

Ajay Srivastava, PhD, MBA

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Web: <https://sites.google.com/view/srivastavalab-at-wku/welcome-to-srivastava-lab>

My Bibliography:

<http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/45290837/?sort=date&direction=descending>

POSITIONS AND EMPLOYMENT

- 2020 -** *Professor*, Western Kentucky University, Bowling Green, KY, USA
2017 - *Associate Director, Applied Research and Technology Program*, Western Kentucky University, Bowling Green, KY, USA
2016 - 2020 *Associate Professor with tenure*, Western Kentucky University, Bowling Green, KY, USA
2010 - 2016 *Assistant Professor in the tenure track*, Western Kentucky University, Bowling Green, KY, USA
2010 - *Member of the Graduate Faculty* at Western Kentucky University, Bowling Green, KY, USA
2010 *Associate Research Scientist*, Yale University School of Medicine, New Haven, CT, USA
2004 - 2009 *Manager* of the Xu Lab Confocal Microscopy Facility at Yale University, New Haven, CT
2003 - 2010 *Post-Doctoral Fellow* in the Department of Genetics, HHMI at Yale University School of Medicine, New Haven, CT, USA
1998 - 2002 *Graduate Research Assistant*, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada
1997 - 2002 *Graduate Teaching Assistant*, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada

EDUCATION AND TRAINING

- 2012 - 2013** *Master of Business Administration with Distinction*, University of Louisville, Louisville, KY, USA
 Capstone Project: Development of a Strategic Marketing Plan for the product launch of Ultimate Concrete Waterproofing Company.
2010 *Associate Research Scientist*, Department of Cell Biology, Yale University School of Medicine, New Haven, CT, USA
2003 - 2010 *Post-Doctoral Fellow*, Department of Genetics, HHMI at Yale University School of Medicine, New Haven, CT, USA
 Project: 1) A genetic screen for metastatic behavior in *Drosophila melanogaster*.
 Project: 2) Understanding the role of Matrix Metalloproteases in development and tumor invasion.
 Project Advisor: Dr. Tian Xu
1997 - 2003 *Doctor of Philosophy* (Ph.D. in Molecular Biology and Genetics), Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada
 Thesis: Understanding the Roles of *scalloped* and *vestigial* during wing development in *Drosophila melanogaster*.
 Thesis Advisor: Dr. John Bell
1991 - 1993 *Master of Science* (Zoology, Specialization in Genetics and Molecular Biology), Center for Advanced Study in Zoology, Banaras Hindu University, Varanasi, India
 Achieved a first division with second rank in the order of merit.
1988 - 1991 *Bachelor of Science (Honors in Zoology)*, Center for Advanced Study in Zoology, Banaras Hindu University, Varanasi, India
 Achieved a first division.

AWARDS AND HONORS

- 2019-2022** Awarded the NSF-MRI grant for acquisition of a Confocal Microscope.
- 2018-2019** Awarded the RCAP-1 grant. Sponsored by the WKU Office of Research.
- 2018-2019** Awarded the KBRIN – IDeA grant. Sponsored by the Kentucky Biomedical Research Infrastructure Network.
- 2017** Awarded the “Most Prolific Proposer” award sponsored by WKU Office of Research and Creative Activity.
- 2016** Awarded a Research and Creative Activities Category-1S grant. Sponsored by the WKU Office of Research.
- 2016 - 2018** Awarded the KBRIN – AREA grant. Sponsored by the Kentucky Biomedical Research Infrastructure Network.
- 2016** Received the Ogden College of Science and Engineering “Faculty Advising Award” for excellence in advising
- 2016** Received the “Most Prolific Proposer” award, sponsored by the WKU office of sponsored programs.
- 2015** Awarded a WKU RISE Fellowship for excellence in research. Sponsored by the WKU office of sponsored programs.
- 2014 - 2016** Awarded funds to recruit a postdoctoral fellow to my laboratory for two years. Sponsored by the WKU office of diversity.
- 2014** Awarded a Research and Creative Activities Category-1 grant. Sponsored by the WKU office of research.
- 2011 - 2014** Awarded the KBRIN – AREA grant. Sponsored by the Kentucky Biomedical Research Infrastructure Network.
- 2011** Received the “First Time Grant Awardee” award from the WKU office of sponsored programs.
- 2011** Elected Cell and Molecular Biology section **Chair**, Kentucky Academy of Science.
- 2011** Awarded a Research and Creative Activities Category-1 grant. Sponsored by the WKU office of research.
- 2010** Elected Cell and Molecular Biology section **Secretary**, Kentucky Academy of Science.
- 2004** Awarded the Anna Fuller Fund Postdoctoral Fellowship in Molecular Oncology at Yale University.
- 2002** Received the Pansy and George Strange Graduate Scholarship at the University of Alberta. Awarded to one graduate student in a University wide open competition.
- 2001** Awarded the “Development Travelling Fellowship”, sponsored by the Company of Biologists Limited, United Kingdom.
- 2001** Received Mary Louise Imrie graduate student award and the Department of Biological Sciences, University of Alberta travel award.
- 2001** Received the best poster award in Molecular Biology and Genetics category at the Annual Graduate Student Research Days, sponsored by the Department of Biological Sciences, University of Alberta, Edmonton, Canada.
- 1999 - 2002** Received graduate tuition supplements from the Department of Biological Sciences, University of Alberta, Edmonton, Canada.
- 1997 – 2002** Received graduate teaching assistantships from the Department of Biological Sciences, University of Alberta, Edmonton, Canada.
- 1993** Awarded a Junior Research Fellowship by the Department of Science and Technology, Government of India.
- 1993** Secured second position in the order of merit at the MSc examination, Banaras Hindu University, Varanasi, India

CURRENT RESEARCH INTERESTS

My training is in the field of Developmental Biology, Genetics and Molecular Oncology. My current research interests are reflective of my training and are provided below.

- Mechanisms of invasive behavior during normal development and tumor progression using *Drosophila* as a genetic model.
- Cathepsins, Protease Inhibitors, Matrix metalloproteases, Extracellular Matrix and their contributions to normal development and tumor progression.
- Inhibitory molecule suppression of invasive behavior.
- Wing, Air Sac Primordium and general development in *Drosophila melanogaster*.

ACTIVE COLLABORATIONS

- | | | |
|---------------------------------|--------------------------|---|
| 1. Dr. Matthew Gentry | University of Kentucky | Identification of Basement membrane associated proteins in <i>Drosophila melanogaster</i> . |
| 2. Dr. Amit Singh | University of Dayton | Understanding Lunasin's effect on neurodegeneration during Alzheimer Disease using a <i>Drosophila</i> model. |
| 3. Dr. Andrea Page-McCaw | Vanderbilt University | Exploring the relationship between MMPs and Cathepsins |
| 4. Dr. Shaad Ahmad | Indiana State University | Heart Development and Cathepsin L in <i>Drosophila melanogaster</i> |

REFEREED PUBLICATIONS

*Denotes WKU Student Authors

§Denotes Corresponding Author

Publications From WKU

- 2019 15. Powers, N*, **Srivastava, A§**. JAK/STAT signaling is involved in air sac primordium development of *Drosophila melanogaster*. *FEBS Lett.* **2019 Mar 10**. doi: 10.1002/1873-3468.13355. [Epub ahead of print] PMID: 30854626 (**Selected for "Editor's Choice" and featured on the front cover**)
- 2018 14. Sarkar, A, Gogia N, Glenn N, Singh A, Jones G*, Powers N*, **Srivastava A**, Kango-Singh M, Singh A. A soy protein Lunasin can ameliorate amyloid-beta 42 mediated neurodegeneration in *Drosophila* eye. *Sci Rep.* **2018 Sep 10**;8(1):13545. doi: 10.1038/s41598-018-31787-7. PMID:30202077
- 2018 13. Nathan Powers*, **Ajay Srivastava§**. The Air Sac Primordium of *Drosophila*: A Model for Invasive Development. *Int J Mol Sci.* **2018 Jul 17**;19(7). pii: E2074. doi: 10.3390/ijms19072074. PMID:30018198
- 2015 12. Qian Dong*, Breanna Brenneman*, Christopher Fields*, **Ajay Srivastava§**. A Cathepsin-L is required for invasive behavior during Air Sac Primordium development in *Drosophila melanogaster*. *FEBS Lett.* **2015 Sep 2**. pii: S0014-5793(15)00736-X. doi: 10.1016/j.febslet.2015.08.036. [Epub ahead of print] PubMed PMID: 26341534
- 2015 11. **Srivastava, Ajay§**. A novel link between FMR gene and The JNK pathway provides clues to possible role in Malignant Pleural Mesothelioma. *FEBS Open Bio.* **2015 Aug 19**;5:705-11. doi: 10.1016/j.fob.2015.07.005. eCollection 2015. PubMed PMID: 26425438
- 2015 10. **Srivastava, Ajay§** and Qian Dong*. Regulation of a Serine Protease Homolog by the JNK pathway during thoracic development of *Drosophila melanogaster*. *FEBS Open Bio.* **2015 Feb 7**;5:117-23. doi: 10.1016/j.fob.2015.01.008. eCollection 2015
- 2014 9. Gillian E. Jones* and **Ajay Srivastava§**. Understanding Lunasin's Biology and Potential as a Cancer Therapeutic by utilizing *Drosophila* Genetics. *Experimental Biology and Medicine* **2014**; 239: 519–528. DOI: 10.1177/1535370214522180
- 2013 8. **Srivastava, Ajay§**. A Protocol for Genetic Induction and Visualization of Benign and Invasive Tumors in Cephalic Complexes of *Drosophila melanogaster*. *Journal of Visualized Experiments* **2013**. (79), e50624, doi:10.3791/50624

Publications Prior to WKU

- 2007 7. **Ajay Srivastava**, Jose Carlos Pastor-Pareja, Tatsushi Igaki, Raymond Pagliarini and Tian Xu§. Basement membrane remodeling is essential for *Drosophila* disc eversion and tumor invasion. *Proceedings of the National Academy of Sciences, USA*. 2007 Feb 20; 104(8):2721-6. Epub 2007 Feb 14
- 2007 6. Garg A, **Srivastava A**, Davis MM, O'Keefe S, Chow L, Bell JB§. Antagonizing Scalloped with a Novel Vestigial Construct Reveals an Important role for Scalloped in Leg, Eye and Optic Lobe Development of *Drosophila melanogaster*. *Genetics* 2007 Feb;175(2):659-69. Epub 2006 Nov 16
- 2004 5. **Srivastava A**, Simmonds AJ, Garg A, Fossheim L, Campbell SD, Bell JB§. Molecular and functional analysis of scalloped lethal alleles in *Drosophila melanogaster*. *Genetics* 2004, 166(4):1833-43.
- 2003 4. MacKay JO, Soanes KH, **Srivastava A**, Simmonds AJ, Brook WJ, Bell JB§. An in vivo analysis of the vestigial gene in *Drosophila melanogaster* confirms domains required for VG function. *Genetics* 2003, 163-4; 1365-73.
- 2003 3. **Srivastava A**, Bell JB§. Further developmental roles of the vestigial / scalloped transcription complex during wing development in *Drosophila melanogaster*. *Mechanisms of Development* 2003, 120(5); 587-96.
- 2002 2. **Srivastava A**, Heise C, Garg A, Bell JB§. The relationship between the dominant Additional vein mutant in *Drosophila melanogaster* and engrailed. *Genome* 2002, 45;1077-1082.
- 2002 1. **Srivastava A**, MacKay JO, Bell JB§. A Vestigial:Scalloped TEA domain chimera rescues the wing phenotype of a scalloped mutation in *Drosophila melanogaster*. *Genesis* 2002, 33(1);40-47.

Published Abstracts:

- 2020 5. Elisha VanZant* and **Ajay Srivastava§**. A Screen for Protein Encoding Genes for Air Sac Primordium Invasion of the Wing Imaginal Disc in *Drosophila melanogaster*. *The FASEB Journal, Volume 34, Issue 1_supplement01 Apr 2020*
- 2020 4. Usman Salim*, Anas Gondal*, Hasan Salim* and **Ajay Srivastava§**. Investigating the role of a V-ATPase in the Development of the Air Sac Primordia. *The FASEB Journal, Volume 34, Issue 1_supplement01 Apr 2020*
- 2020 3. Camilla Lozano* and **Ajay Srivastava§**. Role of Apontic in ASP Development in *Drosophila melanogaster*. *The FASEB Journal, Volume 34, Issue 1_supplement01 Apr 2020*
- 2019 2. Anas Gondal*, Hasan Salim*, and **Ajay Srivastava§**. A Genetic Screen for Proteins Involved in ASP Invasion of the Wing Disc of *Drosophila melanogaster*. *The FASEB Journal, Volume 33, Issue 1_supplement01 Apr 2019*
- 2018 1. Hasan Salim*, and **Ajay Srivastava§**. Assessing the Role of the Gene, Pebbled, in *D. melanogaster* ASP Invasive Behavior. *The FASEB Journal, Volume 32, Issue 1_supplement01 Apr 2018*

MANUSCRIPTS IN REVIEW

*Denotes WKU Student Author

§Denotes Corresponding Author

1. Joy Fan*, Hasan Salim*, **Ajay Srivastava§**. Pebbled/Hindsight is Required for Air Sac Primordium Development in *Drosophila melanogaster*. FEBS Open Bio 2019 (In Review)

MANUSCRIPTS IN PREPARATION

*Denotes WKU Student Author

§Denotes Corresponding Author

1. **Ajay Srivastava§**, Sayo Aromiwura*, Christopher Fields*, Qian Dong*. Functional analysis of a putative basement membrane degrader in *Drosophila melanogaster*.

2. **Ajay Srivastava§**, Dane Flinchum*, Sayo Aromiwura*, Qian Dong*, Breanna Brenneman*. A Cathepsin L is in regulatory relationship with JNK and Wingless signaling pathways.

CONFERENCE PRESENTATIONS

*Denotes Student Author

Presenting Student Authors Are Underlined

From WKU

- 2020 70. Poster presented at the Louisville Regional Science and Engineering Fair titled: A screen for protein encoding genes for Air Sac Primordium invasion of the wing imaginal disc in *Drosophila melanogaster*. Elisha VanZant* and **Ajay Srivastava§**.
- 2020 69. Poster presented at the WKU Student Research Virtual Conference titled: Investigating the Role of a V-ATPase in the development of the Air Sac Primordia. Usman Salim*, Hasan Salim*, Anas Gondal* and **Ajay Srivastava§**.
- 2020 68. Poster presented at the WKU Student Research Virtual Conference titled: A screen for protein encoding genes for Air Sac Primordium invasion of the wing imaginal disc in *Drosophila melanogaster*. Elisha VanZant* and **Ajay Srivastava§**.
- 2020 67. Poster presented at the WKU Student Research Virtual Conference titled: Role Of *apontic* In Asp Development. Camila Lozano*, Anas Gondal* and **Ajay Srivastava§**.
- 2020 66. Abstract accepted for poster presentation at the Experimental Biology 2020 meeting to be held in San Diego, CA titled: Role of *Apontic* in ASP Development in *Drosophila melanogaster*. Camila Lozano* and **Ajay Srivastava§**. (Conference cancelled due to COVID-19)
- 2020 65. Abstract accepted for poster presentation at the Experimental Biology 2020 meeting to be held in San Diego, CA titled: Investigating the role of a V-ATPase in the Development of the Air Sac Primordia. Usman Salim*, Hasan Salim*, Anas Gondal*, **Ajay Srivastava§**. (Conference cancelled due to COVID-19)
- 2020 64. Abstract accepted for poster presentation at the Experimental Biology 2020 meeting to be held in San Diego, CA titled: A Screen for Protein Encoding Genes for Air Sac Primordium Invasion of the Wing Imaginal Disc in *Drosophila melanogaster*. Elisha VanZant and **Ajay Srivastava§**. (Conference cancelled due to COVID-19)
- 2019 63. Poster presented at the annual meeting of the Kentucky Academy of Science, Berea, KY titled: Investigating the role of a V-ATPase in the Development of the Air Sac Primordia. Usman Salim*, Hasan Salim*, Anas Gondal*, **Ajay Srivastava§**.
- 2019 62. Poster presented at the annual meeting of the Kentucky Academy of Science, Berea, KY titled: Role of *Apontic* in ASP Development in *Drosophila melanogaster*. Camila Lozano* and **Ajay Srivastava§**.
- 2019 61. Poster presented at the annual meeting of the Kentucky Academy of Science, Berea, KY titled: A Protein Trap Screen for Genes Involved in ASP Development. Elisha VanZant* and **Ajay Srivastava§**.
- 2019 60. Talk presented at the annual meeting of the Kentucky Academy of Science, Berea, KY titled: Characterization of a basement membrane associated protein in endomembrane system of *Drosophila melanogaster*. Aref Ranjbar*, Mayank Kapadia* and **Ajay Srivastava§**.
- 2019 59. Poster presented at the SE Regional IDEA Meeting held in Louisville, KY titled: Characterization of a basement membrane associated protein in the endomembrane system of *Drosophila melanogaster*. Aref Ranjbar*, **Ajay Srivastava§**.
- 2019 58. Poster presented at the Experimental Biology 2019 meeting held in Orlando, Florida titled: A Genetic Screen for Proteins Involved in ASP Invasion. Anas Gondal*, Hasan Salim*, **Ajay Srivastava§**.
- 2019 57. Talk presented at the WKU REACH Student Research Conference titled: Characterization of a Basement Membrane Associated Protein Encoding Gene in *Drosophila melanogaster*. Aref Ranjbar*, Mayank Kapadia*, **Ajay Srivastava§**.
- 2019 56. Poster presented at the WKU REACH Student Research Conference titled: A Genetic Screen for Proteins Involved in ASP Invasion. Anas Gondal*, **Ajay Srivastava§**.

- 2018 55. Poster presented at the annual NISBRE meeting, Washington DC titled: Characterization of Antibodies Against Two Basement Membrane Degraders Reveal their Tissue Specific Expression in *Drosophila melanogaster*. Afolasayo Aromiwura*, **Ajay Srivastava§.**
- 2018 54. Poster presented at the annual NISBRE meeting, Washington DC titled: The Roles of JAK/STAT Signaling and a Basement Membrane Associated Protein During Air Sac Primordium Development in *Drosophila melanogaster*. Nathan Powers*, Mayank Kapadia*, **Ajay Srivastava§.**
- 2018 53. Poster Presented at the Experimental Biology 2018 Meeting held in San Diego, California titled: Assessing the role of the gene, *pebbled*, in *D. melanogaster* ASP Invasive Behavior. Hasan Salim*, Joy Fan*, **Ajay Srivastava§.**
- 2018 52. Poster presented at the 59th Annual Drosophila Research Conference, Philadelphia, Pennsylvania titled: Characterization of Antibodies Developed against Two Basement Membrane Degraders in *Drosophila melanogaster*. Sayo Aromiwura* and **Ajay Srivastava§.**
- 2018 51. Poster presented at the WKU REACH Student Research Conference titled: Assessing the Role of the Gene, *pebbled*, in *Drosophila melanogaster* ASP Invasive Behavior. Hasan Salim*, Joy Fan*, **Ajay Srivastava§. (This poster won the best poster award in its category)**
- 2018 50. Poster presented at the WKU REACH Student Research Conference titled: Hemocyte Development in *Drosophila melanogaster* – assessing the role of Cathepsin L. Enes Atici* and **Ajay Srivastava§.**
- 2018 49. Talk presented at the WKU REACH Student Research Conference titled: Characterization of Two Basement Membrane Degraders in *Drosophila Melanogaster* Sayo Aromiwura*, Christopher Fields, **Ajay Srivastava§.**
- 2018 48. Talk presented at the WKU REACH Student Research Conference titled: Preliminary Characterization of a Basement Membrane-associated Protein in *Drosophila*. Nathan Powers*, Mayank Kapadia*, **Ajay Srivastava§.**
- 2017 47. Talk presented at the annual meeting of the Kentucky Academy of Science, Murray State University, Murray, KY titled: Characterization of Reagents Developed Against Two Basement Membrane Degraders in *Drosophila melanogaster*. Sayo Aromiwura*, **Ajay Srivastava§. (This Talk Won the 2nd Place Graduate Talk Award in Cell and Molecular Biology Category)**
- 2017 46. Poster presented at the annual meeting of the Kentucky Academy of Science, Murray State University, Murray, KY titled: Assessing the role of the gene, *pebbled*, in *D. melanogaster* ASP Invasive Behavior. Hasan Salim, Joy Fan, **Ajay Srivastava§.**
- 2017 45. Poster presented at the annual meeting of the Kentucky Academy of Science, Murray State University, Murray, KY titled: Characterizing the role of CP1 in *Drosophila melanogaster* and its effects on basement membrane degradation and signaling. Dane Flinchum, **Ajay Srivastava§.**
- 2017 44. Poster presented at the SE Regional IDEA Meeting held in Morgantown, WV titled: The Characterization of SNUTS, a Basement Membrane Degradation Gene, and its Role in the Development of *Drosophila melanogaster*. Sayo Aromiwura*, **Ajay Srivastava§.**
- 2017 43. Poster presented at the SE Regional IDEA Meeting held in Morgantown WV titled: Involvement of JAK-STAT pathway during air sac primordia development of *Drosophila melanogaster*. Nathan Powers*, **Ajay Srivastava§.**
- 2017 42. Poster presented at the SE Regional IDEA Meeting held in Morgantown WV titled: Characterizing the role of CP1 in *Drosophila melanogaster* and its effects on basement membrane degradation and signaling. Dane Flinchum*, Breanna Brenneman*, Qian Dong*, **Ajay Srivastava§.**
- 2017 41. Talk presented at the WKU REACH week titled: Characterizing the role of CP1 in *Drosophila melanogaster* and its effects on Basement Membrane Degradation and Signaling. Dane Flinchum*, **Ajay Srivastava§.**
- 2017 40. Talk presented at the WKU REACH week titled: Characterization of the SNUTS Protein and its Role in the Development of *Drosophila melanogaster*. Sayo Aromiwura*, **Ajay Srivastava§.**
- 2017 39. Talk presented at the WKU REACH week titled: Involvement of JAK/STAT pathway during air sac primordia development of *Drosophila melanogaster*. Nathan Powers*, **Ajay Srivastava§.**

- 2016 38. Poster presented at the annual meeting of the Kentucky Academy of Science, University of Louisville, Louisville, KY titled: Analysis of a Cathepsin-L in Hemocyte Development and Wound Healing in *Drosophila melanogaster*. Enes Atici*, **Ajay Srivastava**
- 2016 37. Talk presented at the annual meeting of the Kentucky Academy of Science, University of Louisville, Louisville, KY titled: Altering expression of JAK/STAT pathway components in air sac primordia of *Drosophila melanogaster*. Nathan Powers*, **Ajay Srivastava**
- 2016 36. Poster presented at the fly meeting and the Allied Genetics Conference, Orlando, FL titled: Role of a soy protein Lunasin in A β 2 mediated neurodegeneration in Alzheimer's Disease. N. Glenn*, A. Sarkar*, A. Giaquinto, M. Moran, G. Jones*, **A. Srivastava**, M. Kango-Singh, A. Singh
- 2016 35. Poster presented at the fly meeting and the Allied Genetics Conference, Orlando, FL titled: Altering Expression of JAK/STAT Pathway Components in Air Sac Primordia of *Drosophila melanogaster*. Nathan Powers*, **Ajay Srivastava**
- 2016 34. Poster presented at the fly meeting and the Allied Genetics Conference, Orlando, FL titled: Regulation of Air Sac Primordium Development by A Cathepsin L in *Drosophila melanogaster*. Christopher Fields*, Qian Dong, Breanna Brenneman, **Ajay Srivastava**
- 2016 33. Poster presented at the annual NISBRE meeting, Washington DC titled: Functional and Expression Analysis of a Putative Basement Membrane Degradar in *Drosophila melanogaster*. Christopher Fields*, Qian Dong, **Ajay Srivastava**
- 2016 32. Talk presented at the WKU REACH week titled: Investigating JAK/STAT Pathway Involvement in Developing Air Sacs of *Drosophila melanogaster*. Nathan Powers*, **Ajay Srivastava**
- 2016 31. Talk presented at the WKU REACH week titled: Identification of Collagen IV Associated Proteins Using *Drosophila* Genetics & Mass Spectrometry. Mayank Kapadia*, **Ajay Srivastava**
- 2016 30. Poster presented at the WKU REACH week titled: An Immunohistochemical Screen for Genes Expressed in Air Sac Primordium in *Drosophila*. Joy Fan* and **Ajay Srivastava**
- 2015 29. Talk presented at the 101st Annual Meeting of the Kentucky Academy of Science titled: Functional and expression analysis of a putative basement membrane degrader in *Drosophila melanogaster*. Christopher Fields*, Qian Dong*, Elizabeth Oates*, **Ajay Srivastava**
- 2015 28. Poster presented at 2015 Southeast Regional IDeA Meeting titled: Regulation of Air sac Primordium Development by a Cathepsin L in *Drosophila melanogaster*. **Ajay Srivastava**, Qian Dong*, Breanna Brenneman*, Christopher Fields*
- 2015 27. Poster presented at 8th Annual WKU BSURE Symposium titled: Investigating JAK/STAT Pathway Involvement in the Development of Air Sacs of *Drosophila melanogaster*. Nathan Powers* and **Ajay Srivastava**
- 2015 26. Poster presented at 8th Annual WKU BSURE Symposium titled: An Immunohistochemical Screen for Genes Expressed in the Air Sac Primordium in *Drosophila*. Joy Fan* and **Ajay Srivastava**
- 2015 25. Talk presented at the WKU REACH week titled: Involvement of a protease in the development of dorsal Air Sac Primordium (ASP) of *Drosophila melanogaster*. Qian Dong*, Breanna Brenneman*, Christopher Fields*, **Ajay Srivastava**
- 2015 24. Talk presented at the WKU REACH week titled: Genetic characterization of a basement membrane degrader in *Drosophila melanogaster*. Christopher Fields*, Qian Dong*, Elizabeth Oates*, **Ajay Srivastava**
- 2015 23. Poster presented at the WKU REACH week titled: A *Drosophila melanogaster* Model to Study Silver Nanoparticle Toxicity. Ananya Sharma* and **Ajay Srivastava**
- 2015 22. Poster presented at the 56th Annual *Drosophila* Research Conference, Chicago, Illinois titled: Evaluating Toxicity of Silver Nanoparticles in *Drosophila melanogaster*. Ananya Sharma* and **Ajay Srivastava**
- 2015 21. Poster presented at the 56th Annual *Drosophila* Research Conference, Chicago, Illinois titled: Role of a soy protein Lunasin in A β 2 mediated neurodegeneration in Alzheimer's disease. Angela Giaquinto, Michael Moran, Ankita Sarkar, Gillian Jones*, **Ajay Srivastava**, Maduri Kango-Singh, Amit Singh

- 2014 20. Poster presented at the 100th Kentucky Academy of Science Annual Meeting at University of Kentucky, Lexington, Kentucky titled: Evaluating toxicity of silver nanoparticles in *Drosophila melanogaster*. Ananya Sharma* and **Ajay Srivastava**
- 2014 19. Poster presented at the 7th Annual BSURE Symposium, Biology Department, WKU titled: Evaluating toxicity of silver nanoparticles in *Drosophila melanogaster*. Ananya Sharma* and **Ajay Srivastava**
- 2014 18. Poster presented at the 7th Annual BSURE Symposium, Biology Department, WKU titled: Creation of constructs capable of expressing different domains of a novel basement membrane degrader in *Drosophila melanogaster*. Elizabeth Oates* and **Ajay Srivastava**
- 2014 17. Poster presented at the 55th Annual Drosophila Research Conference in San Diego, CA titled: Functional and Expression Analysis of a Putative Basement Membrane degrader in *Drosophila melanogaster*. Christopher Fields* and **Ajay Srivastava**
- 2013 16. Poster Presented at the 99th KAS Annual Meeting at Morehead State University, Morehead, KY titled: Preliminary characterization of a novel gene identified in a genetic screen for basement membrane degraders in *Drosophila melanogaster*. Christopher Fields* and **Ajay Srivastava**
- 2013 15. Poster presented at the 6th Annual BSURE Symposium, Biology Department, WKU titled: Initial Characterization of a Novel Putative Basement Membrane Degradation in *Drosophila melanogaster*. Christopher Fields* and **Ajay Srivastava**
- 2013 14. Talk presented at the 43rd WKU Student Research Conference titled: Understanding the Effects of Lunasin Overexpression on Normal Development and Tumor Progression in *Drosophila melanogaster*. Gillian Jones* and **Ajay Srivastava**
- 2013 13. Talk presented at the 43rd WKU Student Research Conference titled: Creation of Transgenic UAS-NC1 *Drosophila melanogaster*. Jordan Olberding* and **Ajay Srivastava**. (This talk won the best talk award in its section)
- 2013 12. Talk presented at the 43rd WKU Student Research Conference titled: Functional and Expression Analysis of a Novel Basement Membrane Degradation in *Drosophila melanogaster*. Christopher Fields* and **Ajay Srivastava**.
- 2012 11. Poster presented at the Council for Undergraduate Research Conference titled: Functional analysis of a Cathepsin-L in *Drosophila melanogaster*. Breanna Brenneman* and **Ajay Srivastava**
- 2012 10. Poster presented at the 42nd WKU Undergraduate Research Conference titled: Identification of Genetic Suppressors of a scalloped wing mutation in *Drosophila*. Samantha Hawtrey* (Gatton Academy Student) and **Ajay Srivastava**
- 2011 9. Poster presented at the Kentucky Academy of Science annual meeting held at Murray State University, Murray, KY and titled: Identification of Basement Membrane degraders in *Drosophila*. Shannon Sean* and **Srivastava Ajay**. (This poster won the best poster award in its category)
- 2011 8. Poster presented at the 41st WKU Undergraduate Research Conference titled: Identification of Candidate Basement Membrane degraders using *Drosophila* Genetics. Sean Shannon* and **Ajay Srivastava**. (This poster won the best poster award in the category)
- 2010 7. Talk presented at the Annual meeting of the Kentucky Academy of Science held in Bowling Green, KY titled: A novel protease inhibitor regulates tumorigenesis by suppressing apoptosis in *Drosophila melanogaster*. **Ajay Srivastava**

Prior to WKU

- 2006 6. Presented a poster at the 47th Annual Drosophila Research Conference held in Houston Texas titled: A genetic screen for mutations that cause tumor progression and metastatic behaviour. Gaurang Daftary, Tatsushi Igaki, Rui Li, Jinyu (Jim) Lu, Ajay Srivastava, Congwu Chi, Xiangxiang Kong, Zhisheng Ye, Huanhu Zhu, Xiao-Hui Wu, Tian Xu.
- 2002 5. Presented a poster at the 43rd Annual Drosophila Research Conference held in San Diego, CA, titled: Molecular characterization of scalloped lethal alleles reveal domains important for its biological function. **Ajay Srivastava** and John Bell.

- 2001 4. Presented a talk at the Canadian Fly Meeting held in Canmore, Alberta, Canada titled: Analysis of scalloped and vestigial functions during *Drosophila* wing development. **Ajay Srivastava** and John Bell
- 2001 3. Presented a poster at the 42nd Annual Drosophila Research Conference held in Washington D.C. titled: Rescue of a scalloped wing mutation by a VG::SD TEA domain chimera. **Ajay Srivastava**, Julie McKay, John Bell
- 2001 2. Presented a poster at the Annual Student Research Day, Department of Biological Sciences, University of Alberta, Alberta, Canada titled: A VG::SD TEA domain chimera mimics the native transcription complex. **Ajay Srivastava**, Julie McKay, John Bell.
- 2000 1. Presented a poster at the VISION 2000 conference held in Vancouver, BC, Canada and organized by the Genetics Societies of America and Canada titled: Molecular Characterization of lethal alleles of scalloped. **Ajay Srivastava**, Shelagh Campbell, John Bell

INVITED TALKS

Since Joining WKU

2019	September 27 th	Department of Biology, University of Louisville, Louisville, KY
2019	April 26 th	Department of Biology, Western Kentucky University, Bowling Green, KY
2016	October 20 th	KBRIN-EAC Meeting, Lexington, KY
2015	August 19 th	Ogden College of Science and Engineering TED talk, WKU, Bowling Green, KY
2014	November 13 th	Department of Biological Sciences, University of Kentucky, Lexington, KY
2014	October 31 st	Department of Biological Sciences, Murray State University, Murray, KY
2012	April 8 th	STEM Academy, Greenville, KY
2011	October 10 th	KBRIN – EAC Meeting, Louisville, KY
2010	April 15 th	Department of Biology, Western Kentucky University, Bowling Green, KY

Prior to WKU

2010	March 26 th	Department of Biological Sciences, Vanderbilt University, Nashville, TN
2010	March 10 th	Department of Biological Sciences, Columbia University, New York City, NY
2001	June	Canadian Fly Meeting, Canmore, Alberta, Canada

GRANTS AND CONTRACTS

FUSE – Faculty Undergraduate Student Engagement
 RCAP – Research and Creative Activities Program
 BSURE – Biology Summer Undergraduate Research Experience
 KBRIN – Kentucky Biomedical Infrastructure Network
 AREA – Academic Research Enhancement Awards
 QTAG – Quick Turn Around Grant

Funded

Year	Description/Type	Internal/External	Amount	My Role
2019-2022	Awarded an NSF-MRI Grant for acquisition of a Confocal Microscope	External , sponsored by the National Science Foundation	\$377,259	Role – Principal Investigator
2019	Awarded a QTAG Grant	Internal , Ogden College of Science and Engineering	\$2,550	Role – Principal Investigator
2019	Awarded a FUSE Grant with my Gatton Academy student Usman Salim	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2019	Awarded KBRIN/NIH Equipment Grant for purchase of a Confocal Microscope	External , sponsored by the KBRIN/NIH	~\$115,000	Role – Principal Investigator

2019	Awarded a FUSE Grant with my Gatton Academy student Anas Gondal	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2018-2019	Awarded the KBRIN – IDeA Grant	External , sponsored by the KBRIN/NIH	~\$56,800	Role – Principal Investigator
2018-2019	Awarded a RCAP1S Grant	Internal , sponsored by WKU office of sponsored programs	\$16,000	Role – Principal Investigator
2018	Awarded a QTAG Grant	Internal , Ogden College of Science and Engineering	\$3,000	Role – Principal Investigator
2018	Awarded a FUSE Grant with my Undergraduate student Aref Ranjbar	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2018	Awarded a FUSE Grant with my Gatton Academy student Hasan Salim	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2017	Awarded a FUSE Grant with my Honors thesis student Enes Atici	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2016	Awarded a RCAP1S Grant	Internal , sponsored by WKU office of sponsored programs	\$16,000	Role – Principal Investigator
2016-2018	Awarded the KBRIN – IDeA Grant	External , sponsored by the KBRIN/NIH	\$112,000	Role – Principal Investigator
2016	Awarded a QTAG Grant	Internal , Ogden College of Science and Engineering	\$3,000	Role – Principal Investigator
2016	Awarded a FUSE Grant with my Honors thesis student Afolasayo Aromiwura	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2015	Awarded Ky NSF EPSCOR RSP grant	External , Kentucky National Science Foundation EPSCOR	\$9,666	Role – Principal Investigator
2015	Awarded BSURE grants with my students Nathan Powers and Joy Fan	Internal , sponsored by WKU Department of Biology	\$2,900	Role – Principal Investigator/Mentor
2015	Awarded a FUSE Grant with my Honors thesis student Nathan Powers	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2015	Awarded a FUSE Grant with my Gatton Academy student Ananya Sharma	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2014-2016	Awarded funds to recruit an Underrepresented Minority Postdoctoral Fellow to my Laboratory	Internal , sponsored by WKU office of diversity	\$90,000	Role – Postdoctoral mentor
2014	Awarded BSURE grants with my Gatton Academy students Ananya Sharma, Paige Kington and my Honors student Elizabeth Oates	Internal , sponsored by WKU Department of Biology	\$2,700	Role – Principal Investigator/Mentor
2014	Awarded a FUSE Grant with my Honors thesis student Elizabeth Oates	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2014-2015	Awarded a RCAP1 Grant	Internal , sponsored by WKU office of research	~\$15,000	Role – Principal Investigator
2013-2014	Awarded the KBRIN – AREA Grant	External , sponsored by the KBRIN/NIH	\$26,000	Role – Principal Investigator

2013	Awarded a FUSE grant along with my Honors thesis student Christopher Fields	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2012	Awarded a FUSE grant along with my Honors thesis student Jordan Olberding	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2011-2013	Awarded the KBRIN – AREA Grant	External , sponsored by the KBRIN/NIH	\$52,000	Role – Principal Investigator
2011	Awarded a RCAP1 Grant	Internal , sponsored by WKU office of research	\$20,000	Role – Principal Investigator

Submitted Grants in Review

Year	Description/Type	Internal/External	Amount Requested	My Role
2020	RCAP-1	Internal , sponsored by WKU office of sponsored programs	\$16,000	Role – Principal Investigator
2020	Submitted a FUSE Grant with my Gatton Academy student Krupa Hegde	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator
2020	Beckman Scholars Program	External , Arnold and Mabel Beckman Foundation	\$104,000	Role – Principal Investigator/Mentor

Declined Grants

Year	Description/Type	Internal/External	Amount Requested	My Role
2019	Beckman Scholars Program	External , Arnold and Mabel Beckman Foundation	\$104,000	Role – Principal Investigator/Mentor
2019	Submitted a NIH – R15 Grant titled: Elucidation of a Cathepsin L's developmental role and regulation in <i>Drosophila melanogaster</i>	External , National Institutes of Health	\$426,000	Role – Principal Investigator
2019	Submitted a FUSE Grant with my Gatton Academy student Elisha VanZant	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2019	Submitted a FUSE Grant with my Gatton Academy student Camila Lozano	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2018	Submitted a FUSE Grant with my Gatton Academy student Hannah Watkins	Internal , sponsored by WKU office of sponsored programs	~\$3,500	Role – Principal Investigator/Mentor
2017	Submitted a NIH – R15 Grant titled: Functional Analysis of a Cathepsin L in <i>Drosophila melanogaster</i>	External , National Institutes of Health	\$411,269	Role – Principal Investigator
2017	Submitted a NSF-MRI grant for acquisition of a Confocal Microscope	External , National Science Foundation	\$391,110	Role – Principal Investigator
2017	Submitted a Kentucky NSF – EPSCOR Research Enhancement Grant	External , Kentucky National Science Foundation EPSCOR	\$35,500	Role – Principal Investigator
2017	Submitted a Kentucky NSF – EPSCOR Research Scholars Program Grant	External , Kentucky National Science Foundation EPSCOR	\$9,545	Role – Principal Investigator

2016	Submitted a NIH – R15 Grant titled: Functional Analysis of a Cathepsin L in <i>Drosophila melanogaster</i>	External , National Institutes of Health	\$501,644	Role – Principal Investigator
2016	Submitted a FUSE Grant with my Gatton Academy student Joy Fan	Internal , sponsored by WKU office of sponsored programs	~\$5,000	Role – Principal Investigator/Mentor
2016	Submitted a Kentucky NSF – EPSCOR Research Enhancement Grant	External , Kentucky National Science Foundation EPSCOR	\$25,000	Role – Principal Investigator
2015	Submitted a NIH – R15 Grant titled: Functional Analysis of a Cathepsin L in <i>Drosophila melanogaster</i>	External , National Institutes of Health	\$454,659	Role – Principal Investigator
2015	Submitted a Kentucky NSF – EPSCOR Research Enhancement Grant	External , Kentucky National Science Foundation EPSCOR	\$25,000	Role – Principal Investigator
2015	Submitted a NIH – R21 Grant titled: Developmental Profiling of Basement Membrane Associated Proteins in <i>Drosophila melanogaster</i>	External , National Institutes of Health	\$375,800	Role – Principal Investigator
2015	Submitted a NSF-MRI grant for Acquisition of a Confocal Microscope	External , National Science Foundation, Major Research Instrumentation	\$375,270	Role – Principal Investigator
2015	Submitted a RCAP1S grant for Creation of reagents for characterization of SNUTS.	Internal , sponsored by WKU office of research	\$16,000	Role – Principal Investigator
2015	Submitted a KBRIN-IDEA grant for Identification of Basement Membrane associated proteins.	External , sponsored by the KBRIN/NIH	\$113,600	Role – Principal Investigator
2014	Submitted a Special Research Grant for creation of antibodies against a novel Basement Membrane degrader.	External , sponsored by the Kentucky Academy of Science	\$5,000	Role – Principal Investigator
2014	Submitted a KBRIN-IDEA Grant.	External , sponsored by the KBRIN/NIH	\$40,000	Role – Principal Investigator
2014	Submitted a RCAPII Grant.	Internal , sponsored by WKU office of research	\$8,000	Role – Principal Investigator
2013	Submitted a NSF-MRI grant for Acquisition of a Confocal Microscope	External , National Science Foundation, Major Research Instrumentation	\$378,132	Role – Principal Investigator
2012	Submitted a NIH-R15 grant for identification and characterization of putative Basement Membrane degraders in <i>Drosophila</i> .	External , National Institutes of Health	\$425,995	Role – Principal Investigator
2012	Submitted a RCAP I Grant for identification of Basement Membrane associated proteins.	Internal , sponsored by WKU office of research	\$19,696	Role – Principal Investigator
2012	Submitted a RCAPII Grant for understanding the <i>in vivo</i> effects of Canstatin.	Internal , sponsored by WKU office of research	\$7,978	Role – Principal Investigator

2012	Submitted a RCAPII Grant for understanding the <i>in vivo</i> effects of Lunasin.	Internal , sponsored by WKU office of research	\$5,240	Role – Principal Investigator
2012	Submitted a NSF-MRI grant for Acquisition of a Confocal Microscope	External , National Science Foundation, Major Research Instrumentation	\$425,205	Role – Principal Investigator
2011	Submitted a NSF-MRI grant for Acquisition of a Confocal Microscope	External , National Science Foundation, Major Research Instrumentation	\$501,400	Role – Principal Investigator

Declined Collaborative Grants

Year	Description/Type	Internal/External	Amount Requested	My Role
2020	Part of a NSF-MRI Grant for Acquisition of a LC-MS	External , National Science Foundation		Role – Senior Personnel (PI: Eric Conte)
2018	Part of a NSF-MRI Grant for Acquisition of a Femtosecond Laser. PI – Dr. Ali Er	External , National Science Foundation	\$628,665	Role – Co-Principal Investigator
2014	Part of a Summer Research Experience for Undergraduates proposal. PI – Dr. Rodney King	External , National Science Foundation, Research Experience for Undergraduates	\$405,230	Role – Senior Personnel
2014	Part of a BRIDGES to Baccalaureate, NIH-R25 grant. PI: Dr. Raja Dakshinamurthy	External , National Institutes of Health	\$1,527,530	Role – Senior Personnel
2013	Part of a proposal to acquire Next Generation Sequencing Apparatus. PI – Dr. Robert Wyatt	Internal , sponsored by WKU office of research	\$75,270	Role – Senior Personnel

Planned Grant Submissions

Year	Description/Type	Internal/External	My Role
2021	NSF-MRI for Acquisition of a Femtosecond Laser	External , National Science Foundation	Role – Co-Principal Investigator
2021	NSF-proposal to IOS cluster	External , National Science Foundation	Role – Principal Investigator

STUDENT SUPERVISION AND TRAINEES

JUMP – Joint Undergraduate Masters Program

Masters Students at WKU (Total=9, 7 Completed)

Student's Name	Year	Status	My Role	Current Occupation
Noah McVay	2020-	Current	Primary Thesis Advisor	JUMP Student
Paige Hiltner	2019-2021	Current	Primary Thesis Advisor	
Aref Ranjbar	2016-2020	Withdrew	Primary Thesis Advisor	Withdrew for Personal Reasons
Sayo Aromiwura	2016-2019	Completed	Primary Thesis Advisor	DO Student at Liberty University, Lynchburg, VA
Nathan Powers	2016-2018	Completed	Primary Thesis Advisor	Research Associate, Vanderbilt University,
Dane Flinchum	2015-2018	Completed	Primary Thesis Advisor	PhD Student at Tulane University, New Orleans, LA
Mayank Kapadia	2014-2016	Completed	Primary Thesis Advisor	Research Associate at UTMB, Galveston, TX

Christopher Fields	2014-2016	Completed	Primary Thesis Advisor	Ph.D. Student at University of Florida
Qian Dong	2013-2015	Completed	Primary Thesis Advisor	Ph.D. Student at University of Melbourne, Australia
Gillian Jones	2011-2013	Completed	Primary Thesis Advisor	Research Technician at Virginia Technological University

Other Masters Students at WKU (Total=5)

Student's Name	Year	Status	Primary Advisor	My Role
Joel Omage	2018-	In Progress	Dr. Moon-Soo Kim	Member, Thesis Committee
Jasmine Murillo	2018-	In Progress	Dr. Simran Banga	Member, Thesis Committee
Robyn Wilson	2016	Completed	Dr. Sigrid Jacobshagen	Member, Thesis Committee
Julia Freeman	2011-2013	Completed	Dr. Nancy Rice	Member, Thesis Committee
Olivia Boyd	2013-2015	Completed	Dr. Keith Philips	Member, Thesis Committee

Undergraduate Honors Thesis Students at WKU (Total=6)

Student's Name	Year	Status	My Role	Current Occupation
Noah McVay	2019-	Switched to JUMP	Primary Thesis Advisor	
Enes Atici	2016-2018	Did not finish	Primary Thesis Advisor	MD Student at WKU/University of Kentucky College Of Medicine
Sayo Aromiwura	2015-2016	Switched to JUMP	Primary Thesis Advisor	JUMP Student at WKU/DO Student at Liberty University
Nathan Powers	2015-2016	Switched to JUMP	Primary Thesis Advisor	JUMP Student at WKU
Elizabeth Oates	2014-2016	Did not finish	Primary Thesis Advisor	Honors Student at WKU
Christopher Fields	2012-2014	Completed	Primary Thesis Advisor	Ph.D. Student at University of Florida
Jordan Olberding	2011-2013	Completed	Primary Thesis Advisor	Ph.D. Student at Yale University

NSF-REU Students at WKU (Total=3)

Student's Name	Year	Current Occupation	Comments
Breanna Brennehan	2012	Ph.D. Student at University of Virginia, Charlottesville	Honorable mention at the NSF Graduate Fellowship Competition
Kevin Colon-Negron	2011	Ph.D. Student at University of California, San Francisco	Recipient of the NSF Graduate Fellowship
Rebecca Ray	2011	Ph.D. Student in Forensics	

Gatton Academy Summer Research Students at WKU (Total=10)

Student's Name	Year	Current Occupation	Comments
Krupa Hegde	2019-2021	Undergraduate Student at WKU	Gatton Research Internship Grant Recipient – COVID-19 Pandemic
Elisha VanZant	2019-2020	Undergraduate Student at WKU	FUSE, Gatton Research Internship Grant Recipient
Grace McClurg	2019	Undergraduate Student at WKU	Gatton Research Internship Grant Recipient but declined due to personal reasons
Camila Lozano	2019-2020	Undergraduate Student at WKU	Gatton Research Internship Grant Recipient
Jakob Quisenberry	2019	Undergraduate Student at WKU	Gatton Research Internship Grant Recipient
Usman Salim	2019-2020	Undergraduate Student at WKU	FUSE, Gatton Research Internship Grant Recipient

Anas Gondal	2018-2019	Undergraduate Student at WKU	Gatton Research Internship Grant Recipient
Hasan Salim	2017-2018	Undergraduate Student at Washington University in St. Louis	Gatton Research Internship Grant Recipient, Best Poster Award at the WKU Reach Week
Joy Fan	2015-2016	Undergraduate Student at MIT	BSURE, Gatton Research Internship Grant Recipient
Ananya Sharma	2014	Undergraduate Student at Vanderbilt University	FUSE, BSURE, Gatton Research Internship Grant Recipient
Paige Kington	2014	Undergraduate Student	BSURE, Gatton Research Internship Grant Recipient

Other Students Mentored in Research at WKU (Total=47)

Student's Name	Year	Type	Current Occupation	Comments
Gabriel Heckerman	2020	Volunteer	Undergraduate Student at WKU	
Krupa Hegde	2019	HON303, BIOL399	Gatton Academy Junior	
Saeed Patwardhan	2019	BIOL399	Gatton Academy Rising Senior	Undergraduate Student at NYU
Emerson VanTrease	2019	Volunteer	Undergraduate Student at WKU	
Jakob Quisenberry	2019	Volunteer	High School Student	
Usman Salim	2018	Volunteer	Undergraduate Student at WKU	FUSE Award Recipient
Naail Tariq	2018	BIOL399	Undergraduate Student at WKU	
Rachel Curtis	2018	BIOL399	Undergraduate Student at WKU	
Thomas Pelkey	2018	Volunteer	Undergraduate Student at WKU	
Challee Shartzter	2018	Volunteer	Undergraduate Student at WKU	
Enes Atici	2016-2018	BIOL399	MD Student at WKU/UK College of Medicine	Fuse Award Recipient
Braxton Gauthier	2017	Volunteer	Undergraduate Student at WKU	
Deanna Close	2017	Volunteer	Undergraduate Student at WKU	
Hasan Salim	2017	BIOL399	Gatton Academy Rising Senior	Undergraduate Student at Washington University in St. Louis, FUSE Recipient
Hannah Watkins	2017-2019	Volunteer/Biol399	Undergraduate Student at WKU	
Sarah Ames	2016	Volunteer	Undergraduate Student at WKU	MD Student
Aref Ranjbar	2016	Volunteer	Undergraduate Student at WKU	Undergraduate Student at WKU, FUSE Recipient
Morgan Cash	2015-2016	BIOL399	Undergraduate Student at WKU	MD Student at University of Kentucky
Mackenzie Armstrong	2016	BIOL399	Undergraduate Student at WKU	

Joy Fan	2015	BIOL399	Undergraduate Student at MIT	BSURE Recipient, Ex Gattton Academy Student
Nathan Powers	2015	BIOL399	JUMP Student at WKU	FUSE, BSURE Recipient, 2016 Outstanding Biotechnology Student Award Recipient, Gleason Award Recipient
Sayo Aromiwura	2015	BIOL399	JUMP Student at WKU	FUSE Recipient
Elizabeth Oates	2014	BIOL399	Honors College Student at WKU	FUSE Recipient
Noel Maxwell	2014-2015	BIOL399	Undergraduate Student at WKU	
Ananya Sharma	2014-2015	BIOL399	Undergraduate Student at Vanderbilt University	Ex Gattton Academy Student
Paige Kington	2014	BIOL399	Undergraduate Student	Ex Gattton Academy Student
Noah Maikranz	2014	BIOL399	Undergraduate Student	Ex Gattton Academy Student
Aiste Dobrovolskaite	2013-2014	BIOL399	MS Student at WKU	
Rachel Huffman	2013	BIOL369	Dental School at University of Louisville	-
Dixa Patel	2013	Volunteer	Not Known	Ex Gattton Academy Student
Bradley Blankenship	2013	BIOL399	MD Student at University of Kentucky	
Kelsey Kaetzel	2013	BIOL399	Not Known	
Taylor Billings	2012-2013	BIOL399	Undergraduate Student at WKU	
Taylor Johnson	2012	BIOL399	MD Student at University of Louisville	
Sibi Rajendran	2012	BIOL399	MD Student	Ex Gattton Academy Student
Linda Cruz	2012	BIOL399	Undergraduate Student at WKU	Ex Gattton Academy Student
Cecily Allen	2012	BIOL399	Not Known	Ex Gattton Academy Student
Samantha Hawtrey	2011-2012	BIOL399	MD Student at University of Louisville	Ex Gattton Academy Student
Karlee Driver	2011-2012	BIOL399	Not Known	
Patrick Webb	2011	Volunteer	Not Known	
Katie Melton	2011	Volunteer	Not Known	
Alex Lee Compton	2011	Volunteer	Attending Optometry School	
Cheryl Onwu	2011	Volunteer	Not Known	
Meliha Hrustanovic	2011	BIOL399	MD Student at University of Louisville	
Chelsey Faulk	2011	BIOL399	Not Known	
Jordan Olberding	2011	BIOL199 BIOL399	Ph.D. Student at Yale University	
Sean Shannon	2010-2011	BIOL399	MD Student at University of Louisville	

Completed Theses at WKU as Thesis Director (Total=9; 7 MS and 2 Honors)

Student's Name	Year	Type	Title of Thesis	Comments
Sayo Aromiwura	2019	MS	Characterization of Antibodies Against Two Basement Membrane Degradors in <i>Drosophila</i> .	DO Student at Liberty University, Lynchburg, VA
Nathan Powers	2018	MS	Involvement of JAK/STAT Signaling and A Basement Membrane – Associated Protein During Air Sac Primordium Development in <i>Drosophila melanogaster</i>	Research Associate, Vanderbilt University School of Medicine, Nashville, TN
Dane Flinchum	2018	MS	Characterizing the Role of CP1 in <i>Drosophila melanogaster</i> : Its Effects on Basement Membrane Degradation and Signaling	PhD student at Tulane University, New Orleans, LA
Mayank Kapadia	2016	MS	Identification of Collagen IV Associated Proteins in <i>Drosophila</i> using Genetics and Mass Spectrometry	Research Associate at UTMB Galveston, TX
Christopher Fields	2016	MS	Functional and Expression Analysis of a Novel Basement Membrane Degradator in <i>Drosophila melanogaster</i>	Ph.D. student at University of Florida
Qian Dong	2015	MS	Functional Analysis of a Cathepsin L in <i>Drosophila melanogaster</i> .	Ph.D. Student at University of Melbourne, Melbourne, Australia
Gillian Jones	2013	MS	Development of Tools to Assess the Effects of Lunasin on Normal Development and Tumor Progression in <i>Drosophila melanogaster</i>	Outstanding Biology Graduate Student at WKU
Christopher Fields	2014	Honors	Functional and Expression Analysis of SNUTS in <i>Drosophila melanogaster</i>	Gleason Award Winner at WKU for Excellence in Undergraduate Research
Jordan Olberding	2013	Honors	Creation of Tools to Assess the effects of α 2NC1 on Normal Development and Tumor Progression in <i>Drosophila melanogaster</i> .	Outstanding Biology Undergraduate Student at WKU

Postdoctoral Supervision at WKU

Name	Year
Dr. Jessica Ross	2014-2016

TEACHING EXPERIENCE*Courses Taught at WKU*

F – Fall; SP – Spring; SU – Summer; W – Winter
H – Honors; G – Graduate; O – Online

Course Number	Course Description and Credit Hours	Semesters and Years Taught
BIOL120	Introduction to Cell Biology, Metabolism and Genetics, 3 credit hours	SP11,F12,F13,F14,F16, F17, SP18
BIOL120 (O)	Introduction to Cell Biology, Metabolism and Genetics, 3 credit hours	W15,SU15,SU16,SU17,W18, SU18
BIOL327	Genetics and associated labs, 4 credit hours	F10,SP11,SP12,SP13,SP14
BIOL327	Genetics, 3 credit hours	SP15, F15,SP17, F20
BIOL327 (H)	Genetics Honors, 3 credit hours	SP15,SP17, F17, F19, F20
BIOL337	Genetics labs, 1 credit hours	SP15,F15
BIOL411	Cell Biology, 3 credit hours	SP16, SP19, SP20
BIOL411 (H)	Cell Biology, 3 credit hours	SP16, SP19, SP20

BIOL411 (G)	Cell Biology, 3 credit hours	SP16, SP19
BIOL412	Cell Biology Labs, 1 credit hour	SP19, SP20
BIOL440	Developmental Genetics, 3 credit hours	F11
BIOL475	Techniques in Developmental Biology, 3 credit hours	F13
BIOL560	Advanced Cell Biology	F19, SU19
BIOL675	Drosophila Genetics and Cancer	F11,F14
BIOL675	Selected Topics in Development	SP12,SP14,F17
BIOL675	Advanced Topics in Development	SP15
BIOL675	Advanced Topics in ECM Biology	F15,SP16
BIOL675	Selected Topics in Stem Cell Biology	SP17
BIOL675	Advanced Topics in Protease Biology	SP18, F20
BIOL675	Selected Topics in Basement Membrane Biology	SP19

Teaching Experience and Supervision Prior to WKU

2004-2009	Yale University	Manager of the Xu Lab Confocal Microscopy Facility. I was responsible for the initial purchase, setup and subsequent training of students and Post-docs in the laboratory on how to use the Confocal Microscope as well as the administration of the facility.
1998-2002	University of Alberta	Supervised undergraduate project students in the laboratory of Dr. John Bell (8 in number) on various Biology 498 and Biology 499 research projects of one and two semester duration respectively. Instrumental in design and execution of experiments conducted by the students.
1997-2002	University of Alberta	Teaching Assistant for Biology 107 (introduction to cell biology, labs). I was responsible for successful completion of the labs as well as grading of the final exams for the course.

PROFESSIONAL SERVICE

Leadership Positions

2018-	Co-director , Molecular Biotechnology Major, Department of Biology, WKU, Bowling Green, KY
2017-2019	Senator , WKU Senate, representing Biology Department
2016-2017	Chair , Biology Department Online Graduate Program Development Committee
2014-2015	Chair , Seminar Committee, WKU Biology Department
2013-2015	Chair of the WKU Ogden College Identity Committee
2011-2013	President and Vice President of Sigma Xi, WKU Chapter
2010-2012	Chair and Secretary of the Cell and Molecular Biology Section of the Kentucky Academy of Science

Reviewer

2019-	Academic Editor , PLOS One
2017-	Editorial Board , Scientific Reports – a Nature Publishing Group Journal
2015-	NIH Early Career Grant Reviewer Program
2015-	Editorial Board , Heliyon (Elsevier)
2014-	Editorial Review Board , Journal of Visualized Experiments (JOVE)
2014-	Member , Community Advisory Group, FLYBASE
2014	Reviewed Book Chapters for Principles of Development by Lewis Wolpert and Others, Published by the Oxford University Press, London, England
2010-	Reviewed Journal Articles for the following Journals: Experimental Biology and Medicine, Genome, PLOS One, Oncogene, Oncotarget, Disease Models and Mechanisms, PeerJ

Invited External Evaluator, Tenure and Promotion Decisions

- 2019** Invited to Provide External Evaluation of Promotion and Tenure packet for Dr. Min Gao, Assistant Professor at Indiana University NorthWest, IN, USA

Grant Reviewer, Internal

- 2017-2018** WKU Research and Creative Activities Program
2014-2020 WKU FUSE Grants

Panelist, Internal

- 2019** WKU Research and Creative Activities Program Panel Sponsored by WKU Office of Sponsored Programs

Judge

- 2016** Judged Posters at the Annual Meeting of the Kentucky Academy of Science held at Louisville, KY
2015 Judged posters at the SE Regional IDeA meeting held in Biloxi, MS
2013 Judged posters at the Annual Meeting of the Kentucky Academy of Science held at Morehead, KY
2012 Judged posters at the Annual Meeting of the Kentucky Academy of Science held at Richmond, KY.
2012 Judged posters and platform presentations for Undergraduate and Graduate students respectively at the 42nd WKU Research Conference and REACH week.
2011 Judged posters at the Sigma Xi International Conference, Raleigh, NC
2011 Judged “Cell and Molecular Biology Section” posters at the annual meeting of the Kentucky Academy of Science held in Murray, KY.
2011 Judged posters at the 41st WKU Undergraduate Research Conference.
2010 Judged “Cell and Molecular Biology Section” posters at the annual meeting of the Kentucky Academy of Science held in Bowling Green, KY.

SERVICE TO UNIVERSITY, COLLEGE AND DEPARTMENT*University Service*

- 2019-2020** **WKU Goldwater Scholarship Application Packet Reviewer**
2017-2019 **Elected Senator Representing Biology at the University Senate, WKU**
2017- **Member, WKU Technology Commercialization Roadmap Committee**
2017 **Member, WKU SGA Student Awards Committee**
2017- **Member, WKU Financial Conflict of Interest Committee**
2016 **Member, Applied Research and Technology Program (ARTP) Steering Committee**
2016-2017 **Member, Biotechnology Center Executive Committee**
2014-2016 **Member, WKU Graduate School Minority Assistantship Council**, Reviewed 15, 26 Minority Assistantship program Applications in Spring 2014 and 2015
2013-2014 **Member, Biotechnology Center Bylaws Review Committee**
2011-2013 **Member, WKU Student Research Council**. As an active member of this council I played an important role in the discussions leading up to the new research week. An acronym suggested by me for this new research week was accepted. This research week is now referred to as the REACH week or the Research Experiences and Creative Heights week.
2011-2013 **Vice President and President of Sigma Xi**, WKU Chapter. As part of my involvement with Sigma Xi I represented it at the WKU student research council and hosted the conference speakers during the REACH week in 2012, 2013.

- 2011-** **Faculty Co-Advisor to WKU Indian Students Association.** As a faculty advisor I help student leadership with the various aspects of student life. In addition, I am also responsible for conducting yearly elections for the position of officers of the association.
- 2010-** Attended WKU Commencement Ceremonies

College Related Service

- 2019-** **Member,** Ogden College “ Diversity, Equity, and Inclusion, DEI” Committee
- 2019** **Member,** Ogden College “Comprehensive Academic Program Evaluation – CAPE” Review Committee
- 2017** **Member,** Ogden College Faculty Awards Committee
- 2016** **Member,** ARTP Steering Committee
- 2015** **Member,** Ogden College Marketing Committee
- 2014** **Invited** by the Dean to present a vision for “Branding and Marketing” of Ogden College
- 2013-2015** **Chair** of the WKU Ogden College Identity Committee
- 2011-** **Member,** Premed **Advising Committee**

Departmental Service

- 2018-** **Co-director,** Molecular Biotechnology Major, WKU Biology Department
- 2018** **Member,** Departmental Program Review Committee
- 2016-2018** **Member,** Biotechnology Major Program Revision Committee
- 2016-2017** **Chair,** Online Graduate Program Development Committee
- 2016-2018** **Member,** Graduate Curriculum Committee
- 2014-2015** **Chair,** Seminar Committee, WKU Biology Department
- 2012-** **Faculty Co-Advisor,** Association of Undergraduate Geneticists
- 2012-2015** **Hosted** one BASS session and attended several others
- 2012-2017** **Member,** Departmental Safety Committee
- 2011-** **Attended** ATP sessions, Major Minor Fair
- 2010-2016** **Member,** Undergraduate Curriculum Committee
- 2010-** **Member,** Departmental Advising Committee
- 2010-** **Member,** Pre-Professional Advising Committee
- 2010-** **Member,** Thesis Advisory Committees for Undergraduate and Graduate Students
- 2010-** **Invited and Hosted** the following seminar speakers: Dr. Carl Hashimoto (could not make it); Dr. Jennifer Curtiss, Dr. Alexey Arkov, Dr. Amit Singh, Dr. Andrea Page-McCaw, Dr. Luke Bradley, Dr. Madhuri Kango-Singh, Dr. Jakub Famulski, Dr. Udai Pandey
- 2010-** **Wrote** several reference letters for Undergraduate and Graduate students applying to Medical, Dental, Optometry and Ph.D. programs

K-12 School Service

- 2019-2020** Was Re-elected to Serve on the Site Based Decision Making Council for Greenwood High School, Bowling Green, KY
- 2018-2019** Was Elected to Serve on the Site Based Decision Making Council for Greenwood High School, Bowling Green, KY
- 2016** Joined BioRad Science Ambassador Program and Presented a “Genes in a Bottle” activity to the Gifted and Talented students at the Warren County 212 Academy
- 2016** Kentucky Science Olympiad, Cell Biology Events Coordinator
- 2013** Invited by Briarwood Elementary School to talk to their 4th grade students about cells.
- 2012** Presented a talk to STEM Academy students at Greenville, KY (04/08/12) titled: Understanding Development and Disease using Drosophila Genetics.
- 2013** Presented three one hour talks on Drosophila genetics and demonstrated Drosophila wild type and mutant strains to students at Drakes Creek Middle School, Bowling Green, KY

PROFESSIONAL DEVELOPMENT ACTIVITIES

Year	Description of Activity	Type
2020	Attended an e-symposium titled: "The Extracellular Matrix Reloaded", hosted by the American Society for Matrix Biology	Research Related
2019	Attended the SE regional IDEa meeting held in Louisville, KY	Research Related
2018	Attended the NISBRE meeting held in Washington DC	Research Related
2017	Attended the SE regional IDEa meeting held in Morgantown, WV	Research Related
2017	Attended Genetics Society of America Sponsored Workshops at the Annual Drosophila Research Conference held in San Diego, CA	Research Related
2015	Attended a WKU RISE Brown Bag Lunch	Research Related
2010-2019	Attended Annual Meetings of the Kentucky Academy of Science	Research Related
2012-2019	Attended the Annual Drosophila Research Conference held in Chicago, IL; San Diego, CA; Orlando, FL, San Diego, CA; Philadelphia, PA; Dallas, TX.	Research Related
2012	Attended "Writing Winning Grants": Workshop organized by WKU Office of Sponsored Programs.	Research Related
2011-	Attended Annual Department of Biology Safety Seminars	Research Related
2011	Attended the Sigma Xi annual international conference and ethics symposium held at Raleigh, NC	Research Related
2011	Attended the Sophomore Faculty Follow-up organized by the office of the Provost and VP-Research.	Research Related
2010	Attended the KBRIN-AREA grant writing workshop at the Annual Meeting of the KAS held in Bowling Green, KY.	Research Related
2010	NSF Grant writing workshop at NKU, Frankfort KY	Research Related
2010	Attended a workshop titled "Planning the Budget for Your Grant Proposal" organized by WKU Office of Sponsored Programs	Research Related
2010-	Met regularly with my mentoring committee and mentor	Research/Teaching Related
2016	Attended WKU CET/Honors Thesis fair organized by the Biology Department Head	Teaching Related
2016	Attended a "Vision and Change" Workshop at the Allied Genetics Research Conference, Orlando, FL	Teaching Related
2016	Attended the Undergraduate Session at the SE Regional IDEa meeting, Biloxi, MS	Teaching Related
2014	Completed ADA compliance training on the web	Teaching Related
2013	Attended Academic Dishonesty Workshop hosted by Michael Crowe from WKU Judicial Affairs	Teaching Related
2013	Attended McGraw Hill Workshop on e-textbooks	Teaching Related
2013	Attended an information session for "Thesis Readers in Ogden College" organized by the WKU biology department	Teaching related
2012	Attended seminar conducted by Dr. Pam Petty, Professional Development mandated by the State of Kentucky	Teaching Related
2012	Attended workshop organized by WKU Information Technology department titled: Teaching with Turning Point Clickers	Teaching Related
2012	Workshop on Writing for The Sciences organized by the Dean's office	Teaching Related
2012	Attended a workshop titled: Electronics In The Classroom	Teaching Related
2012	Attended a curriculum development workshop organized by FACET and titled: "Escaping the Tyranny of Textbook Changes"	Teaching Related
2019	Completed a Title IX training administered by Catharsis for WKU	General
2017	Attended a seminar on diversity and inclusion organized by Dean of Ogden College titled: "Making Excellence Inclusive" and presented by Dr. Alma Clayton-Peterson	General
2013	Attended a special meeting hosted by the head of the biology department for Pre-Tenure Faculty	General

2013	Attended a workshop titled: How to get promotion and tenure in Ogden college at WKU. Hosted by the Ogden College Dean	General
2012-2013	As part of an MBA degree from University of Louisville, I took for credit several courses in leadership, organizational behavior, business intelligence, managerial decision making, and managing in the future. All of these courses have relevance in helping me manage people, and resources at WKU in my role as an Assistant Professor.	General Management
2010-	Attended the Annual WKU President's Convocation	General
2010-	Attended the Annual Fall Ogden College Opening by the Dean	General

COMMUNITY OUTREACH

- Interviewed by WNKY TV News, Bowling Green, KY to talk about the Molecular Biotechnology Major within the Biology Department.
- Interviewed by Bowling Green Daily News about the Indian festival of colors, Holi.
- Invited by Briarwood Elementary School to talk to their 4th grade students about cells.
- Gave a talk on Drosophila genetics and demonstrated Drosophila wild type and mutant strains to students at Drakes Creek Middle School, Bowling Green, KY.
- Was interviewed by Bowling Green Daily News to offer my perspective on the controversy involving a Hindu celebration, Governor Beshear's position and the position of State Senator Williams.

PROFESSIONAL AFFILIATIONS

2018-	Member , American Society for Biochemistry and Molecular Biology
2014-2015	Member , Society for Experimental Biology and Medicine
2012-	Member , Society for Developmental Biology
2010-	Member , Kentucky Academy of Science
2002-	Member , Sigma Xi the scientific research society
1998-	Member , Genetics Society of America

MEDIA COVERAGE

2019	https://www.bgdailynews.com/news/new-high-tech-microscope-will-enhance-gatton-academy-wku-students/article_8c146434-eafa-5af9-b262-ff15183b1afb.html
2018	https://www.wnky.com/wwwwnkycomwku-to-add-molecular-biotechnology-major/
2013	http://www.lanereport.com/25166/2013/10/wku-researchers-using-fruit-fly-to-study-growth-of-cancer-cells/