

UNIVERSITY OF DAYTON
COLLEGE OF ARTS AND SCIENCES
CURRICULUM VITAE

Name: **Amit Singh** Date: **08-06-2013**

School: **Arts and Sciences** Department: **Biology**

Date hired at UD: **8/16/2007**

Date eligible for tenure: **2013**

Date tenured: **8/16/2013**

Rank:	From	To	Institution	Full or Part Time
Instructor	1/1/2004	8/14/2007	Microbiology and Cell Biology, Baylor College of Medicine, Houston, Texas	Full Time
Assistant Professor	8/16/2007	To-date	Dept. of Biology, Univ. of Dayton, Dayton, OH	Full time
	8/16/2007	To-date	Center for Tissue Regeneration & Engineering at Dayton (TREND), Univ. of Dayton, Dayton, OH	
Associate Professor	8/16/2013	To-date	Dept. of Biology, Univ. of Dayton, Dayton, OH	Full time
	8/16/2013	To-date	Center for Tissue Regeneration & Engineering at Dayton (TREND), Univ. of Dayton, Dayton, OH	
Director, Graduate Program	8/16/2013	To-date	Dept. of Biology, Univ. of Dayton, Dayton, OH	Full time

Rank Applied for: Professor

I. Professional Training and Experience

A. Academic and Professional Training

1.	College or University	Degree	Date
	H.P. University, Shimla, India.	B. Sc	1988
	Devi Ahilya University (DAVV), Indore, INDIA.	M. Sc (Life Sciences)	1990
	Devi Ahilya University, Indore, INDIA.	PhD (Molecular Genetics & Development using	1995

Drosophila melanogaster
model)

Microbiology & Cell Biology (MCB), Indian Institute of Science (IISc), Bangalore, India	Research Associate	1998
Institute of Molecular Biology (IMB) Academia Sinica, Taipei, Taiwan, R.O.C	Post Doctoral Fellow	2002
Baylor College of Medicine (BCM), Texas Medical Center, Houston, Texas	Post Doctoral Associate	2004

2. Current Study NOT APPLICABLE

Are you a candidate for a degree at present? NOT APPLICABLE

If so, state the institution in which enrolled: NOT APPLICABLE

Total number of graduate credits completed to present:
Total degree requirements (credits, dissertation, language examinations, etc.) not yet
completed:

3. Scholastic Honors (prizes, honorary societies, scholarships, fellowships, awards, etc.)

- 1985- 1988** Recipient of Merit Scholarship from H.P. University, Shimla, India.
- 1988- 1990** Second position in the order of merit of Master's degree program of Life Sciences at Devi Ahilya University, Indore, (M.P.), India.
- Dec. 1989** Recipient of prestigious University Grants Commission (UGC) Research Fellowship after qualifying the National Level test jointly conducted by CSIR and UGC, New Delhi, India.
- Feb. 1992** Recipient of Prof. S.R.V. Rao award for best scientific presentation at All India Cell Biology meeting at New Delhi, India.
- Jan. 1993** Recipient of Indian ISCB best presentation award for best scientific presentation at All India Cell Biology meeting at Varanasi, India.
- May, 1996** Recipient of Travel award to participate in VIth Summer School on "Developmental Switches" held at Institute of Advanced Studies, Hebrew University, Jerusalem, Israel.
- 1998- 2002** Recipient of Academia Sinica Research Fellowship, Taipei, Taiwan.
- Feb. 2000** International Travel Award from Academia Sinica, Taipei, Taiwan (R.O.C) to attend Fly meeting at Pittsburgh, USA.

Mar. 2001	International Travel Award from Academia Sinica, Taipei, Taiwan (R.O.C) to attend Fly meeting at Washington D.C., USA.
2006-2006	Fellow of Fight for Sight Inc. Research Foundation
2005-2006	Fellow of Knight's Templar Ophthalmology Research Foundation
2006-2007	Fellow of Retina Research Foundation, Houston, Texas
2008- To date	Honorary member of Theta Kappa Chapter of University of Dayton's Beta Beta Beta, Honor Society.
Dec. 2011	Faculty Spirit Award from Beta Beta Beta Honors' Society.

4. Professional Progress (Professional Schools)
Certification by Specialty Boards, with dates:

B. Professional Experience (pertaining to field of study)

- Participated in Ryan C .Harris Learning Teaching Center (LTC), University of Dayton, Teaching Fellow Program during the academic year 2008-2009.
- Participated in GENA (Geneticist Educators Network of America) workshop to develop new genetics curriculum for the high school biology at Seattle, Washington from June 5-7th, 2009. The workshop was jointly sponsored by American Society of Human Genetics (ASHG) and National Science Foundation. The aim of the workshop was to involve university faculty in process of improving genetics curriculum in the high school.
- Taught a course on neurodegenerative disorders in the BEST program for students from Singapore (2008-2010) and China (2011).
- Developed a Cell Biology Laboratory manual for Bio-440(L) course.
- Developed and taught an interdisciplinary course on Mathematical Biology (Bio-445) in Spring 2009.
- Participated in Council of Undergraduate Research (CUR) Workshop in Washington DC, 2011.

II. Professional Attitudes and Growth

A. Significant Publications in Print - An appropriate sampling of copies or reprints of your publications over the past five years should be submitted with this form. Reviews or other commentary on the above should also be submitted.

1. Books, Pamphlets, and Monographs (titles, publishers, dates, pages)

BOOK

1. **Singh, A.** and Kango-Singh, M. (2013). Molecular Genetics of Axial Patterning, Growth and Disease in the *Drosophila* eye. **Amit Singh** (Editor) and **Madhuri Kango-Singh** (Editor), Springer, Publication Date: **September 30, 2013** | ISBN-10: **1461482313** | ISBN-13: **978-1461482314** | Edition: **2013**

BOOK CHAPTERS

2. Tare, M., Roy, O. R., **Singh, A.** “Molecular genetic mechanisms of axial patterning: Mechanistic insights into generation of axes in the developing eye”. A. Singh, M. Kango-Singh (eds.), *Molecular Genetics of Axial Patterning, Growth and Disease in Drosophila Eye*, DOI 10.1007/978-1-4614-8232-1_9, © Springer Science+Business Media New York 2013.
 3. Gopinathan, K.P., Joy, O., and **Singh, A.** (1998). Developmental aspects of Mulberry and Non-mulberry Silkworm Species: A comparative study. In "**Genome Analysis in Eukaryotes: Developmental and evolutionary aspects**" (eds. R. M. Chatterjee and L. Sanchez) pp. 65-97, Springer-Verlag New York, Incorporated.
 4. **Singh, A.**, Lim, J., and Choi K.-W (2005b). Dorso-ventral boundary is required for organizing growth and planar polarity in the *Drosophila* eye. In "**Planar Cell Polarization during Development: Advances in Developmental Biology and Biochemistry**" (ed. M. Mlodzik) pp. 59-91, Elsevier Science & Technology Books.
2. Articles (journals, volumes, dates, pagination)
 5. Moran, M.T., Tare, M., Kango-Singh, M. *, **Singh A.** * (2013). Homeotic gene teashirt (tsh) has a neuroprotective function in amyloid-beta 42 mediated neurodegeneration. **PLoS ONE** [* **Corresponding Author**]
 6. Steffensemeir, A., Tare, M., Puli, O. R., Modi, R.M., Nainaparampil, J., Kango-Singh*, M., **Singh A.** * (2013). Novel neuroprotective function of apical-basal polarity gene crumbs in amyloid beta 42 (A β 42) mediated neurodegeneration. **PLoS ONE** [* **Corresponding Author**]
 7. Tare, M., Puli, O. R., Moran, M. T., Kango-Singh, M., **Singh A.** (2013). Domain specific genetic mosaic system in the *Drosophila* eye. **Genesis**. 2013 Jan; 51(1):68-74. doi: 10.1002/dvg.22355. Epub 2012 Nov 26. (PMID: 23109378)
 8. **Singh, A.** (2012). Neurodegeneration a means to an end. Journal of Cell Science and Therapy (Editorial). J. Cell Sci. Therapy 3:e107. Doi:10.4172/2157-7013.1000e107. <http://www.omicsonline.org/2157-7013/2157-7013-3-e107.php?aid=6170>.

9. Call, G.B., Puli, O. R, Jame, A.M., Pope, C.R., Kango-Singh, M., **Singh, A.*** (2012). Annual *Drosophila* Research Conference, 2012 **Developmental Dynamics**. 241:1227-1236. PMID: 22592979 [*** Corresponding Author**]
10. **Singh, A.*** and Irvine K.D. (2012). *Drosophila* as a model for understanding development and disease. **Developmental Dynamics**. 241(1):1-2. (Editorial). PMID: 22174082 ***Amit Singh is the guest editor for this special issue.**
11. **Singh, A.***, Tare, M., Puli, O.R., Kango-Singh, M*. (2012). A glimpse into Dorso-ventral patterning of the *Drosophila* eye. **Developmental Dynamics**. 241(1):69-84. (Review). PMID: 22034010 [***Corresponding Author**] ***Amit Singh is the guest editor for this special issue.**
12. Puli, O.R., and **Singh, A. *** (2011). Protein trap lines of *Drosophila* to demonstrate spatio-temporal localization of proteins in an undergraduate lab. ***Drosophila Information Service (D.I.S)*** 94: 190-196. [***Corresponding Author**]
13. **Singh, A.***, Tare, M., Kango-Singh, M., Son, W.-S., Cho, K.-O. Choi, K.-W. * (2011). Opposing interactions between *homothorax* and *Lobe* defines the ventral eye margin of *Drosophila* eye. **Developmental Biology**. 15; 359(2): 199-208. PMID: 21920354 [*** Corresponding Author**]
14. Tare, M.[#], Modi, R. [#], Nainaparampil, J. [#], Puli, O. R., Bedi, S., Fernandez-Funez, P., Kango-Singh, M*. and **Singh, A.*** (2011). Activation of JNK signaling mediates Amyloid- β -dependent cell death. **PLoS ONE** 6 (9) e24361, 1-12 PMID: 21949710 [*** Corresponding Author**] [#] **All three are equal first authors, Rohan Modi and Jaison Nainaparampil (Honors thesis students, 2008-2010)**
15. Call, G.B., Verghese, S., Puli, O. R, Hemmerle, D.M., Kango-Singh, M., **Singh, A.*** (2011). Annual *Drosophila* Research Conference, 2011 **Developmental Dynamics**. 240:2042-2050. PMID: 21761487 [*** Corresponding Author**]
16. Usman, M., **Singh, A.*** (2011). A New Undergraduate Curriculum in Mathematical Biology at the University of Dayton. **Journal of STEM Education**. 12(5 & 6): 9-17 July - Sept. 2011. [*** Corresponding Author**]
17. Oros, S.M., Tare, M., Kango-Singh, M. and **Singh, A.*** (2010). Dorsal eye selector *pannier* (*pnr*) suppresses the eye fate to define dorsal margin of the *Drosophila* eye. **Developmental Biology** 2010 Oct 15; 346(2):258-71. Epub 2010 Aug 5. PMID: 20691679. [*** Corresponding Author**]. **Oros SM, first author, was Honors student (undergraduate)**
18. Call, G.B., Puli, O. R., Verghese, S., **Singh, A.*** (2010). Annual *Drosophila* Research Conference, D.C, 2010 **Developmental Dynamics**. 239 (11): 3124-9. PMID: 20865791. [*** Corresponding Author**]
19. **Singh, A.** and Tsonis, P.A. (2010). Focus on molecule: Six 3. **Experimental Eye Research** 90: 535-536. PMID: 20117106.

20. Kango-Singh, M. and **Singh, A.*** (2009). Regulation of Organ Size: Insights from the *Drosophila* Hippo signaling pathway. **Developmental Dynamics** 238(7):1627-37. [*** Co- Corresponding Author**]
21. **Singh, A.**, Kango-Singh, M., and Gopinathan, K.P. (2009). Patterning defects in silkworm embryos analysed through cuticle preparations. **Sericologia** 49 (1):113-117. [*** Corresponding Author**]
22. Tare, M., Puli, O.R., Oros S.M. and **Singh, A.*** (2009). *Drosophila* adult eye model to teach Scanning Electron Microscopy in an undergraduate cell biology laboratory. **Drosophila Information Service (D.I.S)** (92): 174-180. [*** Corresponding Author**]
23. Tare, M. and **Singh, A.*** (2008b). A cell Biology laboratory exercise to study subcellular organelles in *Drosophila*. **Drosophila Information Service (D.I.S)** (91): 160-164. [*** Corresponding Author**]
24. Kango-Singh, M., Call, G. B., **Singh, A.*** (2008a) Annual *Drosophila* Research Conference, 2008. **Developmental Dynamics**. 237(11):3444-52. [**Corresponding Author**]
25. Lim, J. Lee, O.K. Hsu, Y.-C, **Singh, A.** and Choi, K.-W. (2007b) *Drosophila* TRAP230/240 are essential coactivators for Atonal in retinal neurogenesis. **Developmental Biology** 308(2): 322-330
26. **Singh, A.***, Kango-Singh, M., Parthasarathy, R. and Gopinathan, K.P. (2007a). Larval legs of mulberry silkworm *Bombyx mori* are prototypes for the adult legs. **Genesis** 45 (4): 169-176 [***Corresponding Author**]
27. **Singh, A.** (2006c). Fly eye development in fly meeting at Houston. **International Journal of Developmental Biology** 50: 659-663 [*** Corresponding author**].
28. **Singh, A.***, Kango-Singh, M (2006b). Annual *Drosophila* meeting at Houston 2006. **Dev. Dynamics**. (Published Online: 26 Jul 2006) PMID: 16871634 [*** Corresponding Author**]
29. **Singh, A.***, Xiao, S. and Choi, K.-W. (2006a). *Lobe* and *Serrate*, are required for cell survival during early eye development in *Drosophila*. **Development** 133, 4771-4781 [*** Co-Corresponding Author**]
30. **Singh, A.**, Chan, J., Chern, J.J. and Choi, K.-W. (2005a). Genetic interaction of *Lobe* with its modifiers in dorsoventral patterning and growth of the *Drosophila* eye. **Genetics**. 171(1):169-83. Epub 2005 Jun 23. PMID: 15976174
31. **Singh, A.**, Kango-Singh, M., Choi, K.-W. and Sun, Y.H. (2004). Dorso-ventral asymmetric functions of *teashirt* in *Drosophila* eye development depend on spatial cues provided by early DV patterning genes. **Mechanisms of Development** 121: 365-370. PMID: 15110046
32. Kango-Singh, M., **Singh, A.** and Sun, Y.H. (2003). Eyeless collaborates with Hedgehog

and Decapentaplegic signaling in *Drosophila* eye induction. **Developmental Biology** 256 (1):49-60. PMID: 12654291

33. **Singh, A.**, Choi, K.-W. (2003). Initial state of *Drosophila* eye before dorso-ventral specification is equivalent to ventral. **Development** 130: 6351-6360. PMID: 14623824
34. **Singh, A.**, Kango-Singh, M. and Sun, Y.H. (2002). Eye suppression, a novel function of *teashirt*, requires Wingless signaling. **Development** 129(18): 4271-80. PMID: 12183379
35. Kango-Singh, M.*, **Singh, A.*** and Gopinathan, K.P. (2001). The wings of *Bombyx mori* develop from larval discs exhibiting an early differentiated state: a preliminary report. **Journal of Bioscience** 26(2), 167-177. PMID: 11426053 * **Equal first author**
36. **Singh, A.** and Gopinathan, K.P. (1998). Confocal microscopy, a powerful tool for biological research. **Current Science** 74(10):841- 851. (http://www.ias.ac.in/j_archive/currsci/74/10/841-851/viewpage.html)
37. **Singh, A.** and Gopinathan, K.P. (1997). Study of gene expression in whole mount silkworm embryos using heterologous *Drosophila* antibodies. **Current Science** 72 (2): 214-219. (http://www.ias.ac.in/j_archive/currsci/72/3/214-218/viewpage.html)
38. Bhojwani, J., **Singh, A.**, Misquitta, L., Mishra, A. and Sinha, P. (1995). Search for *Drosophila* genes based on patterned expression of mini-*white* reporter gene in adult eyes. **Roux's Archives of Developmental Biology**, 205(3-4): 114-121. (<http://www.springerlink.com/content/k4267w753752444m/>)
39. **Singh, A. *** (1995). Enhancer Trap Technique: A Novel Tool for Identification and Developmental Characterization of Genes of *Drosophila*. **Current Science** 68: 517-525. (http://www.ias.ac.in/j_archive/currsci/68/5/517-525/viewpage.html) [* **Corresponding Author**]
40. **Singh, A.**, Kango, M. (1995). An improved devitelinization technique with a high yield of X-gal stained embryos. **Drosophila Information Service (D.I.S.)** 76:215.
41. **Singh A.**, Kango, M. and Sinha, P. (1995). An improved method for chemical devitelinization of X-gal stained *Drosophila* embryos. **Indian Journal of Experimental Biology**. 33, 150-152. PMID: 7538973

MANUSCRIPTS IN PREPARATION FOR SUBMISSION

1. Tare, M., Kango-Singh, M. **Singh, A. *** (2012). *cullin-4 (cul-4)* activity is required for cell survival during axial patterning in *Drosophila* eye. [* **Corresponding Author**]
2. Puli, O.R., Nakagoshi, H., **Singh A. *** (2012). *defective proventriculus (dve)*, a new dorsal selector gene in *Drosophila* eye. [* **Corresponding Author**]
3. Book Reviews (books reviewed, journals, volumes, pagination)

- B. Recent Addresses or Papers (to learned or professional groups in your area of competence-- title, groups addressed, date)

PLENARY TALKS:

1. **Singh, A.** “*Drosophila* eye model to study patterning and disease.” **Plenary Speaker at 2013 Northeastern Region District IV Convention hosted by the Beta Beta Beta Biological Honor Society Theta Kappa Chapter at the University of Dayton on March 22, 2013.**

INVITED TALKS

2. **Singh, A.** “Applying to Graduate School”. **Careers in Biology Seminar Series, at University of Dayton, on October 29th, 2013.**
3. **Puli, O. R.,** Yorimitsu, T., Nakagoshi, H and **Singh, A.** “*defective proventriculus (dve)*, a new member of DV patterning in the eye” for **Ohio Miami Valley Neuroscience Day, June 7, 2013 at University of Cincinnati, Cincinnati, OH.**
4. Tare, M., Kango-Singh, M. and **Singh, A.** “Genetic basis of axial patterning in the developing *Drosophila* eye.” **Invited talk at University of Massachusetts Medical School, Worcester, MA. January 22, 2013.**
5. Tare, M., Kango-Singh, M. and **Singh A.** Domain specific E3 ubiquitin ligase mediated Wingless degradation promotes Dorso-Ventral lineage in the developing *Drosophila* eye. **50th Annual Midwest Developmental Biology Meeting, at Cincinnati Children’s Hospital Medical Research Center, OH. May 11-12, 2012.**
6. **Singh, A.** *Drosophila* Eye Model to Study Patterning and Disease. **Department of Biology Seminar Series, University of Dayton, April 19th, 2012 at Dayton, OH.**
7. Tare, M. and **Singh, A.** Role of an E3 ubiquitin ligase in ventral eye development. **52nd Annual Drosophila research Conference, March 7-11th, 2012 at Chicago, IL.**
8. **Singh, A.** *Drosophila* Eye Model to Study the Genetic Basis of amyloid-beta Dependent Neurodegeneration. **Ohio Miami Valley Society of Neuroscience Winter Meeting, Miami University, Feb. 2012 at Oxford, OH.**
9. **Singh, A.** *Drosophila* Eye Model to Understand Axial Patterning and Growth. **Department of Zoology, Fall 2011 Seminar Series, Miami University, Oct 6th, 2011 at Oxford, OH.**
10. Puli, O.R. and **Singh, A.** *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Talk at Ohio Miami Valley Neuroscience Symposium, held at Wright State University, Dayton, OH, May 20th, 2011.**
11. Tare, M. and **Singh, A.** Role of an E3 ubiquitin ligase in ventral eye development. **Talk at Brother Joseph W. Stander Symposium at University of Dayton, April 13th, 2011 at Dayton, OH.**
12. Puli, O.R. and **Singh, A.** *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Talk at Brother Joseph W. Stander Symposium at University of Dayton, April 13th, 2011 at Dayton, OH.**

13. Tare, M., and **Singh, A.** Ohio Miami Valley Neuroscience Day at University of Cincinnati School of Medicine, June 5th, 2010 at Cincinnati, OH.
14. **Singh, A.** *Drosophila* eye model to study axial patterning and birth defects. Miami University, Jan. 30th, 2009 at Oxford, OH.
15. **Singh, A.** *Drosophila* eye model to study axial patterning and birth defects. Department of Biology, Wright State University, Feb. 9th, 2009 at Dayton, OH.
16. **Singh, A.** *Drosophila* eye model to study axial patterning and birth defects. Mercer University School of Medicine, Division of Basic Sciences, June 9th, 2008 at Macon, GA.
17. **Singh, A.** *Drosophila* eye model to study birth defects. Birth Defect Center, University of Louisville, May 2007 at Louisville, KY.
18. **Singh, A.** *Drosophila* eye model to study genetic basis of birth defect Aniridia. University of Dayton, Ohio, April, 2007 at Dayton, OH.
19. **Singh, A.** *Drosophila* eye model to study birth defects. AZCOM, Midwestern University, Jan., 2007, Phoenix, AZ.
20. **Singh, A.** *Drosophila* eye model to study axial patterning and birth defects. Murray State University, Dec. 8th, 2006, Murray, KY.
21. **Singh, A.** *Drosophila* eye to study patterning, survival, and inheritable genetic disorders. Bascom Palmer Eye Institute, University of Miami, April 24th 2006 at Miami, FL.
22. **Singh, A.** *Drosophila* eye to study patterning, survival and inheritable genetic disorders. Department of Biology, University of Miami, Jan. 2006 at Coral Gables, FL.
23. **Singh, A.** Identification of genes required for cell survival during early eye development. Platform presentation in 47th Annual *Drosophila* Research Conference, March 30th - April 3rd, 2006 at Houston, TX.

UNDERGRADUATE STUDENTS' ORAL RESEARCH PRESENTATIONS:

- **Cutler, T.L., Tare, M. and Singh, A.** "Study of the role of Cullin-4 function during organogenesis in the *Drosophila melanogaster* eye." **Brother Joseph W. Stander Symposium at University of Dayton, April 17, 2013.**
- **Irwin, M., Tare, M., Puli, O.R., Kango-Singh, M., Singh, A.** "Hippo signaling pathway and JNK signaling pathway in Amyloid-Beta 42 (A β 42) mediated cell death. " **Brother Joseph W. Stander Symposium at University of Dayton, April 17, 2013.**
- **Irwin, M., Tare, M., Puli, O.R., Kango-Singh, M., Singh, A.** "Hippo signaling pathway and JNK signaling pathway in Amyloid-Beta 42 (A β 42) mediated cell death." **2013 Northeastern region District IV Convention hosted by the Beta Beta Beta Biological Honor Society Theta Kappa Chapter at the University of Dayton on March 22, 2013. (First Prize for Oral Presentation)**
- **Steffensmeier, A; Kango-Singh, M. and Singh, A.** "Role of Transcriptional Co activator CREB binding

Protein in Amyloid-Beta-42 Mediated Neurodegeneration". **Berry Summer Thesis Institute Symposium 2012, August 2nd, 2012.**

- Mancini, G. and **Singh, A.** "Role of Signaling Pathways in Amyloid- β - Dependent Cell Death in *Drosophila* Eye." **Berry Summer Thesis Institute Symposium 2012, August 2nd, 2012.**
 - Johns, C. E. and **Singh, A.** "Developmental characterization of ectopic eye formation function of PAX-6 gene in *Drosophila* eye." **Honors' Student Symposium 2011.**
 - Nainaparampil, J.J. and **Singh, A.** "Unravelling the cell death mechanisms of Alzheimer's disease. **Honors' Student Symposium 2011.**
 - Minichello, M. E. and **Singh, A.** "Investigation of defective proventriculus (dve), a new member of the dorso-ventral patterning pathway." **Honors' Student Symposium 2011.**
 - Modi, R.M. and **Singh, A.** "Understanding the role of apoptotic cell death in neurodegeneration caused by amyloid plaques during early development." **Honors' Student Symposium 2010.**
 - Oros, S.M., and **Singh, A.** "Dorsal selector, *pannier* (*pnr*), suppresses the retinal differentiation to define dorsal margin of the *Drosophila* eye". **Honors' Student Symposium 2010.**
 - Oros, S.M., and **Singh, A.** "Dorsal selector, *pannier* (*pnr*), interacts with the retinal determination gene network". **Ohio Miami Valley Neuroscience Day at Miami University, June 5th, 2009 at Oxford, OH.**
24. Oros, S.M., and **Singh, A.** "Dorsal selector, *pannier*, interacts with the retinal determination gene network". **Ohio Miami Valley Neuroscience Day at Miami University, June 5th, 2009 at Oxford, OH.**

CONFERENCE ABSTRACTS

(Since 2007, when I started my lab at University of Dayton:)

1. Moran, M.T., Puli, O.R., Tare, M and **Singh, A.** "*Drosophila* eye model to identify genetic modifiers of A β 42 mediated neurodegeneration." **54th Annual *Drosophila* Research Conference, at Washington, D.C, April 3-7, 2013.**
2. Puli, O. R., Yorimitsu, T., Nakagoshi, H and **Singh, A.** "*defective proventriculus (dve)*, a new member of DV patterning in the eye." **54th Annual *Drosophila* Research Conference, at Washington, D.C, April 3-7, 2013.**
3. Steffensmeier, A., Puli, O. R., Tare, M., Kango-Singh, M. and **Singh, A.** "Search for the modifiers of amyloid--42 mediated cell death in *Drosophila* eye." **54th Annual *Drosophila* Research Conference, at Washington, D.C, April 3-7, 2013.**
4. Tare, M., Kango-Singh, M., **Singh, A.** "Domain specific function of Cullin-4 to promote cell survival in the ventral eye compartment in *Drosophila*." **54th Annual *Drosophila* Research Conference, at Washington D.C. April 3-7, 2013.**
5. Mancini, G.F., Tare, M., and **Singh, A.** "Role of Transcriptional Co activator CREB Binding Protein in Amyloid Beta-42 (A β 42) mediated neurodegeneration." **54th Annual *Drosophila* Research Conference, at Washington D.C. April 3-7, 2013.**

6. Cutler, T.L., Tare, M. and Singh, A. “Study of the role of Cullin-4 function during organogenesis in the *Drosophila melanogaster* eye.” **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
7. Mancini, G.F., Tare, M., and Singh, A. “Role of Transcriptional Co activator CREB Binding Protein in Amyloid Beta-42 (A β 42) mediated neurodegeneration.” **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
8. Moran, M. T., Kango-Singh, M., Puli, O.R., Tare, M and Singh, A. “*Drosophila* eye model to identify genetic modifiers of A β 42 mediated neurodegeneration.” **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
9. Steffensmeier, A.M., Puli, O.R., Tare, M., Kango-Singh, M. and Singh, A. “Search for the modifiers of amyloid β -42 mediated cell death in *Drosophila* eye.” **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
10. Tare, M., Kango-Singh, M., Singh, A. “Domain specific function of Cullin-4 to promote cell survival in the ventral eye compartment in *Drosophila*.” **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
11. Irwin, M., Tare, M., Puli, O.R., Kango-Singh, M., and Singh, A. “Hippo signaling pathway and JNK signaling pathway in Amyloid-Beta 42 (A β 42) mediated cell death”. **Ohio Miami Valley Neuroscience Symposium, held at University of Cincinnati June 7, 2013.**
12. Moran, M.T., Tare, M., Puli, O.R., Kango-Singh, M., Singh, A. “The role of *teashirt* (*tsh*) and *tiptop* (*tio*) in A β -42 mediated neurodegeneration in the *Drosophila* retina” **The Midwest Great Lakes Undergraduate Research symposium in neuroscience, The College of Wooster, Wooster, Ohio September 29, 2012.**
13. Irwin, M., Tare, M., Puli, O.R., Kango-Singh, M., Singh, A. “Hippo signaling pathway and JNK signaling pathway in Amyloid-Beta 42 (A β 42) mediated cell death.” **Honors Thesis research poster presentation at the 2013 Sigma Xi Student Poster Symposium.**
14. Steffensmeier, A.M., Puli, O.R., Tare, M., Kango-Singh, M. and Singh, A. “Search for the modifiers of amyloid β -42 mediated cell death in *Drosophila* eye.” **Honors Student Symposium, University of Dayton, Ohio on March 22, 2013.**
15. Steffensmeier, A.M., Puli, O.R., Tare, M., Kango-Singh, M. and Singh, A. “Search for the modifiers of amyloid β -42 mediated cell death in *Drosophila* eye.” **2013 Northeastern region District IV Convention hosted by the Beta Beta Beta Biological Honor Society Theta Kappa Chapter at the University of Dayton on March 22, 2013. (BEST POSTER AWARD: First Prize)**

16. Moran, M.T., Tare, M., Puli, O.R., Singh, A. “*Drosophila* eye model to identify genetic modifiers of A β 42 mediated neurodegeneration” **at the University of Dayton Stander Symposium, University of Dayton, Dayton, Ohio, April 17, 2013.**
17. Steffensmeier, A.M., Puli, O.R., Tare, M., Kango-Singh, M. and Singh, A. “Search for the modifiers of amyloid β -42 mediated cell death in *Drosophila* eye.” **at the University of Dayton Stander Symposium, University of Dayton, Dayton, Ohio, April 17, 2013.**
18. Irwin, M., Tare, M., Puli, O.R., Kango-Singh, M., Singh, A. Hippo signaling pathway and JNK signaling pathway in Amyloid-Beta 42 (A β 42) mediated cell death.” **at the University of Dayton Stander Symposium, University of Dayton, Dayton, Ohio, April 17, 2013.**
19. Steffensmeier, A.M., Tare, M., Puli, G. O.R., Kango-Singh, M. and Singh A. “Role of signaling pathways in amyloid-Beta-dependent cell death in *Drosophila* eye.” **Biennial National Convention 2012, organised by National Biological Honor Society at Puerto Rico May 16-19, 2012. (First author: undergraduate).**
20. Roy, O.P.G., Yorimitsu, T., Nakagoshi, H., Singh, A. *defective proventriculus (dve)*, a new member of DV patterning in the eye. **53rd Annual *Drosophila* Research Conference held at Chicago, IL, USA, March 7-11, 2012.**
21. Steffensmeier, A.M., Tare, M., Puli, G. O.R., Kango-Singh, M. and Singh A. “Role of signaling pathways in amyloid-Beta-dependent cell death in *Drosophila* eye.” **53rd Annual *Drosophila* Research Conference, at Chicago. March 7-11, 2012.**
 - a. (First author: undergraduate)
22. Waghmare, I., Verghese, S., Hanes, K., Lesko, L., Singh, A. and Kango-Singh M. “A model to study the influence of Hippo signaling on local cell-cell interactions.” **53rd Annual *Drosophila* Research Conference, at Chicago. March 7-11, 2012.**
 - a. (Authors: Hanes, Lesko are undergradutes)
23. Puli, G. O.R., Yorimitsu, T., Nakagoshi, H., and Singh A. “*defective proventriculus (dve)*, a new member of DV patterning in the eye.” Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.
24. Tare, M., Kango-Singh, M., Singh, A. “Domain specific E3 ubiquitin ligase mediated Wingless degradation promotes Dorso-Ventral lineage in the developing *Drosophila* eye.” Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.
25. Mancini, G.F., Staker, K.L., Tare, M., and Singh A. Study of developmental interaction of chip and L during DV patterning of *Drosophila* eye. Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.

26. Moran, M. T., Kango-Singh, M., and **Singh, A.** “Role of retinal determination genes in amyloid beta 42 mediated neurodegeneration in the *Drosophila* retina” Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.
27. Bedi, S., Kango-Singh, M., and **Singh, A.** *Lobe* genetically interacts with RD genes to promote ectopic eye formation in *Drosophila*. Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.
28. Waghmare, I., Verghese, S., Hanes, K., Lesko, L., **Singh, A.** and Kango-Singh M. “A model to study the influence of Hippo signaling on local cell-cell interactions.” Ohio Miami Valley Neuroscience Symposium, May 18th 2012, Miami University, Oxford OH.
29. Puli, G.O.R., Yorimitsu, T., Nakagoshi, H., and **Singh, A.** “*defective proventriculus (dve)*, a new member of DV patterning in the eye.” Annual Sigma Xi symposium, April 12th, 2012 at University of Dayton.
30. Tare, M., Kango-Singh, M., **Singh, A.** Role of an E3 ubiquitin ligase in ventral eye development. Annual Sigma Xi symposium, April 12th, 2012 at University of Dayton.
31. Waghmare, I., Verghese, S., Hanes, K., Lesko, L., **Singh, A.** and Kango-Singh M. “A model to study the influence of Hippo signaling on local cell-cell interactions.” Annual Sigma Xi symposium, April 12th, 2012 at University of Dayton.
32. Puli, G.O.R., Yorimitsu, T., Nakagoshi, H., and **Singh A.** “*defective proventriculus (dve)*, a new member of DV patterning in the eye.” Brother Joseph W Stander symposium, April, 18th, 2012 at University of Dayton.
33. Tare, M., Kango-Singh, M., **Singh, A.** “Domain specific E3 ubiquitin ligase mediated Wingless degradation promotes Dorso-Ventral lineage in the developing *Drosophila* eye.” Brother Joseph W Stander symposium, April, 18th, 2012 at University of Dayton.
34. Mancini, G.F., Staker, K.L., Tare, M., and **Singh A.** Study of developmental interaction of chip and L during DV patterning of *Drosophila* eye. Brother Joseph W Stander symposium, April, 18th, 2012 at University of Dayton.
35. Moran, M. T., Kango-Singh, M., and **Singh A.** “Role of retinal determination genes in amyloid beta 42 mediated neurodegeneration in the *Drosophila* retina” Brother Joseph W Stander symposium, April, 18th, 2012 at University of Dayton.
36. Bedi, S., Kango-Singh, M., and **Singh A.** *Lobe* genetically interacts with retinal determination genes to promote ectopic eye formation in *Drosophila*. Brother Joseph W Stander symposium, April, 18th, 2012 at University of Dayton.
37. Waghmare, I., Verghese, S., Hanes, K., Lesko, L., **Singh, A.** and Kango-Singh M. “A model to study the influence of Hippo signaling on local cell-cell interactions.” **Brother Joseph W Stander Symposium, April, 18th, 2012 at University of Dayton.**

38. Tare, M., Kango-Singh M., **Singh, A.** (2011). Role of an E3 ubiquitin ligase in ventral eye development. **52nd Annual *Drosophila* Research Conference held at San Diego, CA, USA, March 30th -April 3rd, 2011.**
39. Roy, O.P.G., Yorimitsu, T., Nakagoshi, H., **Singh, A.** (2011). *defective proventriculus (dve)*, a new member of DV patterning in the eye. **52nd Annual *Drosophila* Research Conference held at San Diego, CA, USA, March 30th -April 3rd, 2011.**
40. Verghese, S., Sullivan, M., Ranganathan, N., **Singh, A.**, Kango-Singh, M. (2011). Activation of Hippo controls Dronc levels to regulate caspase-mediated apoptosis in *Drosophila*. **52nd Annual *Drosophila* Research Conference held at San Diego, CA, USA, March 30th -April 3rd, 2011.**
41. Bedi S., Nainaparampil J. J., **Singh, A.** (2011). Unraveling the Cell Death Mechanism of Alzheimer's Disease. **Ohio Miami Valley Neuroscience Symposium, held at Wright State University, Dayton, OH, May 20th, 2011. ** Best Poster Presentation Award in postdoctoral presentation category.**
42. Tare M., Kango-Singh M., **Singh, A.** (2011). Role of an E3 ubiquitin ligase in ventral eye development. **Ohio Miami Valley Neuroscience Symposium, held at Wright State University, Dayton, OH, May 20th, 2011.**
43. Salchli L. A., Roy O.P.G., Wittkorn E. L. **Singh, A.** (2011). Defective proventriculus (*dve*), a new member of DV patterning in the eye. **Ohio Miami Valley Neuroscience Symposium, held at Wright State University, Dayton, OH, May 20th, 2011.**
44. Roy O.P.G., Salchli L. A., Wittkorn E. L. **Singh, A.** (2011). *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
45. Salchli L. A., Roy O.P.G., Wittkorn E. L. **Singh, A.** (2011). *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
46. Wittkorn E. L., Salchli L. A., Roy O.P.G. **Singh, A.** (2011). *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
47. Tare M., Farber J., Kango-Singh M. **Singh, A.** (2011). Role of an E3 ubiquitin ligase in ventral eye development. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**

48. Johns C.A. and **Singh, A.** (2011). Developmental characterization of ectopic eye formation as a function of PAX-6 gene in *Drosophila* eye. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
49. Minichello M. A. and **Singh, A.** (2011). Functional characterization of *defective proventriculus (dve)*, a new member of the dorso-ventral patterning pathway. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
50. Nainaparampil J., J. and **Singh, A.** (2011). Unraveling the Cell Death Mechanism of Alzheimer's Disease. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
51. Bedi, S. and **Singh, A.** (2011). Role of *Lobe (L)* gene in the Retinal Determination Gene Network in *Drosophila*. **Brother Joseph W. Stander Symposium at University of Dayton, Dayton, OH, April 13th, 2011.**
52. Modi, R.M., Nainaparampil, J.J., Fernandez- Funez, P., and **Singh, A.** Genetic Basis of Cell Death in Neurodegeneration in Alzheimer's disease. (**51st Annual *Drosophila* Research Conference, Washington D.C., April 7-10th, 2010.**)
53. Oros, S.M., Tare, M., and **Singh, A.** Dorsal eye selector *pannier (pnr)* suppresses the retinal differentiation in the *Drosophila* eye. (**51st Annual *Drosophila* Research Conference, Washington D.C., April 7-10th, 2010.**)
54. Puli G., O.R., Yorimitsu, T., Nakagoshi, H., and **Singh, A.** *defective proventriculus (dve)*, a new member of DV patterning in the eye. (**51st Annual *Drosophila* Research Conference, Washington D.C., April 7-10th, 2010.**)
55. Tare, M., Kango-Singh, M., and **Singh, A.** Role of an E3 ubiquitin ligase in ventral eye development. (**51st Annual *Drosophila* Research Conference, Washington D.C., April 7-10th, 2010.**)
56. Verghese, S., Gunashekere, S., Scriappa, L., Harvey, K., **Singh, A.** and Kango-Singh, M. The complex interactions of Hippo signaling with the intrinsic cell death pathway in the regulation of Hippo-mediated cell death. (**51st Annual *Drosophila* Research Conference, Washington D.C., April 7-10th, 2010.**)
57. Roy, O.P.G., and **Singh, A.** (2010). *defective proventriculus (dve)*, a new member of DV patterning in the eye. **Sigma Xi Poster Symposium, 2010, at University of Dayton, Dayton, OH.**

58. Tare, M. Kango-Singh M. and Singh, A. (2010). Role of an E3 ubiquitin ligase in ventral eye development. **Sigma Xi Poster Symposium, 2010, at University of Dayton, Dayton, OH.**
59. Modi, R.M., Nainaparampil, J.J., Fernandez- Funez, P., and Singh, A. Genetic Basis of Cell Death in Neurodegeneration in Alzheimer's disease. (**Ohio Miami Valley Society of Neuroscience Symposium, May 10th, 2010, School of Medicine, University of Cincinnati, OH.**)
60. Oros, S.M., Tare, M., and Singh, A. Dorsal eye selector *pannier* (*pnr*) suppresses the retinal differentiation in the *Drosophila* eye. (**Ohio Miami Valley Society of Neuroscience Symposium, May 10th, 2010, School of Medicine, University of Cincinnati, OH.**)
61. Puli, O.R., Yorimitsu, T., Nakagoshi, H., and Singh, A. *defective proventriculus* (*dve*), a new member of DV patterning in the eye. (**Ohio Miami Valley Society of Neuroscience Symposium, May, 10, 2010, School of Medicine, University of Cincinnati, OH.**) **This presentation received Best Poster Award.**
62. Usman, M. and Singh A. Development of interdisciplinary Mathematical Biology Course Curriculum and Laboratory. (**Symposium on Biomathematics and Ecology Education and Research (B.E.E.R. 2010), September 4-5th, 2010, Illinois State University, IL.**) (<http://www.biomath.ilstu.edu/beer/TechnicalProgram2010.shtml>)
63. Tare, M., Kango-Singh, M. and Singh, A. Role of an E3 ubiquitin ligase in ventral eye development. (**Brother Joseph W. Stander Symposium, April 14th, 2010 at University of Dayton.**)
64. Modi, R.M., Nainaparampil, J.J., and Singh, A. Genetic Basis of Cell Death in Neurodegeneration in Alzheimer's disease. (**Brother Joseph W. Stander Symposium, April 14th, 2010 at University of Dayton.**)
65. Oros, S.M., and Singh, A. Dorsal eye selector *pannier* (*pnr*) suppresses the retinal differentiation in the *Drosophila* eye. (**Brother Joseph W. Stander symposium, April 14th, 2010 at University of Dayton.**)
66. Puli, O.R., Minichello, M.A., and Singh, A. *defective proventriculus* (*dve*), a new member of DV patterning in the eye. (**Brother Joseph W. Stander Symposium, April 14th, 2010 at University of Dayton.**)
67. Salomone, J.R., Stcy, A. M., Umstead A.Q., Usman, M. and Singh, A. A Computational Study of the Fitzhugh-Nagumo Action Potential System. (**Brother Joseph W. Stander Symposium, April 14th, 2010 at University of Dayton.**)

68. Balbach, W.E., Frantz, N.B., Mersman, B.R., Weger, W.T., Usman, M. and **Singh, A.** Mathematical modeling of H1N1 flu. (**Brother Joseph W. Stander Symposium, April 14th, 2010 at University of Dayton**).
69. Modi, R.M. & **Singh, A.** Understanding the role of apoptotic cell death in neurodegeneration caused by amyloid plaques during early eye development. (**Honors Student Symposium 2010, March 12th, 2010 at University of Dayton**).
70. Oros, S.M., and **Singh, A.** Dorsal eye selector *pannier* (*pnr*) suppresses retinal differentiation in the *Drosophila* eye. (**Honors Student Symposium 2010, March 12th, 2010 at University of Dayton**).
71. Tare, M., and **Singh, A.** Role of an E3 ubiquitin ligase in ventral eye development. (**Sigma Xi at University of Dayton**).
72. Puli G., O.R., Minichello, M. A., and **Singh, A.** *defective proventriculus* (*dve*), a new member of DV patterning in the eye. (**Sigma Xi at University of Dayton**).
73. Tare, M., Kango-Singh M., **Singh, A.** (2009). Opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate* define ventral eye margin of the developing eye field. (**Ohio Miami Valley Neuroscience Day Symposium at Miami University, Oxford, OH, June 5th, 2009**). *** Received Best Poster Award**
74. Modi, R.M., Nainaparampil, J.J. and **Singh, A.** “*Drosophila* eye model to understand the genetic basis of Alzheimer's disease.” (**Ohio Miami Valley Neuroscience Day Symposium at Miami University, Oxford, OH, June 5th, 2009**).
75. Roy, P.G.O., Gunasekara, G., Kango-Singh, M., and **Singh, A.** “A *Drosophila* model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer.” (**Ohio Miami Valley Neuroscience Day Symposium at Miami University, Oxford, OH, June 5th, 2009**).
76. Tare, M., Kango-Singh M., **Singh, A.** Opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate* define ventral eye margin of the developing eye field. (**University of Dayton Brother Joseph W Stander Symposium April 16th, 2009**).
77. Oros, S.M., **Singh, A.** (2009) “Dorsal selector, *pannier*, interacts with the retinal determination gene network”. (**University of Dayton Brother Joseph W Stander Symposium April 16th, 2009**).
78. Gunasekara, G., Roy, P.G.O., Kango-Singh, M., and **Singh, A.** (2009) “A *Drosophila* model to study the role of the Notch ligand Serrate (Jagged-1) in growth and cancer.” (**University of Dayton Stander Symposium April 16th, 2009**).
79. Nainaparampil, J.J., Modi, R.M., and **Singh, A.** (2009) “*Drosophila* eye model to understand the genetic basis of Alzheimer's disease.” (**University of Dayton Brother Joseph W Stander Symposium April 16th, 2009**).

80. Sanker, S.L., and **Singh, A.** (2009) “*Drosophila melanogaster* as a model to study the genetic basis of Alagille's Syndrome.” (University of Dayton Brother Joseph W Stander Symposium April 16th, 2009).
81. Aaby, D., Usman, M., **Singh, A.** (2009) "A comparative study of numerical methods for the Hodgkin-Huxley model of nerve cell action potential. (University of Dayton Brother Joseph W Stander Symposium April 16th, 2009).
82. Tare, M., Kango-Singh, M. Cho, K.-O., Choi, K.-W., **Singh, A.** (2009) "Antagonistic interaction of *L* and *hth* to define ventral eye boundary is independent of the *exd* function". (50th Annual Drosophila Research Conference, Chicago. March 4-8th, 2009).
83. Oros, S.M., **Singh, A.** (2009) “Dorsal selector, *pannier*, interacts with the retinal determination gene network”. (50th Annual Drosophila Conference in Chicago March 4-8th, 2009).*
- a. Oros received
1. Beta Beta Beta Research Award from National Tri-Beta Office,
 2. University of Dayton Honors Program travel fellowship,
 3. University of Dayton Student Government Association conference grant to attend this meeting.
84. Kango-Singh, M., Patel, K., Waits, K., Gunashekera, S. **Singh, A.** (2009) Investigating cell death induced by activation of Hippo signaling. (50th Annual Drosophila Research Conference, Chicago, March 4-8th, 2009).
85. Son, W., **Singh, A.**, Choi, K.-W. and Cho, K.-O. (2009). Growth of compartments in eye antenna discs are differentially regulated by Hedgehog (Hh), Decapentaplegic (Dpp), and Wingless (Wg). (50th Annual Drosophila Research Conference, Chicago, March 4-8th, 2009).
86. Oros, S.M., Berkemier, M. and **Singh, A.** (2008). *Drosophila* model to study genetic basis of birth defect in eye. (Ohio Miami Valley Chapter Society for Neuroscience, Wright State, May 16th, 2008).
87. Tare, M. *, Kango-Singh, M. and **Singh, A.** (2008). Opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate* define ventral eye margin of the developing eye field. (Ohio Miami Valley Chapter Society for Neuroscience, Wright State, May 16th, 2008). **Received the poster presentation award*
88. Tare, M., Kango-Singh M., **Singh A.** (2008). Opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate* define ventral eye margin of the developing eye field. Sigma Xi Poster Symposium, 2008, University of Dayton.
89. Oros, S.M., Berkemier, M. and **Singh, A.** (2008). “Drosophila model to study genetic basis of birth defects in eye.” Sigma Xi Poster Symposium, 2008, University of Dayton.

90. Oros, S.M., Berkemier, M. and **Singh, A.** (2008). *Drosophila* model to study genetic basis of birth defect in eye. (**University of Dayton, Brother Joseph W Stander Symposium April, 2008**).
91. Tare, M., Kango-Singh, M and **Singh A.** (2008). Opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate* define ventral eye margin of the developing eye field. (**University of Dayton, Brother Joseph W Stander Symposium, April, 2008**).
92. **Singh, A.**, Tare, M., Son , W., Vigneswaran, K., and Choi, K.W. Ventral eye margin is defined by opposing interactions between *homothorax* and Notch pathway genes *Lobe* and *Serrate*. (**49th Annual Drosophila Research Conference, San Diego, USA, April, 2008**).

SELECTED ABSTRACTS (Prior to joining University of Dayton in 2007)

93. **Singh, A.**, Wook-Choi, K. Opposing interactions of homeodomain gene *homothorax* and *Notch* pathway genes *Lobe* and *Serrate* are required for ventral eye development. (**48th Annual Drosophila Research Conference, Philadelphia, USA, March, 2007**).
94. **Singh, A.**, Vigneswaran, K. and Choi, K.-W. Role of Dorso-ventral (DV) patterning genes in retinal determination and specification pathway in *Drosophila* eye, and in congenital eye defect Aniridia. Accepted for presentation in (**47th Annual Drosophila Research Conference, Houston, Texas, USA, March, 2006**).
95. **Singh, A.**, and Choi, K.W. Antagonistic interaction of ventral growth control genes with Wg signaling pathway and *homothorax* define the ventral margin of *Drosophila* eye. (**46th Annual Fly meeting, San Diego, USA, March 30th - April 3rd, 2005**).
96. **Singh, A.**, and Choi, K.W. Ventral is the Initial State of *Drosophila* eye before Dorso-ventral specification. (**45th Annual Fly meeting, Washington D.C., USA, March 24th - 29th, 2004**).
97. **Singh, A.**, and Choi, K.W. Role of *Lobe* in the Dorso-ventral patterning of the *Drosophila* eye. (**44th Annual Fly meeting, Chicago Illinois, USA, March 5th -9th, 2003**).
98. **Singh, A.**, Kango-Singh, M. and Sun Y.H. *teashirt* collaborates with WG to suppress ventral eye development. (**42nd Annual Fly meeting, Washington D.C., USA, March, 2001**).
99. Kango-Singh, M., **Singh, A.** and Sun, Y.H. Requirement of *hedgehog* (*hh*) for the induction of ectopic eyes by the *Drosophila* PAX6 gene *eyeless* (*ey*). (**Oral presentation at the 42nd Annual Fly meeting held at Washington D.C., USA, March 23rd -26th, 2001**).
100. **Singh, A.**, Singh-Kango, M., and Sun Y.H. Developmental interaction of *teashirt* (*tsh*) with the genes involved in eye development. (**NHRI Conference on Developmental Biology, Aspire Learning Complex, Taiwan R.O.C., October 27-28th, 2000**).

101. Kango-Singh, M., **Singh, A.** and Sun, Y.H. Requirement of *hedgehog* (*hh*) for the induction of ectopic eyes by the *Drosophila* PAX6 gene *eyeless* (*ey*). (**NHRI Conference on Developmental Biology, Aspire Learning Complex, Taiwan, October 27-28th, 2000**).
102. **Singh, A.**, Kango-Singh, M. and Sun, Y. H. Developmental interaction of *teashirt* (*tsh*) with genes involved in eye development of *Drosophila*. (**Oral Presentation, 41st Annual Fly meeting held, Pittsburgh, USA, March 22nd-26th, 2000**).
103. Kango-Singh, M., **Singh, A.** and Sun, Y.H. Spatial requirements for induction of ectopic eyes in *Drosophila*. (**41st Annual Fly meeting, Pittsburgh, USA, March 22nd-26th, 2000**).
104. Kango-Singh, M, **Singh, A.** and Sun, Y. H. Study of mechanism of *eyeless* (*ey*) function in imaginal disc development of *Drosophila*. (Institute of Molecular Biology (IMB) Retreat, Academia, Sinica, Taipei, Taiwan, R.O.C., Dec. 16th, 1999).
105. **Singh, A.** and Sun, Y. H. Developmental interaction of *teashirt* (*tsh*) with the genes involved in eye development. (NHRI Conference on Developmental Biology at Naloowan Resort, Woolie, Taipei, Taiwan, R.O.C. from Sept. 7th-9th, 1999).
106. **Singh, A.** and Sun, Y. H. Screen for modifier mutation of *homothorax* (*hth*) (VIIth Symposium on Recent Advances in Cellular and Molecular Biology held at Kenting, Taiwan from Jan. 30th - Feb. 1st, 1999).
107. Kango Singh, M., **Singh, A.**, Pillai, B. and Gopinathan, K.P. (1997). Role of patterning genes during adult appendages morphogenesis in silkworm. (IVth International workshop on Mol. Biology & Genetics of Lepidoptera held at Crete, Greece from Aug. 24 -30th, 1997).
108. **Singh, A.**, Kango-Singh, M. and Gopinathan, K.P. (1997) Developmental evolution of patterning mechanisms in morphogenesis of adult appendages of silkworm, *Bombyx mori*. (IVth International workshop on Mol. Biology & Genetics of Lepidoptera held at Crete, Greece from Aug 24-30th, 1997).
109. Gopinathan, K.P., Joy, O. and **Singh, A.** - "Approaches to developing Transgenesis in silkworm, *Bombyx mori*." (Symposia and Workshop on Animal Models for Biomedical Research, IISc, Bangalore, July 1-15th, 1996).
110. **Singh, A.**, Kango-Singh, M. and Gopinathan, K.P. - "Pattern generation in Mulberry Silkworm, *Bombyx mori*." (International Symposium on Present and Future of Major Aspects of Modern Biology, National Centre for Biological Sciences, TIFR, Bangalore, October 14 -18th, 1996).
111. **Singh, A.**, Kango-Singh, M. and Gopinathan, K.P.- "The Silkworm, A model for the study of Pattern Formation." (65th Annual Meeting of the Society of Biological Chemists (SBC) India, Indian Institute of Science (IISc), Bangalore, November 20 -23rd, 1996).

112. **Singh, A.**, Kango-Singh, M. and Gopinathan, K.P.- Development of wing appendages in silkworm results from a pre-patterned wing housed in larva and the role of pattern controlling genes in wing development. (VIth Spring School on "Developmental Switches" held at Institute of Advanced Studies, Hebrew University, Israel).
113. Sinha, P., Bhojwani, J., **Singh, A.**, Misquitta, L., Mishra, A.-"Search for *Drosophila* genes based on patterned expression of mini-*white* reporter gene in adult eyes." (*Drosophila* Meeting, *Drosophila* Stock Center, Mysore, India, 1995).
114. **Singh, A.** and Sinha, P.-"Role of *cubitus-interruptus Dominant*, segment polarity gene in the generation of pattern during *Drosophila* development. (Chromosome Symposia, Banaras Hindu University, Varanasi, India, Jan 13-15th, 1995).
115. **Singh, A.** and Sinha, P.-"A novel aspect of the role of *cubitus interruptus Dominant* segment polarity gene in pattern generation. (XVIIth, All India Cell Biology Conference and Symposia, Indore, India, 1994).
116. **Singh, A.**, Bhojwani, J., Misquitta, L. and Sinha, P.- "Interaction of *new sector (nst)* a novel insertion at *engrailed* locus with segment polarity, segmentation and homeotic genes". (XVIth All India Cell Biology Conference and Symposia, B.H.U., Varanasi, 1993). * **This presentation received the Indian Society for Cell Biology (ISCB) award for Best Poster.**
117. Misquitta, L., Bhojwani, J., **Singh, A.**, Mishra-Sinha, A. and Sinha, P.- "Genetic identification and developmental analysis of *toothless*- a novel gene regulating head development." (XVIth All India Cell Biology Conference and Symposia, B.H.U., Varanasi, 1993).
118. **Singh, A.** and Sinha, P.- "The embryonic phenotype of *new sector (nst)*, a segment polarity gene of *Drosophila*. (*Drosophila* Meeting, *Drosophila* Stock Center, University of Mysore, Mysore, India, 1993).
119. Bhojwani, J., **Singh, A.**, Kango, M. and Sinha, P., - "Compartmentation during *Drosophila* development and the role of *new sector (nst)*, a segment polarity gene. (Cellular and Molecular Aspects of Developmental Regulation, International Symposium from Nov. 27th -Dec 1st, 1993 organised by Indian Society of Developmental Biologists, Department of Zoology, Pune, India).
120. **Singh, A.**, Bhojwani, J., Misquitta, L. and Sinha, P. -" Identification and developmental characterization of *new sector (nst)* a gene regulating development of compartment during *Drosophila* development. (XVth All India Cell biology Conference and Symposia, New Delhi, India, 1992). * **This presentation received the Prof. S. R. V. Rao Prize for Best poster.**
121. **Singh, A.**, Bhojwani, J., Misquitta, L. and Sinha, P.-" Identification of *teashirt*, a homeotic gene." (XVth All India Cell Biology Conference and Symposia, New Delhi, India, 1992).

122. Misquitta, L., Bhojwani, J., **Singh, A.**, Mishra-Sinha, A. and Sinha, P.-" Identification of a novel set of enhancer elements regulating the pattern development in *Drosophila* by a P *lacZ* vector." (XIIth European Drosophila Research Conference at Mainz, Germany, 1991.)

III. Performance of Non-Instructional Duties

A. General Service

1. Academic Administration

Institution	Position	From	To
University of Dayton	Director Graduate program, Biology	2013	To date
University of Dayton	Chair Search Committee: Neurobiologist Department of Biology	2012	2013
University of Dayton	External Member Search Committee: Biopsychologist Department of Psychology	2013	

2. Non-Academic Administration (such as offices in scholarly or professional organizations)

Name of Organization	Position Nature of Duties	Date
Indian Student Association University of Dayton	Faculty Advisor	2013- To date
PLoS ONE	Academic Editor	2009- To Date
Developmental Dynamics	Editorial Board	2010- To Date
Developmental Dynamics (Special Issue) <i>Drosophila</i> as a Model for Understanding Development and Disease	Guest Editor	2011- To Date
Journal of Organ Biology	Editorial Board	2011- To Date
Journal of Biological Sciences	Editorial Board	2011- To Date
Asian Journal of Developmental Biology	Editorial Board	2011- To Date
Journal of Cell Science and Therapy	Editorial Board	2011- To Date

Cell and Developmental Biology	Editorial Board	2011- To Date
Current Research in Neuroscience	Editorial Board	2011- To Date
Biomedical Engineering and Computational Biology	Editorial Board	2011-To date
Cell Biology Insights	Editorial Board	2011-To date
Developmental Biology Journal	Editorial Board	2011-To date
American Heart Association	Grant reviewer	2008-2009
Alzheimer's Association	Grant Reviewer	2008- To date
National Science Foundation (GFRP, NSF)	Grant Reviewer	2009- To date
National Science Foundation (GFRP, NDSEG)	Grant Reviewer	2010- To date
Journal	Ad hoc Reviewer	2006 – To date

1. PLoS Biology
2. Development
3. Developmental Biology
4. Human Molecular Genetics
5. Genetics
6. Developmental Dynamics
7. International J. Developmental Biology
8. Genesis
9. Mechanism of Development
10. PLoS ONE
11. Technotome
12. Organogenesis
13. JOVE
14. Cancer Letter
15. Cell Biology Insights

3. University-wide Committees
Name of Committee Dates
- Graduate leadership Council** **2013**
Indian Student Association **2012-**
4. College Committees
Name of Committee Date

Search Committee: Neurobiologist 2012

Search Committee: Bio Psychologist 2013
Department of Psychology

5. Departmental Committees

1. **Graduate Student Selection Committee** 2007- To date
Department of Biology, College of Arts & Sciences
University of Dayton, Dayton, OH

2. **Center for Tissue Regeneration and Engineering** 2007- To date
at Dayton (TREND), University of Dayton, Dayton, OH

3. **Dept. of Biology Undergraduate Curriculum Committee** 2008-2009

4. **Dept. of Biology Policy/By Laws Committee** 2009-2011

5. **Dept. of Biology Graduate Admissions & Graduate** 2009-2010
Coordinating, Curriculum and Assessment Committee

6. **Dept. of Biology Graduate Coordinating, Curriculum** 2010-2011,
7. **and Assessment Committee**

8. **Chair, Dept. of Biology Lancaster McDougall** 2010-2011
Award Committee

9. **Chair, Search committee for a Neurobiologist position** 2012-2013
Dept. of Biology

10. **Chair, Career in Biology Seminar Series** 2012-2013

11. **Dept. of Biology Graduate Admissions & Graduate** 2013- To date
Coordinating, Curriculum and Assessment Committee

12. **Dept. of Biology Graduate Coordinating, Curriculum** 2013- To date
and Assessment Committee

13. **Graduate Student Research Mentor**
Meghana Tare 2007- 2013
Oorvashi Roy Puli Gajendranath 2009- To date
Erika Wittkorn 2012- To date
Ankita Sarkar 2013- To date

14. **Graduate Student Advisory Committee**

1. Matt Lunn 2008- 2011
2. Muhammad E Shakerath 2007- 2011
3. Ryan Posgai 2008- 2012

4. Joel Baddour	2011-2012
5. John Butts	2010-2012
6. Venkatesh Mutyam	2007- 2013
7. Rital Bhavsar	2008- 2013
8. Shilpi Verghese	2009- To date
9. Kostas Sousounis	2010- To date
10. Alyssa Blystone	2010- To date
11. Indrayani Waghmare	2011- To date
12. Eric Camino	2011- To date
13. Sumant Grover	2012- To date
14. Kyle Murphy	2012- To date

15. Undergraduate Students Research Mentor

Honors Thesis Advisor

1. Sarah M. Oros (Premed/ Honors) 2007-2010

Title: Dorsal eye selector *pannier* (*pnr*) suppresses retinal differentiation to define dorsal margin of *Drosophila* eye

Publication:

- **Oros, S.M.**, Tare, M., Kango-Singh, M. and Singh, A.* (2010). Dorsal eye selector *pannier* (*pnr*) suppresses the eye fate to define dorsal margin of the *Drosophila* eye. **Developmental Biology** 2010 Oct 15; 346(2):258-71. Epub 2010 Aug 5. PMID: 20691679

2. Rohan Modi (Premed/JAMS) 2008-2011

Title: Understanding the genetic mechanism of apoptotic cell death in Alzheimer's disease.

Publication:

- Tare, M.*, **Modi, R.***, Nainaparampil, J.*, Puli-Roy, O., Bedi, S., Fernandez-Funez, P., Kango-Singh, M*. and Singh, A.* (2011). Activation of JNK signaling mediates Amyloid- β -dependent cell death. PLoS ONE (in press) [* Equal First Author]

3. Jaison Nainaparampil (Premed/ JAMS/Barry Scholar) 2008-2011

Title: Unraveling the cell death mechanism of Alzheimer's disease.

Publication:

- Tare, M.*, Modi, R.*, **Nainaparampil, J.***, Puli-Roy, O., Bedi, S., Fernandez-Funez, P., Kango-Singh, M*. and Singh, A.* (2011). Activation of JNK signaling mediates Amyloid- β -dependent cell death. PLoS ONE (in press) [* Equal First Author]

4. Christopher E Johns (Pre Med) 2009-2011

Title: Developmental Characterization of ectopic eye formation as a function of PAX-6 gene in *Drosophila* eye.

5. Michaela E Minichello 2009-2011

Title: Functional characterization of *defective proventriculus (dve)*, a new member of the Dorso-ventral patterning pathway.

6. Andrew Stephensmeier 2011-

Title: Role of Signaling Pathways in Amyloid- β - Dependent Cell Death in *Drosophila* Eye.

7. Greg Mancini 2012-

Title: Role of Transcriptional Co activator CREB binding Protein in Amyloid- β 42 Mediated Neurodegeneration

8. Madison Irwin (Biology) 2012-

9. Tim Cuttler (Pre Med) 2012-

Bio- 421 Mentor

10. Stephen L Sanker (Bio Major) 2007-2010

11. Erika Whittkorn (Bio Major) 2009-

12. Michael T Moran (Biology) 2012-

Research Mentor

13. Monica M Berkemier (Bio Major) 2007-2009

14. Sehrish A Khan (Bio Major) 2007-2008

15. Thomas J Hirschauer (Bio Major) 2007-2008

16. Akash Shah (Pre Med) 2007-2008

17. Kimberly E Sacher (Biology) 2008-2010

18. William E Scott (PreMed) 2009- 2011

19. Eric Welchel (Pre Med) 2009- 2011

20. Lauren Hunt (Bio Major) 2010- 2011

21. Jacob Farber (Pre Med) 2010- 2011

22. Lindsey Salchli (Pre Med) 2010-2012

23. Erica E Whittkorn (Pre Med) 2010-2012

24. Katrina E Staker (Eng.) 2011-2012

25. Karl E Sievert (Bio chem.)	2011-2012
26. Sean E Conroy (Pre Med)	2011-2012
27. Grant E Turek (Pre Med)	2011-2012
28. Weam Hussein (Biology)	2012
29. Katrina Albertino (Bio)	2012-2013
30. Donald Kleppel	2012
31.	

Summer Student Research Mentor

1. Sagar Patel (Centerville High School)	2008
2. Emilia E Zywot (Centerville High School)	2010-2011
3. Aditya Phadke (Beavercreek High School)	2011-2011
4. Arati Kumar (Cincinnati High School)	2011-2012
5. Aditi Singh (Centerville High School)	2012

My laboratory provided research exposure to high school students aspiring to opt biomedical sciences as a career.

5. Kush Patel (University of Cincinnati)	2010
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6. Non-University Committees (governmental, educational, etc.)

Agency	Nature of Work	Dates
PLOS One	Academic Editor	2009- To date
Developmental Dynamics	Editorial Board member	2010- To date
Journal	Ad hoc Reviewer	2006 – To date
1. PLoS Biology		
2. PLoS ONE		
3. Development		
4. Developmental Biology		
5. Human Molecular Genetics		
6. Genetics		
7. Developmental Dynamics		
8. International J. Developmental Biology		
9. Genesis		
10. Mechanism of Development		
11. Technotome		
12. Organogenesis		
13. JOVE		
14. Cancer Letter		
15. Cell Biology Insight		

7. Other Activities on Behalf of the University

1. Represented as a Judge on behalf of the University of Dayton at The Ohio Academy of

- Science in Columbus Ohio on May 10th, 2008.
2. Represented as a Judge on behalf of the University of Dayton at The Ohio Academy of Science in Columbus Ohio on May 10th, 2009.
 3. Participated in a symposium for Regional Academic leadership and WPAFB organized jointly by Wright Patterson Air Force Base and University of Dayton on January 11th, 2008. The symposium was part of ongoing effort of Airforce base to look for possibilities of future collaboration between the local academic institution and Wright Patterson Air force Base at Dayton, OH.
 4. Officer at large for Ohio Miami Valley Society for Neuroscience, a regional chapter of Society of Neuroscience from 2009- to date.
 5. Served as Judge in the poster competition of Ohio Miami Valley Society for Neuroscience Day at University of Miami on June 5th, 2009.
 6. Selected to attend GENA workshop at Seattle, Washington. The objective was to develop genetics curriculum in the local Centerville high school to improve the quality and levels of genetics knowledge among the students entering the college. I was one of the 20 scientist selected from all over North America.
 7. Participated in Council of Undergraduate Research (CUR) workshop at Washington DC representing the University of Dayton.
 8. Participated in a team taught course under BEST program umbrella for Singapore students, 2009.
 9. Participated in a team taught course under BEST program umbrella for Singapore students, 2010
 10. Participated in a team taught course under BEST program umbrella for Chinese students, 2011.
 11. Served as Judge in the poster competition of Ohio Miami Valley Society for Neuroscience Day at Wright State University, 2011.
 12. Participated in a team taught course under BEST program curriculum for Chinese students, 2011.
 13. Represented as a Judge on behalf of the University of Dayton at The Ohio Academy of Science in Columbus Ohio on May 2012.
 14. Served as Judge in the poster competition of Ohio Miami Valley Society for Neuroscience Day at University of Miami on June 15th, 2012.
 15. Faculty Advisor for Indian Student Association (ISA) at University of Dayton since 2012- To date.

- B. Professional Activities in the Community (consultative work, public speaking, community and professional organizations, etc.) Name the group and indicate the extent of your participation.

Agency	Nature of Work	Dates
Member of Mentor Network of American Society of Human Genetics (ASHG).	Genetics Source person .The objective of the network is to bring geneticist to the classroom	2005- To date
Learning Teaching Center Fellow	Participated in a semester long learning teaching fellow training program	
Member of Ohio Miami Valley Society of Neuroscience	Participate in Neuroscience day to increase awareness among students	2008- To date
Member, Council of Undergraduate Research (CUR)	Mentor for undergraduate researchers	2010- Todate

C. **Any Other Pertinent Information**

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1. **MEDIA Contributions:**

Our research on Alzheimer's disease was covered on Channel 2 News, 91.7WVXU Cincinnati, Reuters, Channel 9 WAFB, NBC Channel 12 and several other media links (details in supplementary material enclosed).