

Mario G. Hollomon, Ph.D.

Texas Southern University - Department of Biology
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Education:

B.S., Biological Sciences, Prairie View A&M University, 1993
M.S., Environmental Toxicology, Texas Southern University, 1997
Ph.D., Environmental Toxicology, Texas Southern University, 2003

Postdoctoral Training:

2005 – 2007 The University of Texas MD Anderson Cancer Center, Department of Immunology
Houston, TX
2007 – 2011 The University of Texas MD Anderson Cancer Center, Department of Pediatrics
Houston, TX

Current Appointments:

2014 – Present Assistant Professor, Department of Biology, Texas Southern University, Houston, TX
2012 – Present Contingent Worker (Research Collaboration), Department of Pediatrics, The
University of Texas MD Anderson Cancer Center, Houston, TX
2002 – Present Adjunct Professor, Department of Math and Natural Sciences, Houston Community College,
Houston, TX

Previous Appointments:

2011 – 2013 Visiting Assistant Professor, Department of Biology, Texas Southern University, Houston, TX
2005 – 2007 Adjunct Professor, Department of Biology, Texas Southern University, Houston, TX
2003 – 2005 Visiting Assistant Professor, Department of Biology, Texas Southern University, Houston, TX
2000 - 2003 Instructor, Department of Biology, Texas Southern University, Houston, TX
1997 - 2000 Graduate Research Assistant, Department of Biology, Texas Southern University, Houston, TX
1996 - 1997 Graduate Research Assistant, Minority Center for Toxicological Research, Texas Southern
University, Houston, TX
1995 - 1996 Graduate Teaching Assistant, Department of Chemistry, Texas Southern University,
Houston, TX
1995 Summer Research Intern, National Oceanic and Atmospheric Association (NOAA), National
Acidic Precipitation Assessment Program (NAPAP), Washington, D.C.

Publications:

Peer-reviewed Journal Articles:

1. Yu L, Su B, **Hollomon M**, Facchinetti V, Zhou Z, Kleinerman E. *The use of MEKK3 knockout bone marrow cells to demonstrate the essential role of vasculogenesis in Ewing's sarcoma growth.* Cancer Res 2010, 70:1334-1343.
2. Huang G, Yu L, Cooper L, **Hollomon M**, Huls H, Kleinerman E. *Genetically modified T cells targeting interleukin-11 receptor α -chain kill human osteosarcoma cells and induce the regression of established osteosarcoma lung metastases.* Cancer Res 2012, 72(1):271-281.

3. **Hollomon MG**, Gordon N, Santiago-O’Farrill JM, Kleinerman E. *Knockdown of autophagy related-protein 5, ATG5, decreases oxidative stress and has an opposing effect on camptothecin-induced cytotoxicity in osteosarcoma cells.* BMC Cancer 2013, 13:500
4. Player A, Oguamanam T, Okanmelu J, Burrell K, **Hollomon M**. *Preliminary characterization of IL32 in basal-like/triple negative compared to other types of breast cell lines and tissues.* BMC Res Notes 2014, 7:501.
5. Santiago-O’Farrill J, Kleinerman ES, **Hollomon MG**, Livingston A, Wang WL, Tsai JW, Gordon N. *Phosphorylated heat shock protein 27 as a potential biomarker to predict the role of chemotherapy-induced autophagy in osteosarcoma response to therapy.* Oncotarget 2017, 9(2):1602-1616. doi: org/10.18632/oncotarget.20308
6. Livingston JA, Wang WL, Tsai JW, Lazar AJ, Leung CH, Lin SM, Advani SM, Daw N, Santiago-O’Farrill, **Hollomon M**, Gordon N, Kleinerman E. *Analysis of HSP27 and the autophagy marker LC3B+ punta following preoperative chemotherapy identifies high-risk osteosarcoma patients.* Mol Cancer Ther 2018, 17(6):1315-1323. doi: 10.1158/1535-7163.MCT-17-0901.

Manuscripts in Preparation:

1. **Hollomon M**, Patterson-Ward L, Santiago-O’Farrill JM, Kleinerman E, Gordon N. *Knockdown of Fas-associated protein with Death Domain (FADD) sensitizes osteosarcoma to TNF-induced cell death.*

Abstracts:

1. Mehta CS, Sun PN, **Hollomon M**, Enongene E and Mumtaz MM (1996). *Elevation of glial fibrillary acidic protein in rat CNS: 13-week toluene and trichloroethylene oral exposures studies.* National Health and Environmental Effects Research Laboratory (NHEERL) Symposium on Susceptibility and Risk. Durham, N.C.
2. **Hollomon M**, Sun PN, Mumtaz MM and Mehta CS (1996). *Assessment of GFAP in rat brain after repeated oral toluene exposures.* National Health and Environmental Effects Research Laboratory (NHEERL) Symposium on Susceptibility and Risk. Durham, N.C.
3. **Hollomon M**. (1998). *Acute oral neurotoxicity and assessment of the biomarker of effect, glial fibrillary acidic protein, in male Sprague-Dawley rats after 1,2-dichloroethane exposure.* EPA Star Fellowship Conference. Washington, D.C.
4. Whitaker C, Baszile D, Jejelowo O and **Hollomon M** (2005). *Impact of oxidative stress and polyunsaturated fatty acids on macrophage cytokine production.* Texas Academy of Science 108th Annual Meeting. The University of Texas – Pan American, TX.
5. Yu L, Deng Y, **Hollomon M**, Zhou Z, Su B and Kleinerman E (2007). *The role of MEKK3 in tumor angiogenesis and vasculogenesis.* The 9th International Symposium on Anti-Angiogenic Agents. San Diego, CA.
6. Stevenson C, Jejelowo O and **Hollomon M** (2008). *Impact of oxidative stress, antioxidants, and polyunsaturated fatty acids on mediators associated with asthma.* Texas Academy of Science 111th Annual Meeting. Texas A&M University – Corpus Christi, TX.
7. Williams B and **Hollomon M** (2008). *Influence of antioxidant status in MCF-7 cell line to etoposide treatment.* HBCU-Undergraduate Program, National Research Conference. Atlanta, GA.
8. **Hollomon M** and Kleinerman E (2008). *9-nitrocamptothecin induces autophagy in DLM8 osteosarcoma cells that is independent of caspase activation.* Cancer Health Disparities Summit. Bethesda, MD.
9. Kim E, **Hollomon M** and Kleinerman E (2009). *Effects of poly (ADP-ribose) polymerase (PARP) inhibitors, 3-aminobenzamide and PJ-34, on the antitumor activity of 9-nitrocamptothecin on osteosarcoma cells.* Undergraduate Summer Research Experience, Rice University, Houston, TX.
10. Gordon N, **Hollomon M**, Chien HC, Santiago O’Farrill JM and Kleinerman E (2013). *The microenvironment plays an important role in the ability of aerosol gemcitabine and liposomal 9-nitrocamptothecin to elicit therapeutic effect on osteosarcoma.* Global Biotechnology Congress, Boston, MA.

11. Santiago O’Farrill JM, **Hollomon M**, Kleinerman ES and Gordon N (2013). *Autophagy as a mechanism implicated in osteosarcoma resistance to Gemcitabine*. AACR-NCI-EORTC, Boston, MA.
12. Santiago O’Farrill JM, **Hollomon M**, Kleinerman ES and Gordon N (2014). *The role of autophagy on Gemcitabine-induced cytotoxicity in osteosarcoma*. Keystone Symposia. Autophagy: Fundamentals to disease. Austin, TX.
13. Santiago O’Farrill JM, **Hollomon M**, Kleinerman ES and Gordon N (2015). *HSP27 as a potential regulator of Gemcitabine-induced autophagy in osteosarcoma cells*. ASPHO 2015 Annual Meeting, Phoenix, AZ.
14. Santiago O’Farrill JM, **Hollomon M**, Kleinerman ES and Gordon N (2015). *HSP27 as a potential factor to determine the fate of Gemcitabine- induced autophagy in osteosarcoma: Survival vs. death*. AACR 106th meeting, Philadelphia, PA.
15. Awazi A and **Hollomon M** (2017). Autophagy inhibition and Erlotinib-induced cytotoxicity. RCMi Translational Science 2017 Conference, Washington, DC.

Oral Presentations:

1. Department of Pediatrics, The University of Texas MD Anderson Cancer Center, “9-nitrocamptothecin-induced Autophagy in Osteosarcoma Cells” March 18, 2008
2. Autophagy in Health and Disease: A Workshop on Cross-Disciplinary Issues, The University of Texas Medical School at Houston, “Camptothecin-induced Autophagy” November 14, 2008
3. Department of Cancer Biology Seminar Series, The University of Texas MD Anderson Cancer Center, “9-nitrocamptothecin-induced Autophagy in Osteosarcoma Cells” January 21, 2009
4. Department of Pediatrics, The University of Texas MD Anderson Cancer Center, “Autophagy Induction in Osteosarcoma” May 12, 2009
5. Department of Pediatrics, The University of Texas MD Anderson Cancer Center, “Drug-induced Autophagy in Osteosarcoma” March 9, 2010
6. Department of Experimental Therapeutics, Dr. Robert Bast Laboratory, “Opposing effect of autophagy inhibition on anticancer-induced cytotoxicity within osteosarcoma” July 24, 2014

Conferences:

1. Autophagy – Across Biology and Medicine, University of Texas Health Sciences Center – Houston, The Cooley University Life Center, Texas Medical Center, Houston, Texas, April 24, 2015
2. Cancer Metabolism, The University of Texas MD Anderson Cancer Center, R. Lee Clark Clinic, Floor 11, Houston, Texas, October 5-6, 2017
3. MD Anderson 2nd Sawyer Biliary Pancreatic Symposium, The University of Texas MD Anderson Cancer Center, Dan L. Duncan Building (CPB), Floor 8, Rooms 1-8, Houston, Texas, December 1-2, 2017

Research Support:

Funded:

1. Title of grant: Effect on dietary linolenic fatty acid and linoleic fatty acid supplementation on immune response to ozone exposure.
Funding Agency: Texas Southern University, University Seed Grant, 2003
Role: Hogan (PI), Hollomon (Co-PI); **grant written by Hollomon**
Amount: \$2,000

2. Title of grant: Molecular mechanisms of MEKK3-signaling in angiogenesis.
Funding Agency: National Heart Lung and Blood Institute (National Institutes of Health), 2005 – 2007
Role: Research supplement grant 7R01HL070225-03S1 (PI- Su) – **grant supplement written by Su**; Funds awarded to support Postdoctoral studies for **Mario Hollomon, Ph.D.**
Amount: \$119,596
3. Title of grant: Liposome and polycationic gene therapy for osteosarcoma.
Funding Agency: National Cancer Institute (National Institutes of Health), 2007 – 2009
Role: Research supplement grant 5R01CA042992-22S1 (PI – Kleinerman) – **grant supplement written by Hollomon**; Funds awarded to support Postdoctoral studies for **Mario Hollomon, Ph.D.**
Amount: \$172,480
4. Title of grant: Liposome and polycationic gene therapy for osteosarcoma.
Funding Agency: National Cancer Institute (National Institutes of Health), 2010 – 2011
Role: Research supplement grant 5R01CA042992-24S1 (PI – Kleinerman) – **grant supplement written by Hollomon**; Funds awarded to support Postdoctoral studies for **Mario Hollomon, Ph.D.**
Amount: \$92,714
5. Title of grant: Assessment of the impact of autophagy and anticancer drug treatment on Ras-driven cancer cells.
Funding Agency: Texas Southern University, University Seed Grant, 2013
Role: Principal Investigator
Amount: \$10,000
6. Title of grant: Effect of specific autophagy protein knockdown in Ras-mutated cancer cells.
Funding Agency: Texas Southern University, RCMI, 2015 – 2016
Role: Principal Investigator
Amount: \$30,000

Not funded:

1. Title of grant: Effect of targeted autophagy protein knockdown and anticancer drug treatment on cancer cells with Ras mutation
Funding Agency: National Institutes of Health (NIH) – Support of Competitive Research (SCORE) Program, 2014
Role: Principal Investigator
Amount: \$354,000
2. Title of grant: Effect of targeted autophagy protein knockdown and anticancer drug treatment on cancer cells with Ras mutation (resubmission)
Funding Agency: National Institutes of Health (NIH) – Support of Competitive Research (SCORE) Program, 2015
Role: Principal Investigator
Amount: \$354,000
3. Title of grant: Effect of selective autophagy protein knockdown in Ras-mutated cells.
Funding Agency: National Institutes of Health (NIH) – Small Grant Program (R03), 2017
Role: Principal Investigator – Principal Investigator
Amount: \$145,580

Student Research Supervision

Undergraduate Students:

Tiffani Boston, 2014 and 2015 (Summer Undergraduate Research Program (SURP), College of Science, Engineering and Technology, Texas Southern University, Houston, TX

Annabella Awai, 2017 (Summer Undergraduate Research Program (SURP), College of Science, Engineering and Technology, Texas Southern University, Houston, TX

Devin Hurst, 2018 (Summer Undergraduate Research Program (SURP), College of Science, Engineering and Technology, Texas Southern University, Houston, TX

Graduate Students:

Thesis Advisor:

Latnisha Patterson, M.S. Biology, May 2016

Inhibition of ATG5 or LC3 autophagy proteins results in opposing effects of camptothecin and gemcitabine-induced cell death in metastatic K-Ras transformed Krib osteosarcoma cells.

Che Keeton, M.S. Biology, August 2018

Assessment of autophagy protein knockdown on endogenous antioxidant inhibition in osteosarcoma cells.

Committee Member:

Jordan Pope, M.S. Biology, Fall 2015

Jihad Asad, M.S. Biology, Spring 2016

Kayla Burrell, M.S. Biology, Spring 2016

Te'lisa Williams, M.S. Biology, Spring 2017

Toluwani Adebayo, M.S. Biology, Fall 2017

Anthony Harris, M.S. Biology, Spring 2018

Ali Alshehri, M.S. Chemistry, Spring 2018

Felicia Davis, M.S. Environmental Toxicology, Spring 2018

Mary Kayhani, M.S. Biology, Spring 2018

Jenaye Robinson, Ph.D. Pharmaceutical Sciences, Fall 2018

Grant Proposal, Manuscript, Book Review Activity:

- National Science Foundation (NSF), review of proposal for Excellence in Research track of the Historically Black Colleges and Universities Undergraduate Programs (HBCU-UP, NSF 18-522), 2018
- Tumor Biology (SAGE publishing), 2017
- International Journal of Molecular Sciences (Multidisciplinary Digital Publishing Institute), 2017
- OncoTargets and Therapy (Dove Medical Press Ltd), 2016
- PLOS ONE (Plos One), 2015
- *Discovery Biology* by Singh-Cundy and Cain, 6ed, 2015
- Autophagy Journal (Landes Bioscience Journals) 2012

- *Concepts In Biology* by Enger/Ross/Bailey, 12ed, 2007
- *The Living World* by Johnson, 5ed, 2006

Courses Taught:

- Survey of Life Sciences (Texas Common Course Numbering System: BIOL 1308)
- Biological Sciences I (lecture and laboratory)
- Biological Sciences II (lecture and laboratory)
- Human Anatomy and Physiology (lecture and laboratory)
- Immunology
- Undergraduate Research
- Graduate Research Problems I
- Graduate Research Problems II

Service and Committee Involvement (Texas Southern University):

- COSET Program Assessment Committee, 2016 - present
- Lead, COSET Program Assessment 2017 - 2018
- Member, University Facilities Committee, 2015 - 2017
- Faculty Senator, College of Science, Engineering and Technology, 2015 – 2017
- Member, Student Recruitment and Retention committee, College of Science and Technology, 2012-Present
- Chair, Undergraduate Assessment committee, Department of Biology, 2011-2018
- Member, Search Committee for TSU Executive Director/Police Chief of Public Safety position, 2016
- Member, University General Education subcommittee, 2012-2016
- Member, Student Recruitment and Retention committee, College of Science and Technology, 2009-2010
- Member, University Faculty Development and Mentoring committee, Texas Southern University, 2008-2009
- Core member, Achieve the Dream, 2008-2010
- Chair, Student Recruitment and Retention committee, College of Science and Technology, 2004-2005

Administrative Experience:

- Supervisor, Student Work Study Program, Texas Southern University, 2012-Present
- Coordinator, Pre-Nursing Program, Department of Biology, Texas Southern University, 2012-Present
- Interim Director, Joint Admission Medical Program (JAMP), Texas Southern University, 2009-2010 (three semesters)
- Interim Director, Early Medical School Admission Program (EMSAP), Texas Southern University, 2009-2010 (three semesters)
- Coordinator, Pre-Nursing Program, Department of Biology, Texas Southern University, 2003-2005
- President, Pre-Alumni Association, Prairie View A&M University, 1989-1990

Honors and Awards:

- University Academic Scholarship – Prairie View A&M University, 1987
- Premedical Concepts Institute Scholarship –Prairie View A&M University, 1987
- Department of Biology Scholar – Prairie View A&M University, 1992
- EPA Predoctoral Fellowship, \$75,000, 1997-2000
- National Heart, Lung and Blood Institute (NHLBI) traineeship recipient (did not accept), 2001

- Who's Who Among America's Teachers, 2001
- National Heart, Lung and Blood Institute (NHLBI) Postdoctoral Fellowship, 2005
- National Cancer Institute (NCI) Postdoctoral Fellowship, 2007
- Mike Doiron Memorial 19th Annual Legends of Friendswood Education Foundation Award, The University of Texas M. D. Anderson Cancer Center and The Legends of Friendswood Education Foundation, \$7,500, 2008

Professional Memberships:

- American College of Toxicology (ACT)
- Beta Kappa Chi National Scientific Honor Society
- Society of Environmental Toxicology and Chemistry (SETAC)
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCChE)

Other Qualifications:

- Twenty years of collegiate-level instruction experience
- Twenty-two biology graduate level hours - meets SACS accreditation requirements
- Research proposal development and submission to funding agencies
- Undergraduate and graduate research supervision
- Effective management of classes ranging from five to two hundred students
- Continued favorable student evaluations
- Student recruitment and retention activities
- Curriculum development
- Tutorial program supervision
- Extensive student advising and mentoring
- Microsoft Office, Photoshop, GraphPad, Blackboard

References are available upon request