

**2016 Curriculum Vitae**

**NAME:** Jeffrey G. Scott  
**DEPARTMENT/UNIT:** Entomology  
**TITLE:** Professor  
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**WEB PAGE:** <http://blogs.cornell.edu/scott/>

Current Position

1998 - present                      Professor (Current appointment is 65% research and 30% teaching and 5% extension)

Fields of Specialization

Evolution and Population Genetics of Insecticide Resistance, Insecticide Toxicology, P450 Monooxygenases of Insects, Insect Molecular Biology, Evolution of Sex Determination in *Musca domestica*

Education

- 1985 Ph.D., Entomology, University of California, Riverside, CA 92521  
Thesis title: The Biochemistry, Physiology and Genetics of Permethrin Resistance in the House Fly, *Musca domestica* L.
- 1981 M.S., Entomology, Michigan State University, East Lansing, MI 48824  
Thesis title: Characteristics of DDT-induced Pyrethroid Resistance in the German Cockroach, *Blattella germanica*.
- 1979 B.S. (Honors), Biochemistry, Michigan State University, East Lansing, MI 48824
- 1977 A.A. (Honors), Biology, Grand Rapids Junior College, Grand Rapids, MI 49605

Previous Positions Held

- 2007- 2013 *Department Chair*, 2002 – 2007 *Daljit S. and Elaine Sarkaria Professor of Insect Physiology and Toxicology*, Professor (1998-present), Associate Professor (1992-1998), Assistant Professor (1986-1992), Department of Entomology, Cornell University, Ithaca, NY 14853.
- 2011 – *President* (2010 – *Vice President*) Section of Physiology, Biochemistry and Toxicology of Entomological Society of America
- 2011 – *Co-panel manager and reviewer*, FNIH Grand Challenges in Global Health
- 2007-present – *Director and member*, Sarkaria Institute of Insect Physiology and Toxicology
- 2005-2006 - *Panel Manager* NRI-CSREES (USDA) Suborganismal Biology and Functional Genomics. Responsible for assembling panel, assigning grants, managing panel meeting and dissemination of \$6.5 million in competitive grant funds.
- 1995 – 1998; 2005 – 2007 *Director of Graduate Studies*, Field of Entomology, Cornell University, Ithaca, NY
- 1985 - 1986 *Postdoctoral Research Associate*, Pesticide Chemistry and Toxicology Laboratory, Dept. of Entomol. Sci., University of California, Berkeley, CA 94720

1982 - 1985 *Research Associate*, Division of Toxicology and Physiology, Dept. of Entomology, University of California, Riverside, CA 92521

1979 - 1982 *Research Associate*, Pesticide Research Center, Dept. of Entomology, Michigan State University, East Lansing, MI 48824

#### Academic Honors and Awards

2015 Cornell University Class Councils Faculty Award  
2013 Fellow of the Entomological Society of America  
2012 Recognition Award in Insect Physiology, Biochemistry and Physiology from the Entomological Society of America  
2012 Graduate Student Selected Seminar Speaker, Iowa State Univ.  
2007 Graduate Student Selected Seminar Speaker, Texas A&M Univ.  
2004 Graduate Student Selected Seminar Speaker, Kansas State Univ.  
2003 Spring Suaray Graduate Student Invited Speaker for the Department of Entomology and Plant Pathology, Auburn University  
2002 Daljit S. and Elaine Sarkaria Professor of Insect Physiology and Toxicology  
1999 Paul A. Dahm Memorial Lecturer, Iowa State University  
1997 Orkin Award for Research Excellence  
1996 Prominent Achievement Award from the Pesticide Science Society of Japan  
1992-93 Merck Postdoctoral Fellowship Support Award  
1992 University of California-Riverside Outstanding Young Alumnus  
1985 John Henry Comstock Award from the Entomological Society of America  
1984 Sigma Xi Grant-in-Aid of Research  
1984 Chancellor Patent Fund Research Grant, UC Riverside  
1981 Michigan State University Graduate School Scholarship  
1977-79 Grand Rapids Junior College Scholarship

#### Sabbaticals

January-June 2014. Bioinformatics and biology of muscoid flies - University of Florida, Gainesville, FL.

#### Membership in Professional Societies

American Association for the Advancement of Science (1985-present)  
American Chemical Society (1982-present)  
Entomological Society of America (1981-present)  
Fellow of the Atkinson Center for a Sustainable Future (2011-present)  
Pesticide Science Society of Japan (1986-present)

#### Symposia and Programs Organized (since 2000)

Duplications, Deletions, and Other Mutations: Deciphering the Molecular Basis of Insecticide Resistance, Intern. Cong. Entomol. Orlando, FL 2016 (with R. Nauen)  
Fifty Years of Research and Mentoring: Symposium in Honor of the Life and Career of Professor Fumio Matsumura, National Amer. Chem. Soc. Meetings, San Francisco, CA, 2014 (with J. M. Clark, I. Yamaguchi and K. Tanaka)  
International Congress of Entomology, Scientific Committee, 2013-2016  
RNAi: The Power, the Promise and the Frustration, Program Symposia, National ESA meetings, Knoxville, TN Nov. 2012.

International Scientific Organizing Committee for 11<sup>th</sup> IUPAC Intern. Cong. Pestic.Chem., Kobe, Japan August 6-11, 2006)

International Scientific Organizing Committee for 7<sup>th</sup> International Symposium on P450 Biodiversity and Biotechnology, Awaji-Yumebutai, Hoogo, Japan, August 1-5, 2004.

International Award for Research in Agrochemicals. National Amer. Chem. Soc. Meetings, San Francisco, CA, 2000 (with D. DeVries).

#### Teaching Experience (At Cornell University)

*Insecticide Toxicology* (3-4 Cr.)- 1987, 1989, 1991, 1993, 1995, 1999, 2003, 2005, 2008, 2015.

*Pesticides, the Environment and Human Health* (2 Cr.)- '87, 1988-2014 (even years only).

*Insect Pest Management for Practitioners* (Guest Lecture) 2011.

*Integrated Pest Management* (Guest Lecture) 1998-2000, 2002-13, 2015.

*Principles of Neurobiology* (Guest lectures) - 1991-92, 1994, 1996-2003, 2005-2008, 2013, 2015.

*Alien Empire* (Guest lecture) – 2002, 2007.

*Evolution in Toxic Environments* (BioGD 780) 2006.

*Problems in Genetics and Development* (BIOMG 7810; Guest lecture) 2013

Current Topics in Genetics and Development (BIOMG 7810) 2015

#### Research Supervision and Collaboration

##### Ph.D Students (Current):

Leticia Smith (started Aug. 2013)

##### Graduate Students (completed):

Kavi, L. A. K. M.S. 2014 (Entomology) Characterization of Imidacloprid Resistance in the House Fly, *Musca domestica*. Graduate Studies, Ohio University.

Rinkevich, F. D. Ph.D. 2012 (Entomology) The Role of Post-transcriptional Modification of Nicotinic Acetylcholine Receptor Subunits on the Toxicity of Spinosad and Imidacloprid. Postdoc, Louisiana State Univ.

Lin, G. G.-H. Ph.D. 2010 (Entomology) Understanding *CYP6D1* Transcription: Implications for Xenobiotic Induction and Insecticide Resistance. Dow AgroSciences, Taiwan.

Hardstone, M. C. Ph.D. 2009 (Entomology) Cytochrome P450 Monooxygenase-Mediated Resistance in the Southern House Mosquito: Characterization, Genetics and Fitness. Associate Public Health Biologist, California Department of Public Health, Richmond, CA.

Hamm, R. L. Ph.D. 2008 (Entomology) Exploring the Population Genetics of the House Fly Sex Determining Genes, *M* And *F*. Dow AgroSciences.

#### Research Supervision and Collaboration (continued)

Korytko, P.J. Ph.D. 2000. (Environmental Toxicology), Ectopic Expression and Activity of a House Fly Cytochrome P450, CYP6D1, in *Drosophila melanogaster*. Independent toxicology consultant, Seattle, WA.

Korytko, P.J. M.S. 1997. (Environmental Toxicology), CYP6D1 Protects Thoracic Ganglia of House Flies from the Neurotoxic Insecticide Cypermethrin.

Liu, N. Ph.D. 1995. (Entomology), Molecular Genetics of P450 Monooxygenase-Mediated Pyrethroid Resistance in the House Fly, *Musca domestica*. Professor, Auburn Univ.

Dong, K. Ph.D. 1993. (Entomology), Molecular Mechanism of Knockdown (*kdr*)-Type Resistance to Pyrethroid Insecticides in the German Cockroach (*Blattella germanica* L.). Professor, Michigan State Univ.

- Lee, S.S.T. Ph.D. 1992. (Environmental Toxicology), Phenobarbital Induction of Microsomal Cytochrome P450 Monooxygenases in Insecticide Susceptible and Resistant Strains of House Fly *Musca domestica* L. Professor, The Chinese University of Hong Kong.
- Wheelock, G.D. Ph.D. 1991. (Environmental Toxicology), Purification and Characterization of a Cytochrome P450 from the House Fly and its Role in Insecticide Resistance. Vybion Inc. Ithaca NY, Deceased.

#### Undergraduate Honor Theses (since 2007)

- Davey, T. Biology - Microbiology (BS, Honors) – 2016
- Tong, Khanh Phuong – Nutrition (BS, Honors) – 2015
- Aberegg, L. Computational Biology (BS, High Honors) – 2013 (OH State Med School)
- Harris, S. – Biology – (BS, High Honors) – 2010 (Cornell Univ. Grad School)
- Su, Cathy – NB&B – (BS, High Honors) – 2010 (Harvard Univ. Grad School)
- Lazo, Tomas – NB&B - (BS, Honors) – 2008 (Stoney Brook Med School)
- Deacutis, J. - Entomology – (BS, Honors) – 2007 (Univ. of KY Grad School)

#### Minor Students (Co-chair or committee member)

##### Current Advisees;

Centrella, M. Entomology PhD – 2013 - present

##### Past Advisees;

Hoose, W. M.S. Entomology - 2007

Ramsey, J. Ph.D. Plant Biology - 2010

Russell, C. Ph.D. Entomology - 2013

Song, Xiaozhao Ph.D. Entomology – 2014

Schwartzbord, Jeremy Ph.D. Environmental Toxicology - 2015

Zhang, X. M.S. Entomology - 2007

#### Postdoctoral Research Associates:

Kozaki, T., 2004-2006      Gao, J.-R., 2004-2007      Scott, I, 2006-2007

#### Visiting Scientists:

Kasai, S. 2013-present

#### Undergraduate Students (Research Projects):

Kimmelblatt, B. 2005-2006	Deacutis, J. 2004-2007
Lazo, T. 2007-2008	Xiao, X. 2008-09
Harris, S. 2008-2010	Su, C. 2007-2010
Aberegg, Lauren 2011-2013	Khanh Phuong Tong 2013-2015
Davey, Taira 2015- present	Tyagi, Rakshit 2015-present

#### Membership in Graduate Fields

Entomology (1986-present)

Environmental Toxicology (1986-present)

Genetics and Development (2000-present)

#### Patent

U.S. Patent No. 5,734,086; Cytochrome P450<sub>Ipr</sub> Gene Technology, Scott, J.G. and Tomita, T., March 31, 1998.

Extramural Support Received

S1060 Multistate Project – “Detection and Monitoring of Neonicotinoid and Spinosyn Resistance in House Flies” (2013-2016) \$90,000.  
Hatch – “Insecticide Resistance Management of House Flies at Animal Production Facilities” (2012-2016) \$107,000.  
Atkinson Center for a Sustainable Future (ACSF) Academic Venture Fund - Developing Species-Specific and Environmentally Friendly Insect Control (2012-15) \$99,873  
Bayer – Characterization of the target site(s) of imidacloprid (2011) \$29,378  
Landis International – “Identification of the Mechanism of Action of a Novel Insecticide” (2010-2013) \$232,987  
Faculty Fellows-in-Service grant (2009) for Insectapalooza 2009 (Linda Rayor Co-PI) \$2000  
Dow AgroSciences – Resistance to spinosad in diamondback moth (2008-13) \$130,850  
Dow AgroSciences – Cross-resistance to spinosad (2008-11) \$2750  
S1030 Multistate Project – Flies Impacting Livestock, Poultry and Food Safety (2008-2012) \$60,000  
Dow AgroSciences – Spinosad resistance in house fly (2008-11) \$24,000  
Hatch – Detection, Characterization and Monitoring of Neonicotinoid Insecticide Resistance in the House fly, *Musca domestica* (2007-2011) \$60,000

In addition, over \$397,000 in corporate support has been received.

Academic and Professional Service:

Boyce Thompson Institute;  
Promotion committee (2014)  
College of Agriculture and Life Sciences Committees;  
Administrative Support (2010-11)  
Admissions and Financial Aid (2000 - 2003; Chair 2003)  
Ad Hoc Promotion Review 1994, 1999 (Chair), 2004, 2016 (Chair)  
Mann Library (2005-2008)  
Policy Board (1997-1998)  
Chair 2006-2013, Department of Entomology; (Acting Chair, Aug.-Sept. 1995)  
Cornell University Committees;  
Center for Teaching Excellence Advisory Board (2012-2015)  
Cornell Teaching Partnership Program (2014-present)  
Faculty Advisory Committee on Athletics and Physical Education (2009-2012)  
Freshman Reading Project, (2008-09)  
Proteomics Advisory Board (2002-2012)  
Proteomics Core Facility, Acting Director, (2006)  
Transportation Hearing and Appeals Board (1996-1998)  
University Senate (1995-1997)  
Director of Graduate Studies, Field of Entomology (1995-1998, 2005-2007)  
Director (Acting) of the Institute for Comparative and Environmental Toxicology (Feb.-Aug. 2002)  
Graduate Field Representative, Acting (Summer 1988, 1990, 1991)  
  
Cornell Department of Entomology Committees;  
Ad Hoc Committee on SIP Recommendations (2005)  
Admissions (1986-1989, 1994-1998, 2005-2007)  
Awards and Nominations (1986-1989, 2006-2009; Chair 2000-2003)  
BTI - Entomology Task Force, Chair (1990-1991)  
Computer Facilities (2001-2007)

Curriculum and Teaching (1990-1993, Acting Chair 1991, Chair 1992-1993)  
Director of Undergraduate Studies 2016-  
Endowed Funds (1990-1991)  
Executive Committee (1989-1998, 2007-2013, 2016)  
Foreign Language, Chair (1988-1992)  
Fund Raising, Chair (1999-2000)  
Future Research Directions and Needs, Chair (1988-1989)  
Griswold Fund (1987), Chair (1988)  
Insect Genomics Search Committee, Chair (1998-2003)  
Insect Physiology Search Committee, Chair (1989-1991)  
Insectapalooza Organizing Committee (2007-2012)  
Jugatae Advisor (1987-1989)  
Lazzaro Mentoring Committee, Chair (2003-2007)  
Library Committee (2003-2007)  
Medical Entomology Search Committee (1998)  
Patton Lectureship Committee, Chair (2002-2008)  
Physiology Lectureship Search Committee, Chair (1989)  
Radiation Zone Supervisor (1988-2010)  
Rawlins Endowment (2007-2009)  
Sarkaria Institute Director (2007-present)  
Sarkaria Professor Search Committee, Chair (2005-2007)  
Staffing (1988-1991)

Cornell Field of Environmental Toxicology Committees:

Seminar Series, Chair (1988-1989)  
ICET Steering Committee (1988-1991)  
Curriculum Committee, Chair (1990-1993)  
Admissions Committee (2001-4), Chair (2002-4)

USDA Committees:

Secretary NE-166 (1989-90)  
Chairman NE-166 (1991)

Editorial Board for Pesticide Biochemistry and Physiology (1997-present)  
Editorial Board for Insect Molecular Biology (2008-2016)  
Editorial Board for Insect Biochemistry and Molecular Biology (2001-2007)  
Editorial Board for Journal of Environmental Science and Health, Part B (2007-2009)

Entomological Society of America (since 2008):

Poster judge at National Meetings 2007-9  
Poster judge at ESA Eastern Branch Meetings 2009  
Student oral presentations competition judge at ESA Eastern Branch Meetings 2012  
Section Vice-President Elect of Integrative Physiological and Molecular Insect Systems (2008)  
Section Vice-President of Integrative Physiological and Molecular Insect Systems (2009)  
Section President of Integrative Physiological and Molecular Insect Systems (2010)  
ESA Fellows selection committee 2013-2016

International Congress of Entomology Co-Convener for section on Physiology and Biochemistry  
2013-2016

## Review of Grants and Other:

Agence Nationale Recherche 2011-12, 2015  
BARD 1999-2000  
Consortium for Plant Biotechnology Research 2008, 2011  
Cornell University Undergraduate Research Theses (1988, 1990, 1995, 1997, 2003, 2006-2010)  
Elsevier (book proposal review) 2013  
EPA 2002  
FNIH – Gates Foundation Grand Challenges 2003  
FNIH – Grand Challenges in Global Health VCTR 2011 (Panel Manager and Reviewer)  
Hatch 1988-2011 (Cornell & Texas A&M)  
Military Infectious Diseases Research Program 2015  
National Research Agency (France) 2011, 2016 (AgreenSkills)  
NIH Ad Hoc Review Panel for TMP Study Section 1994-96, 1998-2001  
NSF External Reviewer 1995, 1997  
Rackham Foundation 1998  
University (not Cornell) Faculty Promotions 2009(2)  
Undergraduate research theses 2011-13, 2015 (2)  
USDA Competitive Grants Review Panel 1992, 1995, 2005, 2006 (Panel Manager)  
USDA External Reviewer 1990-91, 93-94, 96-99, 2007, 2011  
Welcome Trust 1996-97

## Review of Manuscripts (since 2000):

Amer. Chem. Soc. Symp. Ser. 2000  
Anal. Biochem. 2000  
Arch. Ins. Biochem. Physiol. 2002, 2007-09  
Biochimica et Biophysica Acta 2002  
BMC Genomics 2006, 2014  
Bull. Entomo. Res. 2006  
Chem. Res. Toxicol. 2009  
Comp. Biochem. Physiol. 2012  
Crop Protection 2000  
DNA Sequence 2004  
FEBS J. 2005, 2009  
Florida Entomologist 2014  
Gene 2002-03, 2007  
Heredity 2012  
Insect Biochem. Molec. Biol. 1996-2007  
Insect Molec. Biol. 2000-2007, 2008 (3), 2009 (6), 2010 (4), 2011, 2012(2), 2013, 2014, 2015(2)  
Insect Science 2009, 2012  
J. Agric. Food Chem. 2003, 2015, 2016  
J. Amer. Mosq. Cont. Assoc. 2007, 2009  
J. Biochem. Molec. Toxicol. 2000, 2003  
J. Biol. Chem. 2006  
J. Econ. Entomol. 1995-2001, 2003, 2006 (2), 2009, 2013, 2015  
J. Heredity 2000, 2007  
J. Insect Sci. 2009, 2010  
J. Med. Entomol. 2003-2006, 2008, 2011-13, 2015

J. Neurochem. 2012  
J. Neurosci. Res. 2006  
J. Vector Ecol. 2005  
Malaria J. 2014  
Molec. Gen. Genom. 2006  
Neurotoxicology 2015  
Pest Man. Sci. 2001-02, 2005, 2008, 2010 (2), 2011, 2013, 2014 (2), 2015 (3), 2016  
Pestic. Biochem. Physiol. 1985-2006, 2007 (2), 2008 (3), 2009 (3), 2010, 2011 (2), 2012, 2013  
(2), 2014 (4), 2015 (2)  
PLoS One 2015  
Philosophical Transactions of the Royal Society B, Biological Sciences. 2012  
Proc. 2006 IUPAC Mtg. 2006 (2)  
Proc. Natl. Acad. Sci. 2002, 2004-05, 2007-08, 2010-11, 2013-14  
Proteomics 2004  
Science 2004

#### Undergraduate advisees (since 2006)

Brandon Woo 2015-present  
Samantha Rose 2014 – 15  
Bick, Emily '13  
Weibman, Susan '12  
Schintzius, Robert '10  
Green, Amy '10  
Deacutis, Juliane '07  
Harris, Robin '06

#### Media (since 2008)

Phone interview for ScienceNow 4-8-2008  
Phone interview for New Scientist 11-2014 (<http://www.newscientist.com/article/mg22530030.300-im-tapping-the-houseflys-genome-to-fight-disease.html#.VNo697Eo6Uk>)  
Interview with Cornell Chronicle 10-2014 <http://www.news.cornell.edu/stories/2014/10/house-fly-genome-reveals-expanded-immune-system>  
Interview with BioMed Central 10-2014  
Flash interview at ESA national meeting 11-2014  
Interview with Cornell Chronicle 6-2015  
Consultant to Genetic Expert News Service 8-2015 (<http://geneticexperts.org/monsanto-is-developing-genetic-sprays-using-rnai-to-combat-pests-and-enhance-crops/>)  
Interviewed by Australian Broadcasting Co. (Clint Jasper 8-20-2015, <http://www.abc.net.au/news/2015-09-04/rna-interference-technology/6748060>)  
Interviewed by Westdeutscher Rundfunk (German public radio) Volkart Wildermuth 8-21-2015)  
Interviewed by Capital Press (John O'Connell, 9-10-2015)  
Interviewed by Quartz (Frida Garza, 9-16-2015)  
Interviewed by CNN about DDT use for *Aedes* control (Ray Sanchez, 2-1-2016)  
<http://www.cnn.com/2016/02/04/health/zika-virus-ddt-what-you-need-to-know/index.html>  
Phone Interview for St. Louis Post-Dispatch about RNAi for pest control (Jacob Barker, 6-21-2016)

#### Consulting (since 2007)

Entrix (Ecological Risk Assessment) 2007-2010  
FMC 2009-2011



Development Courses (since 2008)

Effective Interaction in Organizations for Chairs and Directors July 11-13, 2012.

Developing Effective Communication Skills, Cornell ILR School, July 19-20, 2010.

**LIST OF PUBLICATIONS****Refereed Publications:***In Press or Submitted:*

- Meisel, R. P., Davey, T., Son, J. H., Gerry, A. C., Shono T. and Scott, J. G. 2016. Evolutionarily stable multifactorial sex determination in the house fly, *Musca domestica* (L.). *J. Heredity* (Submitted 4-11-2016, Manuscript ID JOH-2016-065).
- Scott, J. G. Evolution of pyrethroid resistance in *Musca domestica*. *Pest Manag. Sci.* (Submitted 3-29-2016; Revised 5-25-2016; accepted 5-26-2016).
- Smith, L. B., Kasai, S. and Scott, J. G. 2016. Pyrethroid resistance in *Aedes aegypti* and *Aedes albopictus*: important mosquito vectors of human diseases. *Pestic. Biochem. Physiol.* (Submitted 1-16-2016; revised 3-10-2016; accepted 3-14-2016; Proofs returned 4-6-2016).
185. Sun, H., Tong, K.P., Kasai, S. and Scott, J. G. 2016. Overcoming *super-kdr* mediated resistance: Multi-halogenated benzyl pyrethroids are more toxic to *super-kdr* than *kdr* house flies. *Insect Molec. Biol.* 25: 126-137.
184. San Miguel, K., and Scott, J. G. 2016. The next generation of insecticides: dsRNA is stable as a foliar applied insecticide. *Pest Manag. Sci.*72: 801-809.
183. Meisel, R. M., Scott, J. G. and Clark, A. G. 2015. Transcriptome differences between alternative sex determining genotypes in the house fly, *Musca domestica*. *Genome Biol. Evol.* 7: 2051-2061.
182. Scott, J. G., Yoshimizu, M. H. and Kasai, S. 2015. Pyrethroid resistance in *Culex pipiens* mosquitoes. *Pestic. Biochem. Physiol.* 120: 68-76.
181. Hamm, R. L., Meisel, R. P. and Scott, J. G. 2015. The evolving puzzle of autosomal versus Y-linked male determination in *Musca domestica*. *G3* 5: 371-384.
180. Scott, J. G., Warren, W. C., Beukeboom, L. W., Bopp, D., Clark, A. G., Giers, S. D., Hediger, M., Jones, A. K., Kasai, S., Leichter, C. A., Li, M., Meisel, R. P., Minx, P., Murphy, T. D., Nelson, D. R., Reid, W. R., Rinkevich, F. D., Robertson, H. M., Sackton, T. B., Sattelle, D. B., Thibaud-Nissen, F., [Tomlinson, C.](#), van de Zande, L., Walden, K. K. O., Wilson, R. K. and Liu, N. 2014. Genome of the house fly (*Musca domestica* L), a global vector of diseases with adaptations to a septic environment. *Genome Biol.* 15: 466.
179. Højland, D. H., Scott, J. G., Jensen, K.-M. V. and Kristensen, M. 2014. Autosomal male determination in a spinosad-resistant house fly strain from Denmark. *Pest Manag. Sci.* 70: 114-117.
178. Hou, W., Liu, Q., Wu, Q., Zhang, Y., Xie, W., Wang, S., San Miguel, K., Funderburk, J. and Scott, J. G. 2014. The  $\alpha 6$  nicotinic acetylcholine receptor subunit of *Frankliniella occidentalis* is not involved in resistance to spinosad. *Pestic. Biochem. Physiol.* 111: 60-67.
177. Kavi, L. A. K., Kaufman, P. E. and Scott, J. G. 2014. Genetics and mechanisms of imidacloprid resistance in house flies. *Pestic. Biochem. Physiol.* 109:64-69.

176. Li, M., Reid, W. R., Zhang, L., Scott, J. G., Gao, X., Kristensen, M., and Liu, N. 2013. A whole transcriptomal linkage analysis of gene co-regulation in insecticide resistant house flies, *Musca domestica*. BMC Genomics 14: 803.
175. Scott, J. G., Leichter, C. A., Rinkevich, F. D., Harris, S. A., Su, C., Aberegg, L. C. Roger Moon, R., Geden, C. J., Gerry, A. C., Taylor, D., Byford, R. L., Watson, W., Johnson, G., Boxler, D. and Zurek, L. 2013. Insecticide resistance in house flies from the United States: Resistance levels and frequency of pyrethroid resistance alleles. Pestic. Biochem. Physiol. 107: 377-384.
174. Scott, J. G., Michel, K., Bartholomay, L., Siegfried, B. D., Hunter, W. B., Smagghe, G., Zhu, K. Y. and Douglas, A. E. 2013. Towards the elements of successful insect RNAi. J. Insect Physiol. 59: 1212-1221.
173. Leichter, C. A., Thompson, N., Johnson, B. R. and Scott, J. G. 2013. The high potency of ME-5343 to aphids is due to a unique mechanism of action. Pestic. Biochem. Physiol. 107: 169-176.
172. Rinkevich, F. D., Leichter, C. A., Lazo, T. A., Hardstone, M. C. and Scott, J. G. 2013. Variable fitness costs for pyrethroid resistance alleles in the house fly, *Musca domestica*, in the absence of insecticide pressure. Pestic. Biochem. Physiol. 105: 161-168.
171. Rodrigues, A. R. S., Ruberson, J. R., Torres, J. B., Siqueira, H. A. A. and Scott, J. G. 2013. Pyrethroid resistance and its inheritance in a field population of *Hippodamia convergens* (Guérin-Ménéville) (Coleoptera: Coccinellidae). Pestic. Biochem. Physiol. 105: 135-143.
170. Rinkevich, F. D. and Scott, J. G. 2013. Limitations of RNAi of  $\alpha 6$  nicotinic acetylcholine receptor subunits for assessing the *in vivo* sensitivity to spinosad. Insect Sci. 20: 101-108.
169. Rinkevich, F. D., Hedtke, S. M., Leichter, C. A., Harris, S. A., Su, C., Brady, S. G., Taskin, V., Qiu, X. and Scott, J. G. 2012. Multiple origins of *kdr-type* resistance in the house fly, *Musca domestica*. PLOS One 7:e52761.
168. Gao, Q., Li, M., Sheng, C., Scott, J. G. and Qiu, X. 2012. Multiple cytochrome P450s overexpressed in pyrethroid resistant house flies (*Musca domestica*). Pestic. Biochem. Physiol. 104: 252-260.
167. Rinkevich, F. D., Su, C., Lazo, T. A., Hawthorne, D. J., Tingey, W. M., Naimov, S. and Scott, J. G. 2012. Multiple evolutionary origins of knockdown resistance (*kdr*) in pyrethroid-resistant Colorado potato beetle, *Leptinotarsa decemlineata*. Pestic. Biochem Physiol. 104: 192-200.
166. Rinkevich, F. D. and Scott, J. G. 2012. Reduction of *dADAR* affects the sensitivity of spinosad and imidacloprid to *Drosophila melanogaster* Pestic. Biochem. Physiol. 104: 163-169.
165. Rinkevich, F. D., Schweitzer, P. A. and Scott, J. G. 2012. Antisense sequencing improves the accuracy and precision of A-to-I editing measurements using the peak height ratio method. BMC Res. Notes. 5:63.
164. Wang, Q., Li, M., Pan, J., Di, M., Liu, Q., Meng, F., Scott, J. G. and Qiu, X. 2012. Diversity and frequencies of genetic mutations involved in insecticide resistance in field populations of the house fly (*Musca domestica* L.) from China. Pestic. Biochem. Physiol. 102: 153-159.
163. Lin, G. G.-H. and Scott, J. G. 2011. Investigations of the constitutive overexpression of *CYP6D1* in the permethrin resistant LPR strain of house fly (*Musca domestica*). Pestic. Biochem. Physiol. 100: 130-134.
162. Lin, G. G.-H., Kozaki, T. and Scott, J. G. 2011. Hormone receptor-like in 96 and broad-complex modulate phenobarbital induced transcription of cytochrome P450 *CYP6D1* in *Drosophila* S2 cells. Insect Molec. Biol. 20:87-95.
161. Rinkevich, F. D., Chen, M., Shelton, A. M. and Scott, J. G. 2010. Transcripts of the nicotinic acetylcholine receptor subunit gene *Pxyla6* with premature stop codons are associated with spinosad resistance in diamondback moth, *Plutella xylostella*. Invert. Neurosci. 10: 25-33.
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145. Scott, J. G. 2008<sup>a</sup>. Insect Cytochrome P450s: Thinking Beyond Detoxification. In *Recent Advances in Insect Physiology, Toxicology and Molecular Biology*, N. Liu, ed. Research Signpost, Kerala, India. pp 117-124.
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135. Ozoe, Y., Ishikawa, S., Tomiyama, S., Ozoe, F. and Scott, J. G. 2007<sup>b</sup>. Antagonism of the GABA receptor of dieldrin-resistant houseflies by fipronil and its analogues. In *Synthesis and Chemistry of Agrochemicals Series VII*, J. W. Lyga and G. Theodoritis, ed. Amer. Chem Soc., Washington, DC, pp 39-50.
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132. Gao, J. and Scott, J. G. 2006. Role of the transcriptional repressor *mdGfi-1* in *CYP6D1v1*-mediated insecticide resistance in the house fly, *Musca domestica*. *Insect Biochem. Molec. Biol.* 36: 387-395.
131. Rinkevich, F. D., Zhang, L., Hamm, R. L., Brady, S. G., Lazzaro, B. P. and Scott, J. G., 2006. Frequencies of the pyrethroid resistance alleles of *Vssc1* and *CYP6D1* in house flies from the eastern United States. *Insect Molec. Biol.* 15: 157-167.
130. Hardstone, M. C., Baker, S. A., Ewer, J. and Scott, J. G. 2006. Deletion of *Cyp6d4* does not alter toxicity of insecticides to *Drosophila melanogaster* *Pestic. Biochem. Physiol.* 84: 236-242.
129. Paul, A., Harrington, L. C. and Scott, J. G. 2006. Evaluation of novel insecticides for control of the dengue vector, *Aedes aegypti*. *J. Med. Entomol.* 43: 55-60.

<sup>a</sup>Non-refereed invited review

<sup>b</sup>Refereed book chapter

List of other publications available upon request

**OTHER PUBLICATIONS**

52. Ozoe, Y., Ishikawa, S., Tomiyama, S., Ozoe, F., Kozaki, T. Scott, J. G. 2006. The *Rdl* mutation (A299S) does not hinder the binding of fipronil to the housefly GABA receptor. Abstracts IUPAC Intern. Congress on Pestic. Chem., Kobe Japan.
53. Scott, J. G. 2006 The molecular biology and population genetics of pyrethroid resistance. Abstracts IUPAC Intern. Congress on Pestic. Chem., Kobe Japan.
54. Gao, J. and Scott, J. G. 2006. Role of the transcriptional repressor *mdGfi-1* in *CYP6D1v1*-mediated insecticide resistance in the house fly, *Musca domestica*. Abstracts IUPAC Intern. Congress on Pestic. Chem., Kobe Japan.
55. Hirata, K. Scott, J. G., Ozoe, Y. and Matsuda, K. 2007. Actions of spinosyns on insect excitatory and inhibitory ligand-gated ion channels. Abst. Ann Pestic. Sci. Soc. Japan, Tokyo (April).
56. Hardstone, M. C, Lazzaro, B. P. and Scott, J. G. 2008. Fitness of cytochrome P450 monooxygenase-mediated permethrin resistance in the mosquito under three environmental conditions. Abst. Eastern Branch Entomological Society of America Annual meeting.
57. Hamm, R. L. and Scott, J. G. Competition between Y<sup>M</sup> and III<sup>M</sup> makes in the house fly, *Musca domestica* L. 2008. Abst. Eastern Branch Entomological Society of America Annual meeting.
58. Rinkevich, F. D. and Scott, J. G. 2008. RNA-editing and alternative exon usage in nicotinic acetylcholine subunits in *Tribolium castaneum*. Abst. Eastern Branch Entomological Society of America Annual meeting.
59. Day, W. H., Smith, E. H., Hartill, M. L., Patterson, R. S., Ellington, J. J. and Scott, J. G. 2008. W. Arthur Rawlins – Obituary. Amer. Entomol. 54: 126.
60. Scott, J. G., Hardstone, M. C. and Leichter, C. A. 2008. A Synergistic Interaction between the Two Major Mechanisms of Permethrin Resistance in Mosquitoes: Cytochrome P450 Detoxification and *kdr*, Abstract #149, American Chemical Society Annual Meeting, Philadelphia, PA.
61. Scott, J. G., Patton, J. and Douglas, A. E. 2008. Robert L. Patton – Obituary. Amer. Entomol.
62. Day, W. H., Smith, E. H., Hartill, M. L., Patterson, R. S., Ellington, J. J. and Scott, J. G. 2008. W. Arthur Rawlins – Obituary. Amer. Entomol.
63. Muka, A. A., Westcott, L. E. and Scott, J. G. 2009. James E. Dewey – Obituary. Amer. Entomol.
64. Scott, J. G. 2010. Understanding the mechanisms of spinosad resistance in insects. Abstract #255, American Chemical Society Annual Meeting, San Francisco, CA.
65. Smith, R. C. and Scott, J. G. 2012. Edward Holman Smith - Amer. Entomol.
66. Scott, J. G. The evolutionary biology of pesticide resistance, Abstracts of the WAAVP meetings, August 2013, Perth, Australia.
67. Scott, J. G. 2014. Matsumura Method: Discovering insecticide mode of action using insecticide resistant strains, Abstract #Agro14, American Chemical Society Annual Meeting, San Francisco, CA.
68. Leichter, C. A., Thompson, N., Johnson, B. R. and Scott, J. G. 2014. Afidopyropen is highly toxic to aphids via a unique mechanism of action, Abstract #Agro232, American Chemical Society Annual Meeting, San Francisco, CA.
69. \*Scott, J. G. 2014. DDT and the American Century: global Health, Environmental Politics and the Pesticide that Changed the World – Book Review., Amer. Entomol. 60: 250.
70. Scott, J. G. 2015. *Vssc* mutations and insecticide resistance: Understanding the variations, Abstract #Agro128, American Chemical Society Annual Meeting, San Francisco, CA.

**PAPERS PRESENTED**Invited Presentations (since 2006)

2015

“Vssc mutations and insecticide resistance: Understanding the variations” American Chemical Society National Meetings, Boston, MA August 2015.

“Lessons learned from agriculture about insecticide resistance”, Center for Infectious Diseases, Penn State, University Park, MD. September 2015.

Mentoring Faculty Across the Ranks and Performance Evaluation, Office of the Provost, Chair Orientation, Cornell University, January 2015.

2014

“Genome of the house fly (*Musca domestica*), a global vector of diseases with adaptations to a septic environment“, Entomology Society of America National Meetings, Portland, OR Nov. 2014

“The Matsumura method: discovering insecticide mode of action using insecticide resistant strains”, Symposium speaker, IUPAC/ACS Meetings, San Francisco, CA August 2014

“Afidopyropen is highly toxic to aphids via a unique mechanism of action”, Symposium speaker, IUPAC/ACS Meetings, San Francisco, CA August 2014

2013

“The evolution of our understanding of insecticide resistance”, Plenary lecture, Physiology, Biochemistry and Toxicology Section, Entomology Society of America National Meetings, Austin, TX Nov. 2013

“Pyrethroid resistance in the southern house mosquito: Characterization, genetics and fitness”, Entomology Society of America National Meetings, Austin, TX Nov. 2013

“Understanding the target site of, and mechanisms of resistance to, insecticides acting on the nicotinic acetylcholine receptor”, Entomology Society of America National Meetings, Austin, TX Nov. 2013

“The Evolving Puzzle of Insecticide Resistance”, Stockholm-Cornell Symposium on Insect Biology, Cornell Univ., Ithaca, NY Oct. 2013.

“Lessons Learned From the First National Survey of Insecticide Resistance in House Flies”, Auburn University, Auburn, AL Sept. 2013.

“The Evolutionary Biology of Pesticide Resistance”, WAAVP International conference, Perth, Australia. Aug., 2013

“Lessons Learned From the First National Survey of Insecticide Resistance in House Flies”, Michigan State University, East Lansing, MI Aug. 2013.

2012

“The selfish allele: the molecular evolution of insecticide resistance” Symposium speaker, Entomology Society of America National Meetings, Knoxville, TN Nov. 2012

“The mechanisms of resistance to pyrethroid insecticides in mosquitoes and their associated fitness costs”, Department of Entomology, Iowa State University, Ames, IA March 2012

“The mystery of spinosad resistance or how RNA editing nearly drove me mad”, Student selected speaker, Department of Entomology, Iowa State University, Ames, IA March 2012

“The Weird World of Sex Determination in House flies”, Snodgrass and Wigglesworth Undergraduate club, Cornell University, March 2012.

“From Black Board to White Board to PowerPoint and Back Again: 25 years of Experiments with Teaching at Cornell”, Center for Teaching Excellence, Cornell Univ. January 2012

2011

“Molecular mechanisms of pesticide resistance in insects“ Advances in the knowledge of parasite resistance of ruminant hosts and parasites, Embrapa, San Carlos, Brazil, October 2011.

“Have high resolution molecular analyses offered new insights into the evolution of insecticide resistance?” Plenary Lecture, AAVP-LIWC-ISEP Joint Conference, St. Louis, MO July 2011.

“Unraveling the mystery of spinosad resistance in insects”. University of Florida, Department of Entomology, Gainesville, FL, March 2011.

“Future Survival of Entomology: Traditional Departments or Interdisciplinary Groups”. Panel Discussion, Eastern Branch Entomology Society of America National Meetings, Harrisburg, PA March. 2011.

2010

“Population genetics of genes coding for insecticide receptors”. Innovators and Pioneers of Entomological Science Symposium, Entomology Society of America National Meetings, San Diego, CA Dec. 2010.

“Understanding the mechanisms of spinosad resistance in insects”. American Chemical Society Annual Meeting, San Francisco, CA. March 2010.

2009

“Unraveling the mystery of spinosad resistance” Dow AgroSciences, Indianapolis, IN Dec. 2009.

“Evolution of biochemical and molecular mechanisms conferring insecticide resistance” Evolutionary Arms Race Symposium, Entomology Society of America National Meetings, Indianapolis, IN Dec. 2009.

“Understanding spinosad resistance and how RNA editing nearly drove me mad”, Department of Entomology, NYSAES Geneva NY, March 3, 2009

2008

“A Synergistic Interaction between the Two Major Mechanisms of Permethrin Resistance in Mosquitoes: Cytochrome P450 Detoxification and *kdr*, American Chemical Society Annual Meeting, Philadelphia, PA, Aug. 2008.

2007

“The Mystery of Spinosad Resistance in House Flies: Is an altered nicotinic acetylcholine receptor involved?” Student Invited Speaker, Department of Entomology, Texas A&M, College Station, TX, March 2007.

“Evolution and Applied Consequences of *Vssc1* and *CYP6D1* Alleles Conferring Pyrethroid Resistance in *Musca domestica*”, Department of Entomology, Texas A&M, College Station, TX, March 2007.

“Evolution and Applied Consequences of *Vssc1* and *CYP6D1* Alleles Conferring Pyrethroid Resistance in *Musca domestica*”, Featured speaker, USDA-NRI Grant awardee workshop. Ventura, CA Feb. 2007.

2006

“New advances in our understanding of insecticide resistance” Molecular Insect Science Symposium, Entomology Society of America National Meetings, Indianapolis, IN Dec. 2006.

“The Molecular Biology and Population Genetics of Pyrethroid Resistance” (symposium presentation), 11<sup>th</sup> IUPAC International Congress of Pesticide Chemistry, Kobe, Japan, Aug. 2006.

#### Other Presentations

2012

The *Musca domestica* genome and transcriptome analysis in relation to insecticide resistance. M. Kristensen, J. G. Scott, A. G. Clark and N. Liu. International Congress of Entomology, Daegu, Korea, August 2012.

2010

Is *Apis mellifera* more sensitive to insecticides than other insects? Entomol. Soc. Amer. National Meeting, San Diego, Dec. (Poster)

2008

The response of *Trichoplusia ni* Hubner (Lepidoptera: Noctuidae) to induced defenses in tomato *Lycopersicon esculentum* (Solanaceae), I. Scott, J. Thaler, J. G. Scott, Entomology Society of Canada Annual meeting, October.

Insect Cytochrome P450s: Thinking Beyond Detoxification, J. G. Scott, Eastern Branch Entomological Society of America Annual meeting, Syracuse, NY March.

2006

The binding site of noncompetitive GABA receptor antagonists. Y. Ozoe, K. Hisano, F. Ozoe, J. G. Scott, Frontiers in Molecular Neurotoxicology, Nara, Japan, August.