

## *CURRICULUM VITAE*

William A. Donahue, Jr., Ph.D.

### **Expertise:**

Research and product development of new or novel pesticides and/or formulations and devices for the control of pests in the areas of urban, medical, veterinary, vector and specialty products entomology. Specialties include; experimental design, protocol development and consulting in the conduct of efficacy studies to be used for scientific and/or regulatory support in the U.S. and internationally for a diverse client base. Laboratory and field research on an independent contract basis which can be conducted under U.S. EPA guidelines (40 CFR Part 160 - FIFRA) for Good Laboratory Practice (GLP) Standards as well as non-GLP and basic applied research. One area of specialized research is on flea and tick control products for use on companion animals with emphasis on insect growth regulators (IGR) and insecticide combinations. Other areas of research expertise is in livestock and urban entomology as it pertains to new product development.

### **Employment History:**

1994 – Present – President/Laboratory Director, Contract Research & QAU - Sierra Research Laboratories, Inc., Modesto, CA

2000 – 2004 - Adjunct Faculty at Modesto Jr. College. Teach Courses in Integrated Pest Management and Pesticide Applications. Agriculture Department Advisory Committee Member and Guest Lecturer (currently).

1992-93 – Research Assistant, Texas A&M University, College Station, TX

1987-92 – Sr. Research Scientist, Zoecon/Sandoz Corporation, Dallas, TX

1982-86 – Manager Pet Product Development, Zoecon Industries, Dallas, TX

1979-82 – Formulations Biologist, Zoecon Corporation, Palo Alto, CA

1978 – Pest Control Technician, Higdon Pest Control, Cupertino, CA (summer intern)

1974-78 – Veterinary Assistant, Saratoga Pet Clinic, Saratoga, CA

## **Consulting History:**

Acted as an advisor/consultant for clients regarding entomology litigation issues (non-trial or deposition), media interactions (print, television, and radio), research programs, product development and regulatory issues involving pesticide development and project management. 1983 to Present.

## **Litigation Support Experience:**

2007 - Client: Carr & Farrel, LLP – Palo Alto, CA. Case: Spalding Laboratories, Inc. vs. Arizona Biological Control dba ARBICO Organics. Project: Expert witness for a case involving parasitic wasps and house flies in horse operations. QC experimentation (contract research) for Spalding Laboratories, Inc.

2013 - 2014 - Client: Clapp, Moroney, Bellagamba, Vucinich, Beeman, Scheley: A Professional Law Corporation - Pleasanton, CA. Case: Christina Acoba, et al. vs. Olivera Egg Ranch, LLC, et al. Project: Expert witness for a case involving nuisance flies and odors from the egg ranch as per neighbor complaints.

Client: Silicon Valley Expert Witness Group, Inc. – Retained as an expert witness in the field of entomology.

## **Patents:**

Pesticide Microemulsion Formulation, United States Patent Number 5,612,047, March 18, 1997, Inventors: Duffy; Eric P. (Farmers Branch, TX); McDaniel, Jr.; Joe D. (Carrollton, TX); Donahue; William A. (Dallas, TX).

## **Awards:**

Livestock Insect Workers Conference - Industry Appreciation Award June 24, 2014 - 58th Annual Meeting San Diego, CA

## **Education:**

1993 – Ph.D. Entomology, Texas A&M University.

1978 – B. A. Biological Science, San Jose State University

## **Professional Training:**

Strategy of Experimentation  
DuPont Seminar – July 1986

Application of GLP to Field Studies – Feb. 27-28, 1992,  
International Center for Health and Environmental  
Education, Alexandria, VA

California Pesticide Regulations Course, Western  
Agriculture Chemicals Association, Sacramento, CA  
August, 1994, 1995, 1999.

Zoecon Corporation in-house training – various courses  
on GLP training, statistics, media presentations and  
training seminars, 1982-1992.

Qualified Applicators License, State of California,  
Department of Pesticide Regulation, # QAL 104062 –  
Demonstration and Research.

Good Clinical Practice – Achieving Quality and  
Compliance at the Clinical Study Site – SQA. 28-29 April  
2003, Seattle, WA

SQA 2004 Annual Meeting – Reno NV – FDA & EPA  
GLP Training, 9 Sessions

USDA Laboratory Animal Research Facility, 2005 -  
Present, Certificate # 93-R-0557

Professional Meetings – Annual

GLP (EPA) Training – 09 March 2009 – Modesto, CA –  
MK Consulting

SQA Symposia, San Jose, CA – October 11-12, 2010 –  
Achieving Consistency in GLP Inspections and Common  
Regulatory Interpretations.

Western Plant Health Association 2014 Summer  
Regulatory Conference, Sacramento, CA, July 30-31, 2014.

GLP (EPA) Training – 06 June 2018, Modesto, CA by MK  
Consulting

Western Plant Health Association 2014 Summer  
Regulatory Conference, Sacramento, CA, July 25-26, 2018.

### **Professional Associations:**

Entomological Society of America

Society for Vector Ecology

American Association of Veterinary Parasitology

American Mosquito Control Association

Society for Quality Assurance

Pesticide Applicators Professional Association

Pi Chi Omega – The National Professional Pest  
Management Fraternity

### **Publications:**

Staal, Gerardus B., Clive A. Henrick, David L. Grant, David W. Moss, Michael C. Johnston, Robin R. Rudolph, and William A. Donahue. 1985. Cockroach Control with Juvenoids. American Chemical Society Symposium Series No. 276. Bioregulators for Pest Control

Garg, Ramesh C. and William A. Donahue. 1989. Pharmacological Profile of Methoprene, an Insect Growth Regulator, in Cattle, Dogs, and Cats. JAVMA, Vol. 194, No. 3

Donahue, William A., Douglas N. VanGundy, William C. Satterfield, and Lezlee G. Coghlan. 1989. Solving a Tough Problem (Cockroaches/IGR's). Pest Control 57(8):46, 47, 50

Donahue, Bill. 1990. The Resilient Flea, A Researcher's Perspective. Veterinary Forum, July pp. 53

Donahue, William A., Kraig A. Stemme. 1992. Integrated Pest Management for Flea Control. Veterinary Technician, Vol. 13, No. 4, May 1992, Pg. 279

Donahue, William A. & Robert Young. 1992. Evaluating A synergized pyrethrin/(S)-methoprene spray against feline flea infestations. Vet. Med. 87:999-1007.

Teel, P. D., W. A. Donahue, O.F. Strey & R. W. Meola, 1996. J. Med. Entomol, 33, 5:721-725. Effects of pyriproxyfen on engorged females and newly oviposited eggs of the lone star tick, *Amblyomma americanum* (Acari: Ixodidae).

Donahue, W. A. & R. Young, 1996. Vet. Med., Vol. 91, No. 11., pp. 1,000-1,005. Evaluation of a 1% and 2% (S)-methoprene collar against the hatch of cat flea eggs when worn by dogs and cats.

Donahue, W. A., P. D. Teel, O.F. Strey & R. W. Meola. 1997, J. Med. Entomol. 34(2):206-211. Pyriproxyfen effects on newly engorged larvae and nymphs of the lone star tick, *Amblyomma americanum* (Acari: Ixodidae).

Teel, Pete D., Sidney W. Hopkins, William A. Donahue, and Otto F. Strey. 1998. J. Med Entomol, 35, 4:483-488. Population Dynamics of Immature *Amblyomma maculatum* (Acari: Ixodidae) and Other Ectoparasites on Meadowlarks and Northern Bobwhite Quail to the Costal Prairie of Texas.

Donahue Jr., William A., A.T. Showler, M.W. Donahue, B.E. Vinson, L. Hui and W.L.A. Osbrink. 2015 Biopesticides International, 11(2): 108-117. Knockdown and Lethal Effects of Eight Commercial Nonconventional and Two Pyrethroid Insecticides against Moderately Permethrin-resistant Adult Bed Bugs, *Cimex lectularius* (L.) (Hemiptera: Cimicidae)

William A. Donahue, Jr., Allan T. Showler, Michael W. Donahue, Bret E. Vinson and Weste L.A. Osbrink 2017 *Journal of Economic Entomology*, Volume 110, Issue 2, 1 April 2017, Pages 776–782 Lethal Effects of the Insect Growth Regulator Cyromazine Against Three Species of Filth Flies, *Musca domestica*, *Stomoxys calcitrans*, and *Fannia canicularis* (Diptera: Muscidae) in Cattle, Swine, and Chicken Manure

SRL Scientific Reports 1994 - Present: GLP & Non-GLP Studies - Approximately  $\pm 700$ , many submitted to US EPA and other regulatory agencies designed for product registrations and marketing claims for numerous clients.

## **Presentations:**

University of Kentucky 1988 Fumigation Short Course. February 15-16. Fitting Insect Growth Regulators into Stored Product Pest Management.

XVIII International Congress of Entomology. Vancouver, B.C. Canada. July 3 – 9, 1988. Bioassay techniques for the evaluation of insecticides used in the control of *Ctenocephalides felis* Bouche’.

E.S.A. Annual Meeting. San Antonio, TX. Dec. 10-14, 1989. A comparison of the Ovicidal activity of (S)-methoprene against *Ctenocephalides felis* *in vivo* and *in vitro*.

National Conference on Urban Entomology. Feb. 25-28, 1990. A comparison of the ovicidal effect of (S)-methoprene against *C. felis* *in vivo* and *in vitro*.

1<sup>st</sup> Symposium on Ectoparasites of Pets. Moderator: Current Status and Recent Advances in Rearing, Summary and Meeting Wrap-up. Lexington, KY. June 17-19, 1991.

E.S.A. Annual Meeting. Reno, Nevada. Dec. 8-11, 1991. An evaluation of a synergized pyrethrin/methoprene pet pump spray against infestations of *C. felis* on cats.

42<sup>nd</sup> Annual North Carolina Pest Control Technicians School. Jan. 21-23, 1992. Principles on Flea Control and Resistance Management.

Grayson County C.E.U. Conference, Sherman, TX, 1-12-93, Insecticide Resistance and Resistance Management.

Second International Symposium on Ectoparasites of Pets, Lexington, KY. April 4-6, 1993. Evaluation of Lufenuron, SAN-1259I and (S)-methoprene for systemic ovicidal activity in the cat flea using an artificial membrane feeding system. Presented the Meeting Wrap-up.

American Association of Veterinary Parasitologist, 38<sup>th</sup> Annual Meeting July 17-20, 1993. Minneapolis, MN Evaluation of a 1% and 2% (S)-methoprene collar against the hatch of cat flea eggs when worn by dogs and cats.

E.S.A. Annual Meeting Indianapolis, IN, Dec. 12-16, 1993. Effects of pyriproxyfen on different stages of the lone star tick, *Amblyomma americanum*.

Memphis Pest Management Conference. Jan. 23-26, 1994. Fleas: A Research Update.

National Conference on Urban Entomology, Atlanta, GA. Feb. 20-22, 1994. Effects of pyriproxyfen on different stages of the lone star tick *Amblyomma americanum*.

Veterinary Pharmacology in the Pharmaceutical Industry, Ninth Biennial Symposium, Kalamazoo, MI June 16-18, 1994. Ectoparasiticides.

American Association of Veterinary Parasitologist, 39<sup>th</sup> Annual Meeting July 9-12, 1994 San Francisco, CA. Evaluation of Adulticidal/Ovicidal Activity of a (S)-methoprene/Synergized Pyrethrin Microemulsion Dip Against *Ctenocephalides felis* (Bouche') on Cats and Dogs, and Adulticidal Action Against *Rhipicephalus sanguineus* on Dogs.

Texas A&M PCO Workshop for Advanced Learning. IGRs and How They Work. College Station, TX. January 3-6, 1995.

Third International Symposium on Ectoparasites of Pets. Memorial Speaker, Moderator: Ticks and Biting Flies, Meeting Wrap-up and Summary. Steering Committee Member. College Station, TX, April 2-4, 1995.

B&G Chemicals and Equipment Co. 26<sup>th</sup> Annual Pest Management Conference & Expo; Capitalizing on the Opportunities of IPM, Keynote Address, January 1996.

National Conference on Urban Entomology, Feb. 18-20, 1996 Arlington, TX. “In vitro Evaluation for Repellents of Adult Cat Fleas Using an Artificial Membrane Feeding System.

Society for Vector Ecology, Annual Conf. October 7-9, 1996 Berkeley, CA, Two (2) Presentations; Fleas/Repellents/Membrane System and Pyriproxyfen/Ticks.

42<sup>nd</sup> Livestock Insect Workers Conference, Lethbridge, AB, Canada – June 21-24, 1998. Evaluation of Larvadex® 2SL and Neporex® SG2 (cyromazine) against *Fannia canicularis* in Poultry Houses located in Southern California.

Guest Lecturer – Modesto Jr. College & California State University Stanislaus. 1996 - Present. Various topics in Entomology, Parasitology and Pesticide Research and Development.

Fourth International Symposium on Ectoparasites of Pets. Program Committee, Moderator, Meeting Wrap-up and Summary. Riverside, CA. April 6-8, 1997.

Texas A&M University PCO Workshop for Advanced Learning. New Advances in Flea Biology and Control. January 13-15, 1999

Zeneca Ant Workshop – Argentine Ants Biology and Ecology, San Antonio, TX, May 11-13, 1999

PAPA (Pesticide Applicators Professional Association) Seminars. 2000. Insecticide Resistance, Tick Biology, Ant Biology and Integrated Pest Management.

6th International Symposium on Ectoparasites of Pets. Scientific Committee, Moderator, Meeting Wrap-up and Summary. Westport, Co. Mayo, Ireland. May 12-15, 2001.

Pacific Branch – ESA “Field Evaluations of Selected Baits Against Foraging Yellowjackets, *Vespula pensylvanica*, Located in Central California” June 16-19, 2002. PAPA Seminars – 2003, 2006, 2008 Insecticide Resistance – How to Manage the Problem. 2004, 2005 – Nuisance Flies

Pacific Branch ESA, Bozeman MT. June 21-23, 2004, Laboratory and Field Efficacy Evaluations for the Control of Carpenter Ants, *C. modoc* and *C. vicinus* in California

E.S.A. Annual Meeting, Salt Lake City, UT Nov. 14-17, 2004 “Flea and Tick Suppression in the Home” and “Evaluation of Knockdown and Residual Efficacy of Synergized Pyrethrins and Cyfluthrin on Leaf Surfaces Against *Aedes aegypti* in Central California”.

Society for Vector Ecology, 4<sup>th</sup> International Congress, October 2-7, 2005, Reno Nevada, Poster Session – “Mosquito Collection and Rearing Techniques and the Conduct of Various Bioassays Evaluating Compounds and Devices for the Control of Larval and Adult Mosquito Species Obtained in Central California.” W.A. Donahue & SRL Staff

PAPA Seminars – 2006 - Pesticide Research & Development, 2007 - IPM & Pesticide Resistance.

E.S.A. Annual Meeting, Indianapolis, IN - Dec. 10-13, 2006 “Toxicity of Spinosad Treated Substrates Against Susceptible *Musca domestica*, *Fannia canicularis* and *Stomoxys calcitrans*. W.H. White, W.A. Donahue, et.al.

Bayer Animal Health Symposium, Joint Meeting of LIWC & ISEP, Lexington KY 2007, "Evaluation of the Efficacy of Two Imidacloprid Bait Formulations for the Control of Naturally Occurring Infestations of House Flies, *Musca domestica* in Three Central California Dairies".

California Poultry Association – QA Seminar – "Vector Pest Control" March 20, 2008

PAPA (Pesticide Applicators Professional Association) Seminars. 2008. Nuisance Ant Biology and Control.

Clark Pest Control Commercial Pest Management Conference, March 10-11, 2009 Mating Disruption using Pheromones in Commercial Buildings.

9<sup>th</sup> International Conference on Ectoparasites of Pets, Toulouse, France June 2009, “Evaluation of the Insect Repellent Activity (Efficacy) of Icaridin 20% Spray (CENTAURA®) when Applied to Pastured Horses”

PAPA (Pesticide Applicators Professional Association) Seminars – 2009 – 2012 “Bed Bugs – Resurgence of an Old Pest: Biology and Ecology”. 2011- 2012 “Arthropod Pests of Livestock & Pets”

National Conference on Urban Entomology, Portland, OR, May 16-19, 2010 “Conducting Efficacy Studies (GLP and non-GLP) against Pest Species for EPA Product Registrations” and “Laboratory and Field Efficacy Studies Against *Polistes dominulus* and *Vespula pensylvanica* Evaluating Pressurized Aerosol Products”.

Livestock Insect Workers Conference – Knoxville, TN, June 2010 “Conducting Efficacy Studies (GLP and non-GLP) against Pest Species for EPA Product Registrations” and “Laboratory & Field Evaluations to Determine the Effectiveness of Neporex® 2SG



against Fly Larvae from Manure Samples Collected from Cattle, Swine and Poultry Operations in Central California and Florida”.

ESA Annual Meeting, San Diego, CA – Dec. 12-15, 2010 “Field and Laboratory evaluations of the Repellent Activity of Pyrethroids and Natural Products against Biting/Nuisance Flies and Mosquitoes of Vertebrate Hosts”, “Evaluation of Pyrethroid Insecticides on Field Populations of Lesser Mealworms, *Alphitobius diaperinus* as part of an IPM Program in Poultry Production” and “Evaluation of Pyrethroid Susceptibility and the Effects of Insect Growth Regulators Against the Common Bed Bug, *Cimex lectularius* in the Laboratory”.

Mosquito & Vector Control Association of California, San Leandro, CA, Nov. 8, 2011 "Field & Laboratory Evaluations of the Repellent Activity of Selected Compounds Against Biting/Nuisance Flies and Mosquitoes of Vertebrate Pests"

ESA Annual Meeting, Reno, NV – Nov. 13-16, 2011 “Independent Contract Research Laboratories - Small Fish in a Big Pond”

National Conference on Urban Entomology, Atlanta, GA, May 22, 2012 "Susceptibility of Multiple Field Collected Strains of Bed Bug, *Cimex lectularius* to Selected Insecticides" and "Evaluation of the Residual Activity and Repellency of Selected Insecticides Against Bed Bugs, *Cimex lectularius*".

U. C. Riverside Entomology Department Seminar - "Urban and Veterinary Entomology Research in an Industry Environment" Nov. 2, 2012

Nebraska Urban Pest Management Conference, Feb. 12-13, 2013 "Efficacy of Various Insecticides Against Bed Bugs"

CAPCA (California Association of Pest Control Advisors) Seminar, Modesto, CA March 7, 2013 "Nuisance Flies: Biology and Control"

U. C. Riverside Urban Pest Management Seminar, March 26, 2013 "Bed Bugs: Resurgence of an Old Pest: Biology and Ecology as it Relates to Pesticide Evaluations"

International Symposium on Ectoparasites of Pets, Munich, Germany, April 8-9, 2013 "Laboratory Evaluations of the Repellent Activity of Selected Compounds Against Hematophagous Arthropods"

LIWC (Livestock Insect Workers Conference) Lincoln City, NB, June 23-26, 2013, "Dose Response Bioassays for Three Strains of House Flies Evaluating Permethrin, Deltamethrin, Propoxur and Imidacloprid"

Pest World 2013 - NPMA, Phoenix, AZ, Control Solutions Inc. Seminar Oct. 24, 2013, "Insect Growth Regulators: Discovery, Development and How They Work"

Science on Screen Series: The State Theater, Modesto, CA - A community and school district educational series combining science and the arts, "Spiders" Oct. 13, 2013  
"Entomology: A Scientists Life" Oct. 30, 2013

ESA Annual Meeting, Austin, TX, Nov. 10-13, 2013, "Laboratory Evaluations of the Repellent Activity of Selected Compounds Against Hematophagus Arthropods"

Nebraska Urban Pest Management Conference, Feb. 18-19, 2014 "Chemical Control of Bed Bugs" and "Insect Growth Regulators (IGRs) and How They Work for Bed Bugs and Mosquitoes". Also Presented to CAPCA ED Seminar - June 12, 2014 - Newark, CA

National Conference on Urban Entomology, San Antonio, Texas - May 18-21, 2014  
"Laboratory Efficacy Studies of Tekko™ Pro (1.3% Novaluron + 1.3% Pyriproxyfen) for the Control of German Cockroaches, *Blattella germanica*"

Nebraska Urban Pest Management Conference, Feb. 10-11, 2015 "Efficacious Insecticides Against Bed Bugs" and "Update on Insect Growth Regulators Against Fleas, Flies, Mosquitoes, Bed Bugs and Ticks". Also Presented to CAPCA ED Seminar – March 11, 2015 - Modesto, CA

ESA Annual Meeting, Minneapolis, MN, Nov. 15-18, 2015, "Laboratory Evaluations of Mosquito Repellents: Interactions of the Host, Environment & Vector in a Small World"

Target Specialty Products Fall 2015 Seminars "Bed Bug Resistance to Insecticides" and "Biology & Management of American, Oriental and Other Outdoor Cockroaches" Ventura, CA and Ontario, CA. Also presented at Chemtech Supply Seminar Mesa, AZ January 25, 2016.

Nebraska Urban Pest Management Conference, Feb. 9-10, 2016 "Why German Cockroaches Are So Successful: Biology, Behavior & Physiology", "Efficacy of Insecticides Against German Cockroaches", "Insect Repellents".

U. C. Riverside Urban Pest Management Seminar, March 23, 2016 "Nuisance Flies: Biology and Control"

International Congress of Entomology, Orlando, FL, USA Sept. 25-30, 2016 "Historical Perspective: Aspects of Resistance Management in Cockroaches and Fleas.

Contra Costa County IPM Advisory Committee, May 18, 2017, "Using CO<sub>2</sub> to Control Burrowing Rodents" also Target Seminars Winter 2017.

Vertebrate Pest Conference – Rohnert Park, CA, Feb. 26-March 1, 2018, "Efficacy of IGI Carbon Dioxide Gas to Kill Ground Squirrels & Pocket Gophers in Underground Burrows" also in the Conference Proceedings.

Foster Farms Poultry – In-house Training Seminars, March 15, 2018, “Evaluation of Pyrethroid Insecticides on Field Populations of Lesser Mealworms, *Alphitobius diaperinus*, as Part of an Integrated Pest Management Program in Poultry Production” and “Nuisance Flies: Biology & Control”

National Conference on Urban Entomology – Cary, NC, May 21-23, 2018 “A Historical Perspective: Aspects of Resistance Management in German Cockroaches” also in the Conference Proceedings.