cellular Constriction Chain Dynamics in the *Drosophila* Embryo. Annual Graduate Student Poster Competition. Los Angeles, California. March, 2018.

Sharma, K., Y. Ming, A.B. Chougule, P. Liaw, S. Yanofsky, S. Ungashe, **J.H. Thomas**, W. Garland, F. McCormick, M. Holderfield (2018). KRAS and Metabolism: An Interesting Interplay. Targeting RAS-Driven Cancers Meeting. American Association for Cancer Research December, 2018.

Bui, A.P.N., T.Y. Carter, **J.H. Thomas** (2019). Maternal RNAi screening of potential Src64 targets in actomyosin ring contraction during cellularization. Genetics Society of America 60th Annual *Drosophila* Research Conference, Dallas, Texas, March, 2019.

Kairamkonda, S., A.B. Chougule, A. Lenneck, P. Liaw, S. Yanofsky, W. Garland, **J.H. Thomas** (2019). Screening for inhibitors of human oncogenic KRAS using a *Drosophila melanogaster* model. Genetics Society of America 60th Annual *Drosophila* Research Conference, Dallas, Texas, March, 2019.

Holcomb, M., Gao, G-J., Servati, M., Schneider, D., McNeely, P., **Thomas, J.**, Blawdziewicz. (2019). Cellular Constriction Chains in the *Drosophila* Embryo: Mechanical Feedback and Robustness of Morphogenetic Movements. Joint Meeting of the Texas Sections of APS, AAPT and Zone 13 of the SPS, Lubbock, Texas, October 2019.

Blawdziewicz, J., Holcomb, M. C., Gao, G. J., Servati, M., Schneider, D., Presley McNeely, P., **Thomas, J. H.** (2019). Mechanical Feedback during Ventral Furrow Formation in the *Drosophila* embryo: Intercellular Coordination and Robustness., Particles 2019, VI International Conference on Particle-based Methods, Barcelona, Spain, October 2019.

Talks:

Synthetic Multivulva Genes, East Coast *C. elegans* Meeting, Johns Hopkins University, Baltimore, MD, June, 1994.

A Genetic and Molecular Analysis of the Synthetic Multivulva Genes: Genes Involved in the Specification of Cell Fate in *Caenorhabditis elegans* Vulval Development, Predoctoral and Physician Postdoctoral Fellows Meeting, Howard Hughes Medical Institute Headquarters, Chevy Chase, MD, June, 1994.

Synthetic Multivulva Genes, Boston Area Worm Meeting, Massachusetts Institute of Technology, Cambridge, MA, December, 1994.

Loci Affecting Cephalic Furrow Formation in *Drosophila*, Princeton University Department of Molecular Biology Retreat, Vernon NJ, October, 1999.

src64 Involvement in Cellularization, 44th Annual *Drosophila* Research Conference, Chicago, IL, March, 2003.

The Role of Src in *Drosophila* Cellular and Tissue Morphogenesis, Invited Speaker: Institute of Biosciences and Technology, Texas A&M University, Houston, TX, January, 2004

The Role of Src in *Drosophila* Cellular and Tissue Morphogenesis, Invited Speaker: Columbus Children's Hospital, Columbus, OH, May, 2004

The Role of Src in *Drosophila* Cellular and Tissue Morphogenesis, Invited Speaker: Texas Tech University Health Sciences Center, Lubbock, TX, July, 2004

Genes that Control Cell Shape Changes and Movements in the *Drosophila* Embryo, Invited Speaker: Baylor University, Waco, TX, March, 2005.

Regulation of Microfilament Dynamics during *Drosophila* Cellularization, Invited Speaker: Department of Physiology, Texas Tech University Health Sciences Center, Lubbock, TX, October, 2006.

Drosophila Src64 and the Cytoskeleton. Texas Tech Cancer Research Symposium, Lubbock, TX, March, 2007.

Regulation of the Microfilament Cytoskeleton by the *Drosophila src* Homologue, *src64*, Invited Speaker: Department of Pharmacology and Neuroscience, Texas Tech University Health Sciences Center, Lubbock, TX, November, 2007.

Drosophila Src Signaling and the Regulation of Actomyosin Contraction, Invited Speaker: The Commonwealth Medical College, Scranton, PA, December 2, 2010.

Src64 regulates myosin regulatory light chain during basal closure of the *Drosophila* cellular blastoderm. Selected Short Talk: Society for Developmental Biology 70th Annual Meeting, Chicago, IL, July 23, 2011.

Cellular Morphogenesis in the *Drosophila* Embryo. Invited Speaker: Texas Institute for Environmental and Human Health, Lubbock, TX, April 16, 2012.

Identification of targets of a *Drosophila* homologue of *src*, a gene involved in breast cancer. Laura W. Bush Institute for Women's Health: Gender Specific Women's Health Conference, Lubbock, TX. October 3, 2012.

Developmental Biology and Genetics, GSBS Retreat, Lubbock, TX, September, 2013.

Regulation of Actin Organization and Myosin Activity in the *Drosophila* Embryo. Invited Speaker, Department of Immunology and Molecular Microbiology, Texas Tech University Health Sciences Center, Lubbock, TX, April 9, 2014

Overview of Recent Developments and Findings in *Drosophila* Research. Invited Speaker, Tosk, Inc., Sunnyvale, CA, July 29, 2014.

Update on Fly Research in the Thomas Laboratory at Texas Tech. Invited Speaker, Tosk, Inc., Sunnyvale, CA, July 29, 2014.

Cell Shape Change and the Generation of Embryonic Structure. Invited Speaker, Department of Immunology and Molecular Microbiology, Texas Tech University Health Sciences Center, Lubbock, TX, October, 2016

Developing Screens for Other Oncogenic KRAS Mutants. Invited Speaker, Tosk, Inc., Sunnyvale, CA, August 7, 2018.

Flies and Oncogenes. Invited Speaker, Department of Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, Lubbock, TX, September, 2018.

Searching for Mechanisms of Morphogenesis. Invited Speaker, Department of Cell Biology and Biochemistry, Texas Tech University Health Sciences Center, Lubbock, TX, November, 2020.

Architecture and Form in Embryonic Development. Invited Speaker. The Anson L. Clark Scholars Program, Honors College, Texas Tech University, Lubbock, TX, June 20, 2022.

Research Support, Submitted:

NIH-NCI-R03 (Co-I)
R03 (Liu)

09/01/23 – 08/31/25

The biophysical mechanism of selective cancer treatment using low-intensity ultrasound

Role: Co-Investigator (5% effort)

CPRIT- Grant

TREC-PSA (Liu)

A feasibility study of selective cancer ablation in a solid tumor model using ultrasound-induced resonance: A biomechanical strategy for cancer treatment

Role: Collaborator/Consultant (5% effort)

NIH-NIGMS R35

04/01/2024-03/31/2029

Morphogenetic Mechanisms in the *Drosophila* Blastoderm

Role: P.I.

Research Support, Current:

The CH Foundation

01/01/2023-12/31/2023

Drosophila as a model for AD/ADRD: Evaluation of INDY (I'm Not Dead Yet) as a susceptibility gene for dementia.

Principal Investigator: Jeffrey H. Thomas

\$54,833.00 direct costs

Research Support, to be Resubmitted:

NIH-NCI-R03 (Co-I)

09/01/23 – 08/31/25

R03 (Liu)

The biophysical mechanism of selective cancer treatment using low-intensity ultrasound

Role: Co-Investigator (5% effort)

CPRIT- Grant

TREC-PSA (Liu)

A feasibility study of selective cancer ablation in a solid tumor model using ultrasound-induced resonance: A biomechanical strategy for cancer treatment

Role: Collaborator/Consultant (5% effort)

NIH-NIGMS R35

04/01/2024-03/31/2029

Morphogenetic Mechanisms in the *Drosophila* Blastoderm

Role: P.I.

Research Support, Previous:

Anson L. Clark Foundation

05/01/2022-07/30/2022

Whamy and Actomyosin Ring Constriction during *Drosophila* Cellularization

Principal Investigator: Jeffrey H. Thomas

\$750.00 direct costs

- South Plains Foundation Seed 09/01/2019-12/31/2020
 C-GAP, a Key to the Role of the Cytoskeleton during Epithelial Folding
 Principal Investigator: Jeffrey H. Thomas
 \$15,000 direct costs
- 2R44-CA189549-02A1 (NIH-NCI) 09/01/2017-08/31/2019
 Suppressors of kRAS Activity Discovered Using a Fruit Fly-based *in-vivo* Screen
 Principal Investigators: William A. Garland, Jeffrey H. Thomas
 Role: Multiple-PI
 \$1,538,363 direct costs (\$1,999,872 total costs)
- South Plains Foundation Seed 09/01/2017-08/31/2018
 Functional identification of signaling and cytoskeletal proteins regulated by Src64
 Principal Investigator: Jeffrey H. Thomas
 \$15,000 direct costs
- 1R43CA189549-01 (NIH-NCI) 07/01/2014-06/30/2015
 Screening with *D. melanogaster* to discover inhibitors of G12Vmutated KRAS.
 Principal Investigator: William A. Garland
 Role: Co-Investigator
 (5% effort, \$204,033/\$49,142)
 Goal: To develop screening methods in *Drosophila* to discover small chemical inhibitors to specifically target human KRAS.
- Anson L. Clark Foundation 05/01/2014-07/30/2014
 The Role of *Src64* in Nuclear Distribution in *Drosophila* Syncytial Blastoderm and Pre-blastoderm Development
 Principal Investigator: Jeffrey H. Thomas
 \$750.00 direct costs
- LWBIWH and UMC Women's Health Seed Grant 09/01/2013-08/31/2014
 Regulation of oxidative stress response by src
 Principal Investigator: Jeffrey H. Thomas
 (5% effort, \$20,000)
 Goal: To determine how Src64 regulates oxidative stress response in the early *Drosophila* embryo.
- South Plains Foundation Seed Grant 09/01/2012-08/31/2013
 Analysis of the role of *arroyo* in epithelial folding
 Principal Investigator: Jeffrey H. Thomas
 (5% effort, \$15,000)
 Goal: To determine the epithelial folding defects and cellular defects of the *arroyo* mutation, and to molecularly identify the *arroyo* gene.
- TTUHSC Preliminary Data Grant 01/01/2012-12/31/2012
 Regulation of Actomyosin Contraction by a Src-Rok-MLCK Pathway

Principal Investigator: Jeffrey H. Thomas
(5% effort, \$20,000)

Goal: To determine how drak regulates actomyosin assembly and contraction in the early *Drosophila* embryo.

09BGIA2260616 07/01/2009-06/30/2012*

American Heart Assoc., South-Central Affiliate-Beginning Grant-in-Aid
Regulation of the Microfilament Cytoskeleton by Src64

Principal Investigator: Jeffrey H. Thomas
(10% effort, \$127,274)

Goal: To determine how Src64 controls microfilament contraction in the early *Drosophila* embryo and to identify its effector proteins.

*No-cost extension from 07/01/2011-06/30/2012

TTU Center for Undergraduate Research Grant 08/08/2011-08/31/2011

Studies on Morphogenesis of the *Drosophila* Embryo

Principal Investigator: Jeffrey H. Thomas
(1% effort, \$1,500)

Goal: To investigate the mechanisms and signaling pathways involved in morphogenesis in the early *Drosophila* embryo.

LWBIWH and UMC Women's Health Seed Grant 02/01/2010-01/31/2011

Identification of Proteins in a src Signaling Pathway

Principal Investigator: Jeffrey H. Thomas
(5% effort, \$20,000)

Goal: To use proteomics and biochemical approaches to identify signaling and effector molecules that act downstream of Src64 to control microfilament contraction in the *Drosophila* embryo.

TTUHSC Preliminary Data Grant Program: 01/01/2009-12/31/2009

Src64 and the Control of Microfilament Dynamics

Principal Investigator: Jeffrey H. Thomas
(5% effort, \$20,000)

Goal: To use proteomics and biochemical approaches to identify signaling and effector molecules that act downstream of Src64 to control microfilament contraction in the *Drosophila* embryo.

South Plains Foundation Grant: 09/01/2007-08/31/2008

The Role of *csk* in Regulating *src64* Activity in the Early *Drosophila* Embryo.

Principal Investigator: Jeffrey H. Thomas
(5% effort, \$10,000).

Goal: To determine whether *Csk* is a negative regulator of *src64* in microfilament contraction during *Drosophila* cellularization.

Southwest Cancer Treatment and Research Center 03/01/2007 - 02/29/2008

Mechanisms of *Src64* Control of Microfilament Contraction

Principal Investigator: Jeffrey H. Thomas
(5% Effort, \$10,000)

Goal: To determine whether *src64* controls microfilament ring contraction during *Drosophila* cellularization by regulating myosin activity or by organizing actin.

South Plains Foundation Grant: 09/01/2005-08/31/2006
Determination of the Mechanism of *src64*-mediated Control of Cytoskeletal Contraction.

Principal Investigator: Jeffrey H. Thomas
(20% effort, \$10,000).

Goal: To determine whether *src64* controls microfilament ring contraction during *Drosophila* cellularization by regulating myosin activity or by organizing actin.

School of Medicine Seed Grant: 09/01/2005-08/31/2006
Analysis of a *Drosophila* Gene that Delays Epithelial Invagination.

Principal Investigator: Jeffrey H. Thomas
(15% effort, \$20,000).

Goal: To molecularly identify the newly discovered gene *paused furrow* and characterize its role in *Drosophila* cephalic furrow formation.