Jason A. Stewart

Western Kentucky University
Department of Biological Sciences
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EDUCATION

Ph.D. in Biochemistry	**2009**	University of Rochester, Rochester, NY
B.S. in Microbiology	**2003**	Brigham Young University, Provo, UT

POSITIONS

Assistant Professor	**2023-present**	Department of Biological Sciences Western Kentucky University, Bowling Green, KY
Assistant Professor	**2014-2023**	Department of Biological Sciences University of South Carolina, Columbia, SC
Postdoctoral Fellow	**2009-2014**	Department of Cancer Biology University of Cincinnati, Cincinnati, OH

RESEARCH EXPERIENCE

Assistant Professor (08/2023 to present) Principal Investigator
Western Kentucky University (WKU), Bowling Green, KY
Projects: Characterizing the roles of the human CTC1-STN1-TEN1 (CST) complex in telomere maintenance, DNA replication, and DNA repair

Assistant Professor (08/2014 to 05/2023) Principal Investigator
University of South Carolina (USC), Columbia, SC
Projects: Characterizing the roles of the human CTC1-STN1-TEN1 (CST) complex in telomere maintenance, DNA replication, and DNA repair

Postdoctoral Fellow (07/2009 to 08/2014) Laboratory of Dr. Carolyn M. Price
University of Cincinnati, Cincinnati, OH
Project: Functions of the human CST complex in DNA replication and genome stability

Postdoctoral Fellow (04/2009 to 07/2009) Laboratory of Dr. Robert A. Bambara
University of Rochester, Rochester, NY
Project: Biochemical functions of Dna2

Graduate Research Assistant (06/2005 to 04/2009) Laboratory of Dr. Robert A. Bambara
University of Rochester, Rochester, NY
Thesis: Functional interactions between Replication Protein A, Dna2, and Flap Endonuclease 1 during Okazaki fragment processing

Research Technician (01/2004 to 08/2004) Laboratory of Dr. Joan M. Hevel
Utah State University, Logan, UT
Project: Enhancer binding of the transcription factor HNF1α and cofactors DCoH and DCoHα

Undergraduate Research Assistant (07/2002 to 12/2003) Laboratory of Dr. William R. McCleary
Brigham Young University, Provo, UT
Project: Signal transduction activation during phosphate starvation in *Escherichia coli*

RESEARCH SUPPORT (highlighted in red: support since joining WKU)

Total funding awarded: $1,683,106 (External $1,552,310)
Total funding awarded since joining WKU: $731,310 (External $715,310)

Current Research Support

National Institutes of Health R15 AREA Grant (R15GM160955)
Title: Mechanisms of Telomere Maintenance and Protection
Role: Principal Investigator
Requested Funds $531,584 ($375,000 Direct) 09/01/25-08/31/28

Completed Research Support

KY INBRE Research Project Award (subaward for NIH P20GM103436)
Title: Regulation of the DNA damage response at telomeres
Role: Principal Investigator
Total Cost $143,726 ($100,000 Direct) 05/01/24-08/31/25

Western Kentucky University Research and Creative Activities Program (RCAP) Category I
Title: Defining the role of CST in DNA replication origin licensing
Role: Principal Investigator
Total Cost $16,000 05/15/24-08/15/25

KY INBRE Core Utilization Voucher (subaward for NIH P20GM103436)
Title: Phosphoproteomics analysis of ATR signaling in CST-deleted cells
Role: Principal Investigator
Total Cost $5,000 05/01/24-04/30/25

KY INBRE Faculty Start-up Award (subaward for NIH P20GM103436)
Role: Principal Investigator
Total Cost $35,000 ($25,000 Direct) 08/01/23-04/30/25

University of South Carolina Internal Grant Program: ASPIRE-I
Title: Determining the role of CST-DNA polymerase alpha-primase interaction in DNA replication rescue
Role: Principal Investigator
Total Cost $15,000 07/01/21-05/15/23

University of South Carolina Internal Grant Program: ASPIRE-II
Title: Chronic social stress and accelerated aging among South Carolina women: Investigating the social, behavioral, and biological influences on aging processes
Role: Co-PI
Principal Investigator: Douglas Moore
Co-PIs: Jason Stewart, Rekha Patel, Sue Heiney, Alexander McLain, Monique Lyle
Total Cost $99,796 07/01/17-05/31/19

National Institutes of Health: K99/R00 Pathway to Independence Award (R00GM104409)
Title: Roles of the mammalian CST complex in DNA replication and chromosome cohesion
Role: Principal Investigator
Total Cost $747,000 (Direct $507,000) 09/01/14-08/31/18

National Institutes of Health: K99/R00 Pathway to Independence Award (K99GM104409)
Title: Roles of the mammalian CST complex in DNA replication and chromosome cohesion

Role: Principal Investigator
Total Cost $90,000 09/06/13-08/31/14

Trainee Research Support

Western Kentucky University (Total $11,700)

Undergraduate:

- **Faculty-Undergraduate Student Engagement (FUSE):** Grayson Duvall ($3,500) 2024-2025, Colin Loveless & Steven "Donte'" Reed ($4,500) 2024-2025

Gatton Academy:

- **Research Internship Grant (RIG):** Gabriel Gooden, Summer 2024 ($3,700)

University of South Carolina (Total $39,763)

Postdoc:

- **ASPIRE I (Track IIB for Postdoctoral Scholars) ($5000):** Yilin Wang, 2019-2020

Graduate Student:

- **Support to Promote Advancement of Research & Creativity (SPARC) ($5000):** Percy "Logan" Schuck 2020-2021, Stephanie Ackerson 2018-2019

Undergraduate:

- **Magellan Scholar Award ($2500-$3000):** Anna Bazell 2021-2022, Benjamin Caiello 2018-2019, Charles "Jesse" Williamson 2016-2017
- **Mini-Magellan Scholar Award ($1000):** Caroline Gable 2019
- **Magellan Journey Award ($1000):** Merissa Smith 2022
- **College of Arts and Sciences Undergraduate Research Enhancement Program (UREP) Award ($1000):** Alexander Welch 2020
- **Honors College Science Undergraduate Research Fellowships (SURF):** Danny Burnett 2022-2023 ($3000), Meaghan Arnold 2022-2023 ($3000), Emma Ladd 2021-2022 ($2000), Anna Bazell 2020-2022 ($4860)
- **Honors College Thesis Grant:** Benjamin Caiello 2018 ($903)

TEACHING EXPERIENCE (sections highlighted in red: since joining WKU)

Western Kentucky University

Courses In Progress:

Year	Semester	Course	Credits	Students
2025	Fall	BIOL 403 Mol Mechan Cancer	3	29
2025	Fall	BIOL 503 Cancer Biol Seminar	1	1
2025	Fall	BIOL 489 Professional Aspects of Biol	1	22

Courses Taught:

Year	Semester	Course	Credits	Students
2025	Spring	BIOL 319 Intro to Mol & Cell Biol (Honors)	3	22
2025	Spring	BIOL 319 Intro to Mol & Cell Biol	3	85
2024	Fall	BIOL 495G Molecular Genetics	3	2
2024	Fall	BIOL 495 Molecular Genetics	3	10
2024	Fall	BIOL 598 Graduate Seminar	2	8
2024	Spring	BIOL 319 Intro to Mol & Cell Biol (Honors)	3	27
2024	Spring	BIOL 319 Intro to Mol & Cell Biol	3	76
2023	Fall	BIOL 319 Intro to Mol & Cell Biol (Honors)	3	4
2023	Fall	BIOL 319 Intro to Mol & Cell Biol	3	22
2023	Fall	BIOL 598 Graduate Seminar	2	9

Mentored Undergraduate Research Studies:

Year	Semester	Course^	Students
2025	Fall	BIOL 399	3
2025	Spring	BIOL 399	6
2024	Fall	BIOL 399	3
2024	Spring	BIOL 399	2

^BIOL 399: Research Problems in Biology

University of South Carolina

Courses Taught:

Year	Semester	Course^	Credits	Students
2023	Spring	Honors - BIOL 546/CHEM 556	3	21
2023	Fall	BIOL 665	3	16
2022	Spring	Honors - BIOL 546/CHEM 556	3	21
2021	Fall	BIOL 665	3	21
2021	Spring	Honors - BIOL 546/CHEM 556	3	28
2020	Fall	BIOL 665	3	18
2020	Spring	Honors - BIOL 546/CHEM 556	3	21
2019	Fall	BIOL 665	3	32
2019	Summer	BIOL 546/CHEM 556	3	7
2019	Spring	Honors - BIOL 546/CHEM 556	3	15
2018	Fall	BIOL 665	3	18
2018	Spring	BIOL 546/CHEM 556	3	58
2017	Fall	BIOL 665	3	16
2017	Spring	BIOL 665	3	7
2016	Spring	BIOL 665	3	16
2015	Spring	BIOL 665	3	22

^BIOL 665: Human Molecular Genetics; BIOL 546/CHEM 556: Biochemistry/Molecular Biology II

Mentored Undergraduate Research Studies:

Year	Semester	Course^	Students
2022	Spring	SCHC 499	2
2022	Spring	BIOL 399	1

Mentored Undergraduate Research Studies (cont.):

2021	Fall	CHEM 496	1
2021	Fall	SCHC 499	1
2020	Spring	BIOL 399	1
2019	Fall	BIOL 399	2
2019	Spring	SCHC 499	2
2018	Fall	BIOL 399	2
2018	Fall	SCHC 499	2
2018	Spring	BIOL 399	1
2017	Fall	BIOL 399	1
2015	Spring	BIOL 399	1

^BIOL 399: Independent Study; SCHC 499: Honors Senior Thesis/Project

AWARDS & HONORS (highlighted in red: since joining WKU)

Awards and Honors

2025 First Time Lead Award – Office of Research and Sponsored Activities, Western Kentucky University

2022 Distinguished Undergraduate Research Mentor Award – Office of the Vice President for Research, University of South Carolina

2013 Outstanding Platform Presentation by a Postdoctoral Fellow (1st Place) – 15th Annual Midwest DNA Repair Symposium

2012 Outstanding Platform Presentation by a Postdoctoral Fellow (2nd Place) – 14th Annual Midwest DNA Repair Symposium

2012 NIGMS Workshop for Postdocs Transitioning to Independent Positions – National Institutes of Health

2009 Walter J. Bloor Award for Outstanding Thesis – Department of Biochemistry and Biophysics, University of Rochester

2004 Poster Award – Regional American Chemistry Society Meeting, Utah State University

Fellowships
NIH F32 Postdoctoral Fellowship (F32GM097833) – 04/2011 to 7/2012
Elon Huntington Hooker Fellowship – 06/2008 to 06/2009 (Support: $16,000)

Training Grant Appointments
NIH T32 Grant Postdoctoral Trainee (T32CA117846) – 08/2009 to 04/2011
NIH T32 Grant Graduate Trainee (T32GM068411) – 01/2007 to 06/2008

PUBLICATIONS (highlighted in red: publications since joining WKU)

Note: Contributions to articles under review or published since joining WKU are included below.
#Corresponding author(s), *Authors contributed equally to this work
‡Undergraduate or ^graduate students from my group

Total publications: 26
Total publications since joining WKU: 3 (and one in revisions)

NCBI My Bibliography: https://www.ncbi.nlm.nih.gov/myncbi/jason.stewart.1/bibliography/public/

Submitted and In Revisons

Holbrooks, J.S.‡, Loveless, C.A.‡, Reed, S.D.‡, Duvall, G.H.‡, Romney, C.V., Kircher, M.B.‡, **Stewart, J.A.#** Conditional deletion of human STN1 leads to telomere dysfunction and telomerase-dependent genome instability and proliferation defects. Under review at the *Journal of Cell Science* (submitted on 7/3/25, reviews received 9/2/25); **pre-print available on bioRxiv** doi: 10.1101/2025.08.06.669015

Research Articles

Published since joining WKU:

Joudeh, L.A., Schuck, P.L.^, Van, N.M., DiCintio, A.J., **Stewart, J.A.**, Waldman, A.S.# (**2024**) Progerin can induce DNA damage in the absence of global changes in replication or cell proliferation. *PLOS One.* 19:e0315084 doi: 10.1371/journal.pone.0315084

Wysong, B.C., Schuck, P.L.^ Carrison, S., Murakami, Y., Balakrishnan, L.#, **Stewart, J.A.#** (**2024**) Human CST stimulates base excision repair to prevent the accumulation of oxidative DNA damage. *Journal of Molecular Biology.* 436:168672 doi: 10.1016/j.jmb.2024.168672

Li, T., Zhang, M., Li, Y., Zhao, R., Han, X., Tang, L., Ma, T., Zhao, X., Zhou, R., Wang, Y., Bai, X., Zhang, K., Geng, X., Sui, L., Feng, X., Zhang, Q., Zhao, Y., Liu, Y.#, **Stewart, J.A.#**, Wang, F.# (**2023**) Cooperative interaction of CST and RECQ4 resolves G-quadruplexes and maintains telomere stability. *EMBO Reports*. 24:e55494 doi: 10.15252/embr.202255494

Published prior to joining WKU:

Wang, H., Ma, T., Zhang, X., Chen, W., Lan, Y., Kuang G., Hsu, S.J., He, Z., Chen, Y., **Stewart, J.**, Bhattacharjee, A., Luo, Z., Price, C., Feng, X.# (**2023)** CTC1 OB-B interaction with TPP1 terminates telomerase and prevents telomere overextension. *Nucleic Acids Research.* 51:4914-4928 doi: 10.1093/nar/gkad237

Jhanji, M., Rao, C.N., Massey, J.C., Hope M.C., Zhou, X., Keene, C.D., Ma, T., Wyatt, M.D., **Stewart, J.A.**, Sajish, M.# (**2022**) Cis- and trans-resveratrol have opposite effects on histone serine-ADP-ribosylation and tyrosine induced neurodegeneration. *Nature Communications.* 13:3244 doi: 10.1038/s41467-022-30785-8

Schuck, P.L.^, Ball, L.E., **Stewart, J.A#.** (**2021**) The DNA-binding protein CST associates with cohesin and promotes chromosome cohesion. *Journal of Biological Chemistry.* 297:101026 doi: 10.1016/j.jbc.2021.101026

Moore, S.#, Patel, R. **Stewart, J.A.**, McLain, A., Heiney, S. (**2021**) Social inequalities in accelerated aging among southern U.S. women: An analysis of the biosocial and behavioral pathways linking social determinants to telomere length. *Biodemography and Social Biology.* 66:118-131 doi: 10.1080/19485565.2020.1869918

Ackerson, S. M.^, Gable, C.I.‡, **Stewart, J.A#.** (**2020)** Human CTC1 promotes TopBP1 stability and CHK1 phosphorylation in response to telomere dysfunction and global replication stress. *Cell Cycle.* 19:3491-3507 doi: 10.1080/15384101.2020.1849979

Wang, Y.*, Brady, K.S.*, Caiello, B.P.‡, Ackerson, S.M.^, **Stewart, J.A.#** (**2019**) Human CST suppresses origin licensing and promotes AND-1/Ctf4 chromatin association. *Life Science Alliance.* 2:e201800270 doi: 10.26508/lsa.201800270

Bhattacharjee, A., **Stewart, J.A.#,** Chaiken, M., Price, C.M.# (**2016**) STN1 OB fold mutation alters DNA Binding and affects selective aspects of CST function. *PLOS Genetics*. 12:e1006342 doi: 10.1371/journal.pgen.1006342

Wang, F, **Stewart, J.A.,** Price, C.M.# (**2014**) Human CST abundance determines recovery from diverse forms of DNA damage and replication stress. *Cell Cycle.* 13:3488-3498 doi: 10.4161/15384101.2014.964100

Wang, F, **Stewart, J.A.**, Kasbek, C., Zhao, Y., Wright, W.E., Price, C.M.# (**2012**) Human CST has independent functions during telomere duplex replication and C-strand fill-in. *Cell Reports*. 2:1096-1103 doi: 10.1016/j.celrep.2012.10.007

Stewart, J.A.*, Wang, F.*, Chaiken, M.F., Kasbek, C., Chastain, P.D., Wright, W.E., Price, C.M.# (**2012**) Human CST promotes telomere duplex replication and general replication restart after fork stalling. *EMBO Journal*. 31:3537-3549 doi: 10.1038/emboj.2012.215

Price, C.M.#, Boltz, K.A., Chaiken, M.F., **Stewart, J.A.**, Beilstein, M.A., Shippen, D.E.# (**2010**) Evolution of CST function in telomere maintenance. *Cell Cycle*. 9:3157-3165 doi: 10.4161/cc.916.12547

Balakrishnan, L.*****, **Stewart, J.A.***, Polaczek P., Campbell J.L., Bambara, R.A.# (**2010**) Acetylation of Dna2 and FEN1 by p300 promotes DNA stability by creating long flap intermediates**.** *Journal of Biological Chemistry*, 285:4398-4404 doi: 10.1074/jbc.M109.086397

Stewart, J. A., Campbell, J.L., Bambara, R.A.# (**2010**) Dna2 is a structural specific nuclease, with affinity for 5' flap intermediates. *Nucleic Acids Research*, 38:920-930 doi: 10.1093/nar/gkp1055

Stewart, J. A., Campbell, J.L., Bambara, R.A.[#] (**2009**) Significance of the dissociation of Dna2 by flap Endonuclease 1 to Okazaki fragment processing in *Saccharomyces cerevisiae*. *Journal of Biological Chemistry*, 284: 8283-8291 doi: 10.1074/jbc.M809189200

Stewart, J.A., Miller, A.S., Campbell, J.L., Bambara, R.A.[#] (**2008**) Dynamic removal of replication protein A by Dna2 facilitates primer cleavage during Okazaki fragment processing in *Saccharomyces cerevisiae*. *Journal of Biological Chemistry*, 283:31356-31365 doi: 10.1074/jbc.M805965200

Stewart, J.A., Campbell, J.L., Bambara, R.A.[#] (**2006**) Flap endonuclease disengages Dna2 nuclease/helicase from Okazaki fragment flaps. *Journal of Biological Chemistry*. 281:38565-38572 doi: 10.1074/jbc.M606884200

Hevel, J.M., **Stewart, J.A.,** Gross, K.L., Ayling, J.E.[#] (**2006**) Can the DCoHalpha isozyme compensate in patients with 4a-hydroxy-tetrahydrobiopterin dehydratase/DCoH deficiency? *Molecular Genetics and Metabolism*. 88:38-46. doi: 10.1016/j.ymgme.2005.11.014

Invited Review and Methods Articles and Book Chapters

Schuck P.L.^, Ackerson, S.M.^, **Stewart, J.A.[#]** (**2023**) Telomere biology. In R.A. Bradshaw, G.W. Hart, P.H. Stahl (Eds.) *Encyclopedia of Cell Biology (2nd ed.)* Elsevier Inc. 1:523-531 doi: 10.1016/B978-0-12-821618-7.00099-7

Ackerson, S.A.^, Schuck, P.L.^, Romney, C., **Stewart, J.A.[#]** (**2021**) To join or not to join: Decisions along the along the path to double-strand break repair versus chromosome end protection. *Frontiers in Cell and Development Biology*. 9:708763 doi: 10.3389/fcell.2021.708763

Par, S., Vaides, S., VanderVere-Carozza, P.S., Pawelczak, K.S., **Stewart, J.A.**, Turchi, J.J.[#] (**2021**) OB-folds and genome maintenance: Targeting protein-DNA interactions for cancer therapy. *Cancers*. 13:3346-358 doi: 10.3390/cancers13133346

Schuck, P.L.^, **Stewart, J.A.[#]** (**2019**) FISHing for DNA damage on metaphase chromosomes. *Methods in Molecular Biology*. 1999:335-347 doi: 10.1007/978-1-4939-9500-4_24

Stewart, J.A.[#], Wang Y., Ackerson, S.M.^, Schuck, P.L.^ (**2018**) Emerging roles of CST in maintaining genome stability and human disease. *Frontiers in Biosciences.* 1:1564-1586 doi: 10.2741/4661

Stewart, J.A., Chaiken, M.F., Wang, F., Price, C.M.[#] (**2012**) Maintaining the end: Roles of telomere proteins in end-protection, telomere replication and length regulation. *Mutation Research*. 730:12-19 doi: 10.1016/j.mrfmmm.2011.08.011

SEMINARS AND CONFERENCE PRESENTATIONS (highlighted in red: since joining WKU)

Research Seminars

2025 – Dept of Biological Sciences, Western Kentucky University
2022 – Dept of Biochemistry, University of Buffalo
2022 – Dept of Biochemistry and Molecular Biology, Wright State University
2021 – Dept of Biochemistry, Molecular Biology and Biophysics, University of Minnesota (virtual)
2020 – Dept of Biological Sciences, University of South Carolina (virtual)
2020 – Genome Stability Group, University of Minnesota (virtual)
2020 – Dept of Genetics and Biochemistry, Clemson University
2018 – Dept of Biology, Indiana University Purdue University at Indianapolis
2016 – Dept of Biology, University of South Carolina – Aiken
2016 – Dept of Chemistry and Biochemistry, University of South Carolina
2016 – Dept of Physiology and Developmental Biology, Brigham Young University

Conference Oral Presentations

2025 – KY INBRE Annual Research Conference, Louisville, KY
2019 – 4th International Conference on Molecular Biology & Nucleic Acids Meeting**,** Chicago, IL
2019 – Cold Spring Harbor Telomere & Telomerase Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
2018 – American Society for Biochemistry and Molecular Biology Annual Meeting, San Diego, CA
2015 – Emerging Topics in Genome Instability, Oklahoma Medical Research Foundation, Oklahoma City, Oklahoma
2015 – Annual Center for Colon Cancer Retreat, Saluda Shoals, Irmo, SC
2014 – 18th Annual DNA Replication and Repair Symposium, University at Buffalo, Buffalo, NY
2013 – 15th Annual Midwest DNA Repair Symposium, University of Kentucky, Lexington, KY
2013 – Cold Spring Harbor Telomere & Telomerase Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
2012 – 14th Annual Midwest DNA Repair Symposium, University of Cincinnati, Cincinnati, OH
2008 – 12th Annual Buffalo DNA Replication and Repair Symposium**,** Roswell Park, Buffalo, NY

Recent Conference Poster Presentations (last 5 years)

2025 – 24th Annual Midwest DNA Repair Symposium, University of Michigan, Ann Arbor, MI
2021 – Cold Spring Harbor: Telomeres and Telomerase Meeting (virtual)

Career Development Seminars

2016 – "Preparing for the academic job market: curriculum vitae and cover letter", University of South Carolina
2015 – "Maximizing your time as a postdoc: getting plugged in", University of South Carolina
2015 – UofSC's ASBMB "Graduate School Panel Seminar", University of South Carolina

RECENT STUDENT PRESENTATIONS (last 5 years) (highlighted in red: since joining WKU)
Presenter(s): underlined
***Students from my group at WKU; ^Students from my group at USC**

2024 – Student Scholar Showcase, Western Kentucky University, Bowling Green, KY
"Characterization of the telomeric DNA damage response pathway" (oral presentation)
Grayson H. Duvall*, Madison Kircher*, Stephanie Ackerson^, Meaghan Arnold^, Jason A. Stewart

2024 – Student Scholar Showcase, Western Kentucky University, Bowling Green, KY
"Loss of human CST leads to increased genome instability" (poster)
Colin A. Loveless*, S. Donte' Reed*, Emma Ladd^, Jason A. Stewart

2025 – KY INBRE Annual Research Conference, Louisville, KY
"Characterization of the telomeric DNA damage response pathway" (poster)
Grayson H. Duvall*, Madison Kircher*, Stephanie Ackerson^, Meaghan Arnold^, Jason A. Stewart

2025 – KY INBRE Annual Research Conference, Louisville, KY
"Roles of CTC1 in genome stability" (poster)
Colin A. Loveless*, S. Donte' Reed*, Jason A. Stewart

2025 – KY INBRE Annual Research Conference, Louisville, KY
"Investigating the effects of STN1 KO on cell growth and telomere maintenance" (poster)
Jaclyn Holbrooks*, Savanna Arnold*, Jason A. Stewart

2024 – Kentucky Academy of Sciences Annual Meeting, Kentucky State University, Frankfort, KY
"Characterization of the telomeric DNA damage response pathway" (poster)
Grayson H. Duvall*, Madison Kircher*, Carlan Romney^, Meaghan Arnold^, Jason A. Stewart

2024 – Kentucky Academy of Sciences Annual Meeting, Kentucky State University, Frankfort, KY
"Roles of CST in genome stability" (poster)
Colin A. Loveless*, S. Donte' Reed*, Emma Ladd^, Jason A. Stewart

2024 – Kentucky Academy of Sciences Annual Meeting, Kentucky State University, Frankfort, KY
"Investigating the effects of STN1 KO on cell growth and telomere maintenance" (poster)
Jaclyn Holbrooks*, Savanna Arnold*, Carlan Romney^, Jason A. Stewart

2024 – Student Scholar Showcase, Western Kentucky University, Bowling Green, KY
"Investigating the DNA damage repair pathway at telomeres" (poster)
Grayson H. Duvall*, Savanna J. Arnold*, Stephanie Ackerson^, Meaghan Arnold^, Jason A. Stewart

2024 – Student Scholar Showcase, Western Kentucky University, Bowling Green, KY
"Functional roles of CTC1 in genome stability" (poster)
S. Donte' Reed*, Colin A. Loveless*, Emma Ladd^, Jason A. Stewart

2021 – Cell Cycle Meeting at the Salk Institute (virtual)
"CST interacts with the cohesion complex" (poster)
P. Logan Schuck^, Jason A. Stewart

MENTORING & TRAINING (sections highlighted in red: since joining WKU)

Western Kentucky University

Masters Students:

-Andrew Jackson (05/2025-present)

Undergraduate Students:

-Abigail Darling (08/2025-present)
-Shiloh Wright (08/2025-present)
-Emmy Potter (08/2025-present)
-Inyeneabasi Ekrikpo* (04/2025-present; including summer 2025): KY-WV LSMAP (Kentucky-West Virginia Louis Stokes Alliance for Minority Participation) student; BIOL 399 student
-Kennedy Vogler*^ (01/2025-present; including summer 2025): summer 2025
-Madison Kircher*^ (06/2024-present; including summer 2024 & 2025): BIOL 399 student
-Colin Loveless* (10/2023-present; including summer 2025): BIOL 399 student; FUSE award recipient
-**Grayson Duvall*** (09/2023-present; including summer 2024 & 2025): BIOL 399 student; FUSE award recipient
-Andrew Jackson* (01/2025-05/2025): BIOL 399 student
-Jaclyn Holbrooks^ (05/2024-05/2025; including summer 2024): BIOL 399 student
-Steven "Donte'" Reed* (01/2024-05/2025; including summer 2024): BIOL 399 student; FUSE award recipient

*Supported by KY-INBRE awards; ^Supported by RCAP I award

Gatton Academy Students:

-Gabriel Gooden (05/2024-07/2024): RIG recipient
-Savanna Arnold (10/2023-04/2024)

Thesis Advisory Committees:

-**Sandesh Koirala** (MS candidate; Mentor: Dr. Simran Banga)
-**Jenson Harner** (MS candidate; Mentor: Dr. Joe Marquardt)
-**Rangana Ratnayake** (MS candidate; Mentor: Ajay Srivastava)
-**Alannah Dicintio** (PhD candidate at USC; Mentor: Alan Waldman)
-**Rachel Foster** (MS candidate; Mentor: Dr. Joe Marquardt, graduated 2025)

Undergraduate Senior Honors Theses:

-Thesis Director:

Grayson Duvall (Anticipated completion 12/2025)

-Second Reader:

Kaylee Brannon (Anticipated completion 12/2025)

University of South Carolina

PhD Students:

-**Percy "Logan" Schuck** (05/2017-12/2022): SPARC Grant Recipient; Donna and Andrew Sorensen Graduate Fellowship for Cancer Research; Kathryn Hinnant-Johnson, M.D. Memorial Fellowship for Excellence in Graduate Research in Genetics

-**Stephanie Ackerson** (01/2017-07/2021) SPARC Grant Recipient; Cindy and Dan Carson Best Graduate Student Paper Award, 2021; Graduate Association for Biological Sciences President

Undergraduate Students:

-**Daniel Burnett** (09/2021-04/2023): BIOL 399 student; SURF Grant
-**Meaghan Arnold** (09/2021-09/2023): SURF Grant
-**Merissa Smith** (02/2022-05/2022): Magellan Journey Award
-**Emma Ladd** (02/2021-05/2022): CHEM 547 student; SURF Grant
-**Anna Bazell** (09/2019-05/2022): BIOL 399 student; SURF Grant; Magellan Scholar Award; Discover UofSC Poster Award (1st Place); Outstanding Biological Sciences Senior Award
-**Alexander Welch** (05/2019-02/2021): BIOL 399 student; UREP Grant
-**Ross Jaeger** (09/2019-03/2020)
-**Kaury Thome** (08/2018-12/2019): BIOL 399 student
-**Margaret Pokalsky** (05/2018-05/2019): BIOL 399 student
-**Caroline Gable** (01/2018-08/2019): BIOL 399 student; Mini-Magellan Scholar Award; Discover UofSC Poster Award (2nd Place)
-**Benjamin Caiello** (05/2016-08/2019): BIOL 399 student; Magellan Scholar Award; Honors College Thesis Grant; Discover UofSC Poster Award (1st Place)
-**Sasha Hodge** (05/2017-05/2017): CCCR Minority Summer Research Program
-**Charles "Jesse" Williamson** (11/2015-09/2016): Magellan Scholar Award
-**Jazmine Benjamin** (05/2016-07/2016): CCCR Minority Summer Research Program
-**Ji'Vone Freeman** (05/2015-07/2015): CCCR Minority Summer Research Program
-**Francesco Maoli** (12/2014-05/2015): BIOL 399 student; UofSC Discovery Day Poster Award

Post-baccalaureates:

-**Carlan Romney** (07/2019-07/2020): part of NIH PREP program (R25GM076277)

Postdoctoral Researchers:

-**Yilin Wang** (03/2017-07/2019): ASPIRE I (Track II-B for Postdoctoral Scholars) Grant
-**Ali Naqi** (02/2018-02/2019)
-**LeAnna Ledford** (05/2015-01/2017)

Laboratory Technicians:

-**Katie Brady** (12/2014-08/2017)
-**Stephanie Ackerson** (01/2016-12/2016)
-**Francesco Maoli** (05/2015-05/2016)

Thesis Advisory Committees:

-**Jacob Massey** (PhD, graduated 2022)
-**Danda Chapagai** (PhD, graduated 2022)
-**Geetha Sreeram Chellappa** (PhD, graduated 2021)

-**Taylor Carter** (PhD, graduated 2020)
-**Samuel Burnett** (PhD, graduated 2020)
-**Anne "Shelley" Huck** (MS, graduated 2019)
-**Mithil "Harsh" Soni** (PhD, graduated 2018)

Top Scholar Mentor:
-**Danny Burnett** (2021-2023)
-**Remi Brebion** (2019-2023)

Undergraduate Senior Honors Thesis Advisor:
-Thesis Director:
Emma Ladd (Thesis completed 2022)
Anna Bazell (Thesis completed 2022)
Benjamin Caiello (Thesis completed 2019)
Collen Openshaw (Thesis completed 2019)
-Second Reader:
Alyssa Franklin (Thesis completed 2022)
Leland Hartzog (Thesis completed 2020)
Kevin Field & Christine Reid (Joint Project; Thesis completed 2018)

SERVICE (sections highlighted in red: since joining WKU)

Academic

Western Kentucky University

- *Department:*
-Research Committee (2024-present)
-Curriculum Committee (2023-present)
-F1rst-Year Seminar Series: Research, co-lead with Drs. Marquardt and Mountjoy (2024)
-*Ad hoc* Tenure & Promotion Guidelines Committee (2023)

- *University:*
-Departmental Faculty Senator (2024-present)
-Preview Day Volunteer Biology Department Tour Guide (2024)
-TOPs Session Advising (2025)
-Research and Creative Activities Program (RCAP) grant reviewer (7 grants) (2025)

University of South Carolina

- *Department:*
-Awards Committee (2021-2022)
-Graduate Studies Committee (2016-2022)
-Academic Student Advisor (2015-2022)
-Graduate Qualifying Exam Committee (2016, 2017, 2018, 2022)
-Department Advisory Committee (2018-2021)
-Faculty Search Committee: Microbiome (2019-2020)
-Undergraduate Scholarship Committee (2015-2019)
-Instructor Search Committee: Biochemistry (2019)
-Co-Discussion Leader on Faculty Mentoring Guidelines at Department Retreat (2019)
-Kathryn Hinnant-Johnson Fellowship Committee (2017)

- *University:*
-Discover USC Poster Judge (2015, 2017, 2021, 2023)
-ASPIRE Grant Review Committee (2022)
-Top Scholar Selection Committee (2020, 2021, 2022)
-Magellan Scholar Reviewer (2016, 2018, 2021)

-Magellan Scholar Review Committee (2018)
-USC Postdoctoral Association Faculty Advisor (2015-2017)

University of Cincinnati
- Group Discussion Leader – GNTD 730, Ethics in Research, University of Cincinnati (2012, 2013)

Professional

Grant Reviews

-*Ad hoc* for National Science Foundation (1 grant) (2025)
-*Ad hoc* for National Science Foundation (1 grant) (2024)
-National Science Foundation, Division of Molecular and Cellular Biosciences, Genetics Mechanisms Grant Review Panel (5 grants) (2023)
-*Ad hoc* for National Science Foundation (1 grant) (2021)
-Early Career Reviewer for National Institutes of Health Cancer Etiology Study Section (4 grants) (2018)
-*Ad hoc* for National Institutes of Health - South Carolina IDeA Networks Biomedical Research Excellence (SC-INBRE) (3 grants) (2017)
-*Ad hoc* for UK Medical Research Council (1 grant) (2017)
-*Ad hoc* for National Science Foundation (1 grant) (2016)

Manuscript Reviews

Peer-reviewed manuscripts (>50 articles total) for the following journals*: *Nature Structure & Molecular Biology, EMBO Journal, Nucleic Acid Research, DNA Repair, Communications Biology, Frontiers in Molecular Biosciences, Frontiers in Cell and Developmental Biology, PLOS One, Cell Cycle, Genes*, *International Journal of Molecular Studies, Biomolecules*, *Cells, Molecules, Cancers, Journal of Fungi, Hormone Research in Paediatrics, Hereditas, Open Biology, Journal of Visualized Experiments*

*10 reviews completed since joining WKU (*Nucleic Acids Research*: 4, *PLoS One*: 1, *Environmental Pollution*: 1, *Journal of Visual Experiments*: 1, *Open Biology*: 1, *Hereditas*: 1, Elsevier Book Proposal Review: 1)

Book Editor

Methods in Molecular Biology: DNA Repair (2019), co-editor with Dr. Lata Balakrishnan

Conferences

Poster Judge, KY-INBRE Annual Research Conference (2025)
Poster Judge, KY-INBRE Annual Research Conference (2024)
Co-organizer of Poster Sessions – Midwest DNA Repair Symposium, Cincinnati, OH (2012)

Community

2024 – Panelist for the WKU Medical Center Interprofessional Panel: *The Immortal Life of Henrietta Lacks*
2016 – Invited Judge at the UofSC American Society for Biochemistry and Molecular Biology Science Fair for High School Students from the Center for Advanced Technical Studies, Chapin, SC
2012 – Science Week Presenter for 3rd Grade Science Classes at Western Row Elementary School, Mason, OH

CAREER DEVELOPMENT (sections highlighted in red: since joining WKU)

Certificates of Completion and Training

Western Kentucky University

2024 – Blackboard Ultra Training
2024 – QPR Gatekeeper Suicide Prevention Training

University of South Carolina
2021 – Entering Mentoring (program based on work by the Center for the Improvement of Mentored Experiences in Research at the University of Wisconsin)
2018 – Diversity: Inclusion in the Modern Workplace; Harassment and Discrimination Prevention

Workshops and Seminars

Western Kentucky University
2025 – WKU R15/R16 Grant Workshop (sponsored by KY-INBRE)
2025 – CITL: Beyond the Basics: Unlocking the Power of Blackboard Ultra's Groups Tool
2025 – Professional Development Day (Seminars attended: AI Unleashed: Practical Ways to Elevate Your Work and Interests, Failing Forward: Cultivating Productive Failure in Student Learning**)**
2024 – AI Integration: Finding your path forward
2024 – Advising 101: Successful Student Advising Strategies & Updates
2024 – The Art of Balance: Active Learning & Lecture Integration
2024 – CITL: Blackboard Ultra Training
2024 – Counseling Center: QPR Suicide Prevention Training
2024 – Professional Development Day (Seminars attended: Creating Pathways to Success in the Classroom: Teaching Strategies for First Generation College Students & How to Effectively Support WKU Students with Mental Health Issues: Best Practices and Research)
2023 – CITL New Faculty Workshop: How to Teach Effectively at WKU
2023 – KY-INBRE R15/R16 Grant Workshop

University of South Carolina
Office of Diversity, Equity and Inclusion:
2020 – Diversity, Equity, and Inclusion Workshop & Training

Center for Teaching Excellence Workshops:
2016 – Managing Large Lecture Courses: Engaging the Masses
2015 – Improve Your Vocal Presence in the Classroom
2015 – Best Practices for Facilitating Effective Team Projects in the Classroom
2015 – Flipped and Active Learning Basics
2014 – Getting Good Teaching Evaluation
2014 – What to do About Cheating and Plagiarism

Office of Research and Grant Development Workshops:
2016 – Grant Writing 101; NSF Overview Class
2015 – NIH Peer Review
2014 – Pivot Training; What Makes a Good Budget?

Other:
2018 – SC-INBRE Academic Leadership & Development Workshop, Columbia, SC
2014 – Center for Colon Cancer Research Workshop: Experimental Design and Techniques for the Use of Animals, Tissues, and Cells in Biological/Biomedical Research, University of South Carolina
2014 – 3T: Teaching, Technology & Techniques Conference, University of Cincinnati-Clermont
2010 – Grant Writing Workshop, Presented by Stephen W. Russell, University of Cincinnati

MEMBERSHIPS

2015-present: American Society for Biochemistry and Molecular Biology (ASBMB)
2024-present: Kentucky Academy of Sciences