

RANDY GAUGLER

Center for Vector Biology, 180 Jones Avenue
Rutgers University, New Brunswick, NJ 08901-8536
Ph: 848/932-9341 Fax: -9257 Email: gaugler@sebs.rutgers.edu

EDUCATION

B.S., Entomology, North Dakota State University, 1972.
M.S., Entomology, North Carolina State University, 1974.
Ph.D., Entomology, University of Wisconsin, 1978.

POSITIONS

Senior Scientist, New York State Museum, 1979-82.
Assistant Professor, Rutgers University, 1982-86.
Associate Professor, Rutgers University, 1986-91.
Professor, Rutgers University, 1991-95.
Research Director, Ecogen, 1993-95.
Distinguished Professor, Rutgers University, 1995-present.
Associate Director, New Jersey Agricultural Experiment Station, 2007-10.
Director, Rutgers Center for Vector Biology, 2006-2016.

PUBLICATIONS

1989 to present

- Gaugler R & S Schutz. 1989. Environmental influences on hovering behavior of *Tabanus nigrovittatus* and *T. conterminus* (Diptera: Tabanidae). *J Insect Behav* 2:775-86.
- Costa S & R Gaugler. 1989. Influence of *Solanum* host plants on Colorado potato beetle susceptibility to the entomopathogen *Beauveria bassiana*. *Environ Entomol* 18:531-6.
- Gaugler R, S Costa & J Lashomb. 1989. Stability and efficacy of *Beauveria bassiana* soil inoculations. *Environ Entomol* 18:412-7.
- Costa S & R Gaugler. 1989. Sensitivity of *Beauveria bassiana* to solanine and tomatine: plant defensive chemicals inhibit an insect pathogen. *J Chem Ecol* 15:697-706.
- Schutz S & R Gaugler. 1989. Honeydew feeding by salt marsh horse flies (Diptera: Tabanidae). *J. Med. Entomol.* 26:471-3.
- Choo Y, H Kaya, T Burlando & R Gaugler. 1989. Entomopathogenic nematodes: host-finding ability in the presence of plant roots. *Environ. Entomol* 18:1136-40.
- Schutz S, R Gaugler & R Vrijenhoek. 1989. Genetic and morphometric discrimination of coastal and inland *Tabanus lineola* (Diptera: Tabanidae). *Ann Entomol Soc Am* 82:220-4.
- Gaugler R, J Campbell & T McGuire. 1989. Selection for host finding in *Steinernema feltiae*. *J Invertebr Pathol* 54:363-72.
- Gaugler R, T McGuire & J Campbell. 1989. Genetic variability among strains of the entomopathogenic nematode *Steinernema feltiae*. *J Nematol* 21:247-53.
- Gaugler R & H Kaya (Eds). 1990. Entomopathogenic Nematodes in Biological Control. CRC Press, Boca Raton. 365 pp.
- Kung S-P, R Gaugler & H Kaya. 1990. Soil type and entomopathogenic nematode persistence. *J Invertebr Pathol* 55:401-6.
- Schutz S, R Gaugler & R Vrijenhoek. 1990. Genetic variability associated with hovering time in *Tabanus nigrovittatus* (Diptera: Tabanidae). *J Insect Behav* 3:579-87.

- Kung S-P, R Gaugler & H Kaya. 1990. Influence of soil pH and oxygen on persistence of *Steinernema* spp. *J Nematol* 22:440-5.
- Jansson R, S LeCrone, R Gaugler & G Smart. 1990. Potential of entomopathogenic nematodes as biological control agents of sweetpotato weevil. *J Econ Entomol* 83:1818-26.
- Gaugler R & D Freckman. 1990. A program officer's guide to effective grantsmanship. *Am Entomol* 36:206-12.
- Gaugler R, J Campbell & T McGuire. 1990. Fitness of a genetically improved entomopathogenic nematode. *J Invertebr Pathol* 56:106-16.
- Gaugler R. 1990. Salinity tolerance of the stable fly. *J Econ Entomol* 83:887-91.
- Jansson R, R Gaugler & S Lecrone. 1991. Biological control of *Cylas* spp. In "Rencontres Caraibes en Lutte Biologique" (C. Pavis & A. Kermarrec, Eds), pp. 167-82. INRA, Paris.
- Georgis R & R Gaugler. 1991. Predictability in biological control using entomopathogenic nematodes. *J Econ Entomol [Forum]* 84:713-20.
- Gaugler R & R Georgis. 1991. Culture method and efficacy of entomopathogenic nematodes. *Biol Contr* 1:269-74.
- Hara A, R Gaugler, H Kaya & L LeBeck. 1991. Natural populations of entomopathogenic nematodes from the Hawaiian Islands. *Environ. Entomol.* 20:211-6.
- Gaugler R & J Campbell. 1991. Selection for enhanced host-finding to scarab larvae (Coleoptera: Scarabaeidae) in an entomopathogenic nematode. *Environ Entomol* 20:700-6.
- Roberts D, J Fuxa, R Gaugler, M Goettle & J Maddox. 1991. Use of pathogens in insect control. In "CRC Handbook of Pest Management" (D Pimentel, Ed), pp. 243-78. CRC Press.
- Gaugler R, J Campbell & P Gupta. 1991. Characterization and basis of enhanced host-finding in a genetically improved strain of *Steinernema carpocapsae*. *J Invertebr Pathol* 57:234-41.
- Campbell L & R Gaugler. 1991. Mechanisms for exsheathment of entomopathogenic nematodes. *Intern J Parasitol* 21:219-24.
- Kung S-P, R Gaugler & H Kaya. 1991. Effects of soil temperature, moisture and relative humidity on entomopathogenic nematode persistence. *J Invertebr Pathol* 57:242-9.
- Gaugler, R & J Campbell. 1991. Behavioural response of the nematodes *Steinernema carpocapsae* and *Heterorhabditis bacteriophora* to oxamyl. *Ann Appl Biol* 119:131-8.
- Glazer I, R Gaugler & D Segal. 1991. Genetics of the nematode *Heterorhabditis bacteriophora* strain HP88: the diversity of beneficial traits. *J Nematol* 23:324-33.
- Georgis R, H Kaya & R Gaugler. 1991. Effect of steinernematid and heterorhabditid nematodes on nontarget arthropods. *Environ Entomol* 20:815-22.
- Campbell L & R Gaugler. 1991. Role of the sheath in desiccation tolerance of two entomopathogenic nematodes. *Nematologica* 37:324-32.
- Jansson R, S LeCrone & R Gaugler. 1991. Comparison of single and multiple releases of *Heterorhabditis bacteriophora* for control of *Cylas formicarius*. *Biol Contr* 1:320-8.
- Schutz S & R Gaugler. 1992. Thermoregulation and hovering behavior of salt marsh horse flies (Diptera: Tabanidae). *Ann Entomol Soc Am* 85:431-6.
- Gaugler R, A Bednarek & J Campbell. 1992. Ultraviolet inactivation of heterorhabditids and steinernematids. *J Invertebr Pathol* 59:155-60.

- Campbell L & R Gaugler. 1992. Effect of exsheathment on motility and pathogenicity of two entomopathogenic nematode species. *J Nematol* 24:365-70.
- Lewis E, R Gaugler & R Harrison. 1992. Entomopathogenic nematode host finding: response to host contact cues by cruise and ambush foragers. *Parasitology* 105:309-15.
- Gaugler R, J Campbell, M Selvan & E Lewis. 1992. Large-scale inoculative releases of the entomopathogen *Steinernema glaseri*: assessment 50 years later. *Biol Contr* 2:181-7.
- Kaya H & R Gaugler. 1993. Entomopathogenic nematodes. *Ann Rev Entomol* 38:181-206.
- Gaugler R. 1993. Ecological genetics. In "Nematodes and the Biological Control of Insect Pests" (R Bedding, R Akhurst & H Kaya, Eds), pp. 79-87. CSIRO, Canberra.
- Selvan S, R Gaugler & J Campbell. 1993. Efficacy of entomopathogenic nematode strains against Japanese beetle, *Popillia japonica*, larvae. *J Econ Entomol* 86:353-59.
- McMahon M & R Gaugler. 1993. Effect of salt marsh drainage on the distribution of *Tabanus nigrovittatus* (Diptera: Tabanidae). *J Med Entomol* 30:474-6.
- Grewal P, R Gaugler & S Selvan. 1993. Host recognition by entomopathogenic nematodes: behavioral response to contact with host feces. *J Chem Ecol* 19:1219-31.
- Selvan S, R Gaugler & E Lewis. 1993. Biochemical energy reserves of entomopathogenic nematodes. *J Parasitol* 79:167-72.
- Lewis E, R Gaugler & R Harrison. 1993. Response of cruiser and ambusher entomopathogenic nematodes to host volatile cues. *Can J Zool* 71:765-9.
- Grewal P, R Gaugler, H Kaya & M Wusuty. 1993. Infectivity of the entomopathogenic nematode *Steinernema scapterisci*. *J Invertebr Pathol* 62:22-8.
- Selvan S, R Gaugler & P Grewal. 1993. Water content and fatty acid composition of infective juvenile entomopathogenic nematodes during storage. *J Parasitol* 79:510-6.
- Cui L, R Gaugler & Y Wang. 1993. Penetration of steinernematid nematodes into Japanese beetle larvae, *Popillia japonica* (Coleoptera: Scarabaeidae). *J Invertebr Pathol* 62:73-8.
- LeBeck L, R Gaugler, H Kaya & A Hara. 1993. Host stage suitability of the leafminer *Liriomyza trifolii* to the nematode *Steinernema carpocapsae*. *J Invertebr Pathol* 62:92-8.
- Grewal P, S Selvan, E Lewis & R Gaugler. 1993. Male insect-parasitic nematodes: a colonizing sex. *Experientia* 49:605-8.
- McMahon M & R Gaugler. 1993. Spatial distribution of hovering male *Tabanus nigrovittatus* (Diptera: Tabanidae). *Environ Entomol* 22:796-801.
- Grewal P, C Keil, M Tomalak & R Gaugler. 1993. Evaluation of a genetically selected strain of *Steinernema feltiae* against the sciarid *Lycoriella mali*. *Ann Appl Biol* 123:695-702.
- Selvan S, J Campbell & R Gaugler. 1993. Density dependent effects on entomopathogenic nematodes within an insect host. *J Invertebr Pathol* 62:278-84.
- Lacey L, A Bettencourt, F Garrett, N Simoes & R Gaugler. 1993. Factors influencing parasitism of adult Japanese beetles by entomopathogenic nematodes. *Entomophaga* 38:501-9.
- Jansson R, S LeCrone & R Gaugler. 1993. Field efficacy and persistence of entomopathogenic nematodes for control of sweetpotato weevil (Col: Apionidae). *J Econ Entomol* 87:1055-63.
- Rahimi F, T McGuire & R Gaugler. 1993. Morphological mutant in the nematode *Heterorhabditis bacteriophora*. *J Hered* 84:475-8.

- Campbell J & R Gaugler. 1993. Nictation behavior and its ecological implications in the search strategies of entomopathogenic nematodes. *Behavior* 126:155-170.
- Grewal P., R. Gaugler & E. Lewis. 1993. Host recognition behavior by entomopathogenic nematodes during contact with host gut contents. *J Parasitol* 79:495-503.
- Hara A, H Kaya, R Gaugler, L LeBeck & C Mello. 1993. Entomopathogenic nematodes for biological control of the leafminer *Liriomyza trifolii*. *Entomophaga* 38:359-70.
- Gaugler R, I Glazer, J Campbell & N Liran. 1994. Laboratory and field evaluation of an entomopathogenic nematode genetically selected for host finding. *J Invertebr Pathol* 63:68-73.
- Thurston G, H Kaya & R Gaugler. 1994. Characterizing the enhanced susceptibility of milky disease-infected scarabaeid grubs to entomopathogenic nematodes. *Biol Contr* 4:67-73.
- Grewal P, E Lewis, R Gaugler & J Campbell. 1994. Host finding behaviour as a predictor of foraging strategy in entomopathogenic nematodes. *Parasitology* 108:207-15.
- Wang Y, R Gaugler & L Cui. 1994. Variations in immune response of *Popillia japonica* and *Acheta domesticus* to *Heterorhabditis bacteriophora* and *Steinernema* spp. *J Nematol* 26:11-8.
- Selvan S, P Grewal, R Gaugler & M Tomalak. 1994. Evaluation of steinernematid nematodes against *Popillia japonica*: species, strain and rinse after application. *J Econ Entomol* 89:605-9.
- Stuart R & R Gaugler. 1994. Patchiness in populations of entomopathogenic nematodes. *J Invertebr Pathol* 64:39-45.
- Grewal P, S Selvan & R Gaugler. 1994. Thermal adaptation of entomopathogenic nematodes: niche breadth for infection, establishment, and reproduction. *J Thermal Biol* 19:245-53.
- Gaugler R, Y Wang & J Campbell. 1994. Aggressive and evasive behaviors in *Popillia japonica* larvae: defenses against entomopathogenic nematode attack. *J Invertebr Pathol* 64:193-9.
- Lewis R & R Gaugler. 1994. Entomopathogenic nematode sex ratio relates to foraging strategy. *J Invertebr Pathol* 64:238-42.
- Lewis E, P Grewal & R Gaugler. 1995. Hierarchical order of host cues in parasite foraging strategies. *Parasitology* 110:207-13.
- Grewal S, P Grewal & R Gaugler. 1995. Endophytes of fescue grasses enhance susceptibility of *Popillia japonica* to an entomopathogenic nematode. *Entomol Exper appl* 172:219-26.
- Lewis E, S Selvan, J Campbell & R Gaugler. 1995. Changes in foraging in infective stage insect-parasitic nematodes. *Parasitology* 110:583-90.
- Trimmer W, P Ling, C-K Chin, P Orton, R Gaugler, S Hashmi, G Hashmi, B Brunett & M Reed. 1995. Injection of DNA into plant and animal tissues with micromechanical piercing structures. *Micro Electro Mech Syst* 95:111-8.
- Hatab MA & R Gaugler. 1995. Role of proteases in penetration of insect gut by the entomopathogenic nematode *Steinernema glaseri*. *J Invertebr Pathol* 66:125-30.
- Wang Y, J Campbell & R Gaugler. 1995. Infection of entomopathogenic nematodes *Steinernema glaseri* and *Heterorhabditis bacteriophora* against *Popillia japonica* larvae. *J Invertebr Pathol* 66:178-84.
- Hashmi S., P. Ling, G. Hashmi, M. Reed, R. Gaugler & W. Trimmer. 1995. Genetic transformation using arrays of micromechanical piercing structures. *Biotechniques* 19:766-70.
- Campbell J, E Lewis, F Yoder & R Gaugler. 1995. Entomopathogenic nematode seasonal population dynamics and impact on insect populations in turfgrass. *Biol Contr* 5:598-606.

- Hashmi S, G Hashmi & R Gaugler. 1995. Genetic transformation of an entomopathogenic nematode by microinjection. *J Invertebr Pathol* 66:293-6.
- Gaugler R & S Hashmi. 1996. Genetic engineering of an insect parasite. In "Genetic Engineering Principles and Methods" (J Setlow, Ed), pp. 135-57. Plenum Press.
- Stuart R & R Gaugler. 1996. Genetic adaptation and founder effect in laboratory populations of the entomopathogenic nematode, *Steinernema glaseri*. *Can J Zool* 74:164-70.
- Ricci M, I Glazer, J Campbell & R Gaugler. 1996. Comparison of bioassays to measure virulence of different entomopathogenic nematodes. *Biocontr Sci Technol* 6:235-45.
- Brown I & R Gaugler. 1996. Cold tolerance of steinernematid and heterorhabditid nematodes. *J Therm Biol* 21:115-21.
- Grewal P, R Gaugler & C Schupe. 1996. Rapid changes in thermal sensitivity of entomopathogenic nematodes in response to selection at temperature extremes. *J Invertebr Pathol* 68:65-73.
- Caroli L, I Glazer & R Gaugler. 1996. Entomopathogenic nematode infectivity assay: comparison of infection rate into different hosts. *Biocontr Sci Technol* 6:227-33.
- Lewis E, I Glazer & R Gaugler. 1996. Location and behavioral effects of lectin binding on entomopathogenic nematodes with different foraging strategies. *J Chem Ecol* 22:455-66.
- Selvan S, P Grewal, T Leustek & R Gaugler. 1996. Heat shock enhances thermotolerance of infective juvenile insect parasite *Heterorhabditis bacteriophora*. *Experientia* 52:727-30.
- Hashmi G, I Glazer & R Gaugler. 1996. Molecular comparisons of entomopathogenic nematodes using randomly amplified polymorphic DNA (RAPD) markers. *Fund Appl Nematol* 19:399-406.
- Stuart R & R Gaugler. 1996. Selection alters the pattern of emergence from the host cadaver in the entomopathogenic nematode *Steinernema glaseri*. *Parasitology* 113:183-9.
- Campbell J, E Lewis, F Yoder & R Gaugler. 1996. Entomopathogenic nematode spatial distribution in turfgrass. *Parasitology* 113:473-82.
- Glazer I, E Kozodoi, G Hashmi & R Gaugler. 1996. Biological characteristics of the nematode *Heterorhabditis bacteriophora* IS5: a heat tolerant isolate from Israel. *Nematologica* 42:481-92.
- Grewal P, R Gaugler & Y Wang. 1996. Enhanced cold tolerance of *Steinernema feltiae* through genetic selection. *Ann Appl Biol* 129:335-41.
- Solon E, A Gupta & R Gaugler. 1996. Signal transduction during exocytosis in *Limulus polyphemus* granulocytes. *Devel Comp Immunol* 20:307-21.
- Lewis E, M Ricci & R Gaugler. 1996. Host recognition behavior predicts host suitability in the entomopathogenic nematode *Steinernema carpocapsae*. *Parasitology* 113:573-9.
- Gaugler R, E Lewis & R Stuart. 1997. Ecology in the service of biological control. *Oecologica* 109:483-9.
- Hashmi S & R Gaugler. 1997. Application of micromechanical piercing structures for genetic transformation. In "Methods in Molecular Biology: Recombinant Gene Expression Protocols." (R Tuan, Ed), pp. 393-8. Humana Press.
- Hatab MA & R Gaugler. 1997. Growth-mediated variations in fatty acids of *Xenorhabdus* sp. *J Appl Microbiol* 82:351-8.
- Hashmi G, S Hashmi, S Selvan, P Grewal & R Gaugler. 1997. Polymorphism in shock protein gene (*hsp70*) in an entomopathogenic nematode. *J Therm Biol* 22:143-9.
- Gaugler R. 1997. Alternative paradigms for biopesticides. *Phytoparasitica* 25:179-82.

- Hashmi S, MA Hatab & R Gaugler. 1997. GFP: green fluorescent protein a versatile gene marker for entomopathogenic nematodes. *Fund Appl Nematol* 20:323-7.
- Stuart R, S Polavarapu, E Lewis & R Gaugler. 1997. Differential susceptibility of *Dysmicoccus vaccinii* (Homoptera) to entomopathogenic nematodes. *J Econ Entomol* 90:925-32.
- Solon E, A Gupta & R Gaugler. 1997. Location of a putative inositol 1,4,5-triphosphate receptor of the *Limulus* granulocyte. *Devel Comp Immunol* 21:277-85.
- Grewal P, E Lewis & R Gaugler. 1997. Response of infective stage parasites to volatile cues from infected hosts. *J Chem Ecol* 23:503-15.
- Bednarek A & R Gaugler. 1997. Compatibility of soil amendments with entomopathogenic nematodes. *J Nematol* 29:220-7.
- Gaugler R, M Wilson & P Shearer. 1997. Field release and environmental fate of a transgenic entomopathogenic nematode. *Biol Contr* 9:75-80.
- Brown I & R Gaugler. 1997. Temperature and humidity influence emergence and survival of entomopathogenic nematodes. *Nematologica* 43:363-75.
- Hashmi G, S Hashmi & R Gaugler. 1997. Molecular trends in entomopathogenic nematology. In "Recent Research Developments in Entomology" (S Pandalai, Ed), pp. 161-86. Research Signpost.
- Lewis E, J Campbell & R Gaugler. 1997. The effects of aging on the foraging behavior of *Steinernema carpocapsae*. *Nematologica* 43:355-62.
- Hatab MA & R Gaugler. 1997. Influence of growth temperature on fatty acids and phospholipids of the entomopathogen *Steinernema riobraviss*. *J Therm Biol* 22:237-44.
- Campbell J & R Gaugler. 1997. Inter-specific variation in entomopathogenic nematode foraging strategy: dichotomy or variation along a continuum? *Fundam Appl Nematol* 20:393-8.
- Baur M, H Kaya, R Gaugler & B Tabashnik. 1997. Effects of adjuvants on entomopathogenic nematode persistence and efficacy against *Plutella xylostella*. *Biocontr Sci Techn* 7:513-25.
- Brown I & R Gaugler. 1998. Survival of steinernematid nematodes exposed to freezing. *J Therm Biol* 23:75-80.
- Koppenhofer A, J Campbell, H Kaya & R Gaugler. 1998. Estimation of entomopathogenic nematode population density in soil using the correlation between bait insect mortality and nematode penetration. *Fund Appl Nematol* 21:95-102.
- Campbell J, G Orza, F Yoder, E Lewis & R Gaugler. 1998. Spatial and temporal distribution of endemic and released entomopathogenic nematodes in turfgrass. *Entomol Exper Appl* 86:1-11.
- Hatab MA, R Gaugler & R Ehlers. 1998. Influence of culture method on *Steinernema glaseri* lipids. *J Parasitol* 84:215-21.
- Wang Y & R Gaugler. 1998. Host and penetration site location by entomopathogenic nematodes against Japanese beetle larvae. *J Invertebr Pathol* 72:313-8.
- Hashmi S, G Hashmi, I Glazer & R Gaugler. 1998. Thermal response of *Heterorhabditis bacteriophora* transformed with the *Caenorhabditis elegans hsp70*-encoding gene. *J Exper Zool* 281:164-70.
- Lewis E, J Campbell & R Gaugler. 1998. A conservation approach to using entomopathogenic nematodes in turf and landscapes. In "Conservation Biological Control" (P Barbosa, Ed), pp. 235-54. Academic Press.
- Stuart R, MA Hatab & R Gaugler. 1998. Sex ratio and the infection process in entomopathogenic nematodes: are males the colonizing sex? *J Invertebr Pathol* 72:288-95.

- Hashmi G & R Gaugler. 1998. Genetic diversity in *Heterorhabditis* spp. as revealed by molecular markers. *J Invertebr Pathol* 72:185-189.
- Georgis R & R Gaugler. 1998. Entomopathogenic nematodes for insect management. In "Mass-Reared Natural Enemies: Application, Regulation & Needs" (R Ridgway et al, Ed), pp. 139-48. *Thomas Say Publ.*
- Hatab MA, R Stuart & R Gaugler. 1998. Antibiotic resistance and protease production by *Photorhabdus luminescens* and *Xenorhabdus poinari* bacteria symbiotic with entomopathogenic nematodes: variability among species and strains. *Soil Ecol Biochem* 30:1955-61.
- Hashmi S, G Hashmi & R Gaugler. 1999. Transformation of nematodes by microinjection. In "Methods and Tools in Biosciences & Medicine: Microinjection" (J Lacal, R Perona, J Feramisco, Eds), pp. 233-40. Birkhauser Verlag.
- Wilson M, W Xin, S Hashmi & R Gaugler. 1999. Risk assessment and fitness of a transgenic entomopathogenic nematode. *Biol Contr* 15:81-7
- Hatab MA & R Gaugler. 1999. Lipids of in vivo and in vitro cultured *Heterorhabditis bacteriophora*. *Biol Contr* 15:113-8.
- Wang Y & R Gaugler. 1999. *Steinernema glaseri* surface coat protein suppresses the immune response of Japanese beetle larvae. *Biol Contr* 14:45-50.
- Yoo S, I Brown & R Gaugler. 2000. Liquid media development for *Heterorhabditis bacteriophora*: lipid source and concentration. *Appl Microbiol Biotechnol* 54:759-63.
- Koppenhöfer A, I Brown, R Gaugler, P Grewal, H Kaya & M Klein. 2000. Synergism of entomopathogenic nematodes and imidacloprid against white grubs: [greenhouse and field evaluation](#). *Biol Contr* 19:245-51.
- Wilson M & R Gaugler. 2000. Terrestrial mollusc pests. In "Field Manual for Application and Evaluation of Invertebrate Pathogens" (L Lacey & H Kaya, Eds), pp. 787-804. Kluwer Academic.
- Koppenhofer A, M Wilson, I Brown, H Kaya & R Gaugler. 2000. Biological control agents for white grubs in anticipation of establishment of the Japanese beetle in California. *J Econ Entomol* 93:71-80.
- Gaugler R, P Grewal, H Kaya & D Smith-Fiola. 2000. Quality assessment of commercially produced entomopathogenic nematodes. *Biol Contr* 17:100-9.
- Yoo S, I Brown, N Cohen & R Gaugler. 2001. Medium concentration influencing growth of the entomopathogenic nematode *Heterorhabditis bacteriophora* and its symbiotic bacterium *Photorhabdus luminescens*. *J Microbiol Biotechnol* 11:644-8.
- Wilson M, S Hashmi & R Gaugler. 2001. Risk assessment, fitness and field release of a transgenic entomopathogenic nematode. In "Enhancing Biocontrol Agents and Handling Risks." (M Vurro et al., Eds), pp. 177-87. IOS Press.
- Yoo S, R Gaugler & C Brey. 2001. Growth optimization of *Photorhabdus luminescence* isolated from the entomopathogenic nematode *Heterorhabditis bacteriophora*. *Kor J Appl Microbiol Biotechnol* 29:104-9.
- Hatab M & R Gaugler. 2001. Diet composition and lipids of in vitro-produced *Heterorhabditis bacteriophora*. *Biol Contr* 20:1-7.
- Shapiro-Ilan D & R Gaugler. 2002. Production technology for entomopathogenic nematodes and their bacterial symbionts. *J Industr Microbiol Biotechnol* 28:137-46.
- Gaugler R & R Han. 2002. Mass Production Technology. In "Entomopathogenic Nematology" (R Gaugler, Ed), pp. 289-310. CABI Publ.

- Cohen N, I Brown & R Gaugler. 2002. Physiological ageing and behavioural plasticity of *Heterorhabditis bacteriophora* infective juveniles. *Nematology* 4:81-87.
- Sasnarukkit A, R Gaugler & S Sontirat. 2002. Effects of the entomopathogenic nematode *Steinernema siamkayai* and its symbiont's metabolites on *Meloidogyne incognita*. *Intern J Nematol* 12:169-74.
- Gaugler R, I. Brown, D. Shapiro-Ilan & A Atwa. 2002. Automated technology for in vivo mass production of entomopathogenic nematodes. *Biol. Contr.* 24:199-206.
- Fallon D, H Kaya, R Gaugler & B Sipes. 2002. Effects of entomopathogenic nematodes on *Meloidogyne javanica* on tomatoes and soybeans. *J Nematol* 34:239-45.
- Lewis E, B Barbarosa & R Gaugler. 2002. Mating and sexual communication in *Steinernema carpocapsae*. *J Nematol* 34:328-31.
- Shapiro-Ilan D, I Brown, W Tedders & R Gaugler. 2002. Optimization of inoculation for in vivo production of entomopathogenic nematodes. *J Nematol* 34:343-50.
- Gil G, H Choo & R Gaugler. 2002. Enhancement of entomopathogenic nematode production in in vitro liquid culture of *Heterorhabditis bacteriophora* with glucose supplementation. *Appl Microbiol Biotechnol* 58:751-5.
- Brown I, B Lovett, P Grewal & R Gaugler. 2002. Latent infection: a low temperature survival strategy in steinernematid nematodes. *J Therm Biol* 27:531-9.
- Gaugler R. (Ed). 2002. "Entomopathogenic Nematology." CABI Publ. 388 pp.
- Sasnarukkit A, R Gaugler & S Sontirat. 2003. Pathogenicity of entomopathogenic nematodes against diamondback moth, *Plutella xylostella*. *Thai J Agric Res* 37:441-51.
- Wilson M, E Lewis, F Yoder & R Gaugler. 2003. Application pattern and persistence of the entomopathogenic nematode *Heterorhabditis bacteriophora*. *Biol Contr* 26:180-8.
- Gaugler R. 2003. Ticks. In "The Encyclopedia of New Jersey" (M. Mappen & M. Lurie, Eds.), Rutgers University Press, 912 pp.
- Gaugler R. 2003. Evolution of solid culture production for entomopathogenic nematodes. *Eg J Biol Pest Contr* 1:121-4.
- Wilson M & R Gaugler. 2004. Factors limiting short-term persistence of entomopathogenic nematodes. *J Appl Entomol* 128:250-3.
- Fallon D, H Kaya, R Gaugler & B Sipes. 2004. Effect of *Steinernema feltiae* – *Xenorhabdus bovienii* insect pathogen complex on *Meloidogyne javanica*. *Nematology* 6:671-80.
- Bilgrami A & R Gaugler. 2004. Introduction and overview. In "Nematode Behaviour" (R Gaugler & A Bilgrami, Eds), pp. 1-18. CABI Publ.
- Bilgrami A & R Gaugler. 2004. Feeding behavior. In "Nematode Behaviour" (R Gaugler & A Bilgrami, Eds), pp. 91-126. CABI Publ.
- Shapiro-Ilan D, R Gaugler & E Lewis. 2004. In vivo production of entomopathogenic nematodes. *Intern J Nematol* 14:13-18.
- Gaugler R & A Bilgrami (Eds). 2004. "Nematode Behaviour." CABI Publ. 419 pp.
- Bai C, D Shapiro-Ilan, R Gaugler & Y Shuxia. 2004. Effects of entomopathogenic nematode concentration on survival during cryopreservation in liquid nitrogen. *J Nematol* 36:281-4.
- Nguyen K, M Tesfamariam, U Gozel, R Gaugler & B Adams. 2004. *Steinernema yirgalamense* n. sp. (Rhabditida: Steinernematidae) from Ethiopia. *Nematology* 6:839-56.

- Bai C, D Shapiro-Ilan, R Gaugler & K Hopper. 2005. Stabilization of beneficial strains in *Heterorhabditis bacteriophora* through creation of inbred lines. *Biol Contr* 32:220-7.
- Mekete T, R Gaugler, K Nguyen, W Mandfro & M Tessler. 2005. Biogeography of entomopathogenic nematodes in Ethiopia. *Nematropica* 35:31-6.
- Bilgrami A & R Gaugler. 2005. Feeding behavior of the predatory nematodes *Laimydrus baldus* and *Discolaimus major* (Nematoda: Dorylamida). *Nematology* 7:11-20.
- Kepenekci I, A Gokce & R Gaugler. 2005. Virulence of three species of entomopathogenic nematodes to the chestnut weevil, *Curculio elephas*. *Nematropica* 34:199-204.
- Bilgrami A, R Gaugler & C Brey. 2005. Prey preference and feeding behavior of the diplogasterid predator *Mononchoides gaugleri* (Nematoda: Diplogasterida). *Nematology* 7:333-42.
- Bai C, D Shapiro-Ilan, Y Wang, R Gaugler, E Cowles & W Yi. 2005. Protein changes in the symbiotic bacterium *Photorhabdus luminescens* during *in vitro* serial culture. *Intern J Nematol* 15:126-35.
- Brown I, D Shapiro-Ilan & R Gaugler. 2006. Entomopathogenic nematode infectivity enhancement using physical and chemical stressors. *Biol Contr* 39:147-153.
- Bilgrami A, R Gaugler, D Shapiro-Ilan & B Adams. 2006. Source of trait deterioration in entomopathogenic nematodes *Steinernema carpocapsae* and *Heterorhabditis bacteriophora* during *in vivo* culture. *Nematology* 8:397-409.
- Shamseldean M, E Platzer & R Gaugler. 2006. Ultrastructure of the cellular immune responses of *Anopheles quadrimaculatus* to *Romanomermis culicivorax* infection. *Nematropica* 36:243-9.
- Wang Y, A Bilgrami, D Shapiro-Ilan & R Gaugler. 2007. Stability of symbiotic bacteria, *Xenorhabdus nematophila* and *Photorhabdus luminescens*, during *in vitro* culture. *J Industr Microbiol Biotechnol* 34:73-81.
- Bilgrami A & R Gaugler. 2007. Stress-induced loss of heat tolerance in the entomopathogenic nematodes *Heterorhabditis bacteriophora* and *Steinernema carpocapsae*. *Nematology* 9:161-7.
- Li X, R Cowles, E Cowles, R Gaugler & D Cox-Foster. 2007. Relationship between successful infection by entomopathogenic nematodes and the host immune response. *Intern J Parasitol* 37:365-74.
- Shamseldean M, E Platzer & R Gaugler. 2007. Role of the surface coat of *Romanomermis culicivorax* in immune evasion. *Nematology* 9:17-24.
- Bai X, P Grewal, S Hogenhout, B Adams, T Ciche, R Gaugler & P Sternberg. 2007. Expressed sequence tag analysis of gene representation in insect parasitic nematode *Heterorhabditis bacteriophora*. *J Parasitol* 93:1343-9.
- Bilgrami A, C Brey & R Gaugler. 2008. First field release of a predatory nematode, *Mononchoides gaugleri* (Nematoda: Diplogasterida). *Nematology* 10:143-6.
- Bartlett-Healy K, W Crans & R Gaugler. 2008. Phonotaxis to amphibian vocalizations in *Culex territans* (Diptera: Culicidae). *Ann Entomol Soc Amer* 101:95-103.
- Hashmi S, Q Ji, J Zhang, R Parhar, R Rodriguez, C Huang, C Brey & R Gaugler. 2008. A Krüppel-like factor in *Caenorhabditis elegans* with essential roles in fat regulation, cell death and phagocytosis. *DNA & Cell Biol* 27:545-51.
- Williges E, A Farajollahi, J Scott, L McCuiston, W Crans & R Gaugler. 2008. Laboratory colonization of *Aedes japonicus japonicus* (Theobald). *J Am Mosq Contr Assoc.* 24:591-3.
- Bartlett-Healy K, W Crans & R Gaugler. 2008. Temporal and spatial synchrony of *Culex territans* (Diptera: Culicidae) with their amphibian hosts. *J Med Entomol* 45:1031-8.

- Li X, R Cowles, E Cowles, R Gaugler & D Cox-Foster. 2009. Characterization of immunosuppressive surface coat proteins from *Steinernema glaseri* that selectively kill blood cells in susceptible hosts. *Mol Biochem Parasitol* 165:162-9.
- Farajollahi A, B Kesavaraju, M Nelder, S Crans & R Gaugler. 2009. An unusual larval collection and survival of *Orthopodomyia signifera* in the presence of the predator *Toxorhynchites rutilus septentrionalis*. *J Am Mosq Contr Assoc* 25:370-3.
- Bai X, B Adams, T Ciche, S Clifton, R Gaugler, S Hogenhout, J Spieth, P Sternberg & P Grewal. 2009. Transcriptomic analysis of the entomopathogenic nematode, *Heterorhabditis bacteriophora* TT01. *BMC Genomics* 10:205 doi:10.1186/1471-2164-10-205.
- Bartlett-Healy K, W Crans & R Gaugler. 2009. Vertebrate hosts and phylogenetic relationships of amphibian trypanosomes from a potential invertebrate vector, *Culex territans*. *J Parasitol* 95:381-7.
- Williges E, A Farajollahi, M Nelder & R Gaugler. 2009. Comparative field analysis of rapid analyte measurement platform and reverse transcriptase polymerase chain reaction assays for West Nile virus surveillance. *J Vect Ecol* 34:324-8.
- Koppenhöfer H & R Gaugler. 2009. Entomopathogenic nematode and bacteria mutualism. In "Defensive Mutualism in Microbial Symbiosis" (J White & M Torres, Eds), pp. 99-116. Taylor & Francis.
- Molaei G, A Farajollahi, J Scott, R Gaugler & T Andreadis. 2009. Human blood feeding by the recently introduced mosquito, *Aedes japonicus japonicus* (Diptera: Culicidae) and public health implications. *J Am Mosq Contr Assoc* 25:210-4.
- Farajollahi A, B Kesavaraju, D Price, G Williams, S Healy, R Gaugler & M Nelder. 2009. Field evaluation of BG-Sentinel and industry-standard traps for *Aedes albopictus* and West Nile virus surveillance. *J Med Entomol* 46:919-25.
- Zhang J, C Huang, C Brey, M Rodriguez, Y Oksov, R Gaugler & S Hashmi. 2009. Mutation in *Caenorhabditis elegans* Krüppel-like factor, KLF-3 results in fat accumulation and alters fatty acid composition. *Exper Cell Res* 315:2568-80.
- Brey C, M Nelder, T Hailemariam, R Gaugler & S Hashmi. 2009. Krüppel-like family of transcription factors: an emerging new frontier in fat biology. *Intern J Biol Sci* 5:622-36.
- Adhikari B, C Lin, X Bai, T Ciche, P Grewal, A Dillman, J Chaston, D Shapiro, A Bilgrami, R Gaugler, P Sternberg & B Adams. 2009. Transcriptional profiling of trait deterioration in the insect pathogenic nematode *Heterorhabditis bacteriophora*. *BMC Genomics* 10:609 doi:10.1186/1471-2164-10-609.
- Kesavaraju B, A Afify & R Gaugler. 2009. Growth and survival of the invasive *Aedes albopictus* larvae on *Diospyrus virginiana* (American persimmon) leaves. *J Med Entomol* 46:465-70.
- Nelder M, B Kesavaraju, A Farajollahi, S Healy, I Unlu, T Crepeau, D Fonseca & R Gaugler. 2010. Suppressing *Aedes albopictus*, an emerging vector of dengue and chikungunya viruses, by a novel combination of a monomolecular film and insect-growth regulator. *Amer J Trop Med & Hyg* 82:831-7.
- Kesavaraju B, B Alto, A Afify & R Gaugler. 2010. Malathion influences competition between *Aedes albopictus* and *Aedes japonicus*. *J Med Entomol* 47:1011-8.
- Bartlett-Healy K, G Hamilton, S Healy, T Crepeau, I Unlu, A Farajollahi, D Fonseca, R Gaugler, G Clark & D Strickman. 2011. Source reduction behavior as an independent measurement of the impact of a public health education campaign in an integrated vector management program for the Asian tiger mosquito. *Intern J Environ Res Publ Health* 8:1358-67.
- Price D, D Gunther & R Gaugler. 2011. First collection records of Phlebotomine sand flies from New Jersey. *J Med Entomol* 48: 476-8.

- Chaston J, A Dillman, D Shapiro-Ilan, A Bilgrami, R Gaugler, K Hopper & B Adams. 2011. Outcrossing and crossbreeding recovers deteriorated traits in laboratory cultured *Steinernema carpocapsae* nematodes. *Intern J Parasitol* 41:801-9.
- Kesavaraju B, C Brey, A Farajollahi, H Evans & R Gaugler. 2011. Effect of malathion on larval competition between *Aedes albopictus* and *Aedes atropalpus*. *J Med Entomol* 48:479-84.
- Unlu I, A Farajollahi, S Healy, T. Crepeau, K Bartlett-Healy, E Williges, D Strickman, R Gaugler & D Fonseca. 2011. Area-wide management of *Aedes albopictus*: choice of study sites based on geospatial characteristics, socioeconomic factors and mosquito populations. *Pest Manag Sci* 67:965-74.
- Kesavaraju B, D Khan & R Gaugler. 2011. Behavioral differences of invasive container dwelling mosquitoes to a native predator. *J Med Entomol* 48:526-32.
- Chun-Hwi C, K Whang, R Gaugler & S Yoo. 2011. Submerged monoxenic culture medium development for *Heterorhabditis bacteriophora* and its symbiotic bacterium *Photorhabdus luminescens*: protein sources. *J Microbiol Biotech* 21:869-73.
- Gaugler R, D Suman & Y Wang. 2012. An autodissemination station for the transfer of an insect growth regulator to container mosquitoes. *Med Vet Entomol* 26:37-45.
- Bartlett-Healy K, I Unlu, P Obenauer, T Hughes, S Healy, T Crepeau, A Farajollahi, B Kesavaraju, D Fonseca, G Schoeler, R Gaugler & D Strickman. 2012. Larval habitat utilization and community dynamics of *Aedes albopictus* and *Aedes japonicus* (Diptera: Culicidae). *J Med Entomol* 49:813-24.
- Gaugler R. 2012. The golden age of mosquito control. *Wing Beats* Winter p. 8-13.
- Halasa Y, D Shepard, E Wittenberg, D Fonseca, A Farajollahi, S Healy, R Gaugler & G Clark. 2012. Willingness to pay for an area-wide pest management program to control Asian tiger mosquito in New Jersey. *J Am Mosq Control Assoc* 28:225-236.
- Kesavaraju B, A Afify & R Gaugler. 2012. Strain specific differences in intraspecific competition in *Aedes albopictus* (Diptera: Culicidae). *J Med Entomol* 49:988-92.
- Farajollahi A, I Unlu, S Healy, D Fonseca & R Gaugler. 2012. Effectiveness of ultra-low volume nighttime applications of an adulticide against diurnal *Aedes albopictus*, a critical vector of dengue and chikungunya viruses. *PLoS ONE* 7:e49181.
- Wang Y, Z Lutfi, D Suman, M Sanad & R Gaugler. 2012. Host cues induce egg hatch and preparasite foraging behavior in the mosquito-parasitic nematode *Strelkovimermis spiculatus*. *Intern J Parasitol* 42:881-6.
- Suman D, S Healy, A Farajollahi, S Crans & R Gaugler. 2012. Efficacy of a dual-action pyrethroids on caged *Aedes albopictus* using ULV truck-mounted sprayers. *J Am Mosq Control Assoc* 28:338-40.
- Rochlin I, E Williges, R Gaugler & A Farajollahi. 2012. The rise of the invasives and decline of the natives: insights of competitive displacement and reduction gleaned from the adult populations of the mosquitoes *Aedes albopictus*, *Aedes japonicus* and *Aedes triseriatus* in temperate North America. *Biol Invasions* 15:991-1003.
- Fonseca D, I Unlu, T Crepeau, A Farajollahi, S Healy, K Bartlett-Healy, D Strickman, R Gaugler, G Hamilton, D Kline & G Clark. 2013. Area-wide management of *Aedes albopictus*: II. Gauging the efficacy of traditional integrated pest control measures against urban container mosquitoes. *Pest Manag Sci* 69:1351-61.
- Sanad M, M Shamseldean, A Elgrindi & R Gaugler. 2013. Host penetration and emergence patterns of the mosquito-parasitic mermithids *Romanomermis iyengari* and *Strelkovimermis spiculatus* (Nematoda: Mermithidae). *J Nematol* 45:30-8.

- Worobey J, D Fonseca, C Espinosa, S Healy & R Gaugler. 2013. Child outdoor physical activity is reduced by prevalence of the Asian tiger mosquito, *Aedes albopictus*. *J Am Mosq Cont Assoc* 29:78-80.
- Gaugler R. 2013. Tommy Mulhern and the lost crusade. *J Am Mosq Contr Assoc* 29:181-90.
- Suman D, C Brey, Y Wang, M Sanad, M Shamseldean & R Gaugler. 2013. Effects of insect growth regulators on the mosquito-parasitic nematode *Romanomermis iyengari*. *Parasitol Res* 112:817-24.
- Wang Y, D Suman, J Bertrand, L Dong & R Gaugler. 2013. Dual treatment autodissemination station with enhanced transfer of insect growth regulator to mosquito oviposition sites. *Pest Manag Sci* 70:1299-304
- Zhang J, F Cheema, N Al-Nasser, R Bakheet, R Parhar, F Al-Mohanna, R Gaugler, M Hussain & S Hashmi. 2013. Regulation of lipoprotein assembly, secretion and fatty acid β -oxidation by Krüppel-like transcription factor, *klf-3*. *J Mol Biol* 425:2641-55.
- Bai X, B Adams, T Ciche, S Clifton, R Gaugler, K Kim, J Spietch, P Sternberg, R Wilson & P Grewal. 2013. A lover and a fighter: the genome sequence of an entomopathogenic nematode. *PLoS ONE* 8:e69618.
- Suman D, A. Farajollahi, S Healy, G Williams, Y Wang, G Schoeler & R Gaugler. 2013. Point source and area-wide field studies of pyriproxyfen autodissemination against container-inhabiting mosquitoes in urban environments. *Acta Tropica* 135:96-103.
- Armstrong P, J Anderson, A Farajollahi, S Healy, I Unlu, T Crepeau, R Gaugler, D Fonseca & T Andreadis. 2013. Isolations of Cache Valley virus from *Aedes albopictus* (Diptera: Culicidae) in New Jersey and evaluation of its role as a regional arbovirus vector. *J Med Entomol* 50:1310-4.
- Suman D, Y Wang, L Dong & R Gaugler. 2013. Effects of larval habitat substrate on pyriproxyfen efficacy against *Aedes albopictus* (Diptera: Culicidae). *J Med Entomol* 50:1261-6.
- Hashmi S, Y Wang, R Parhar, K Collison, W Conca, F Al-Mohanna & R Gaugler. 2013. A *C. elegans* model to study human metabolic regulation. *Nutr Metab* 10:31 doi:10.1186/1743-7075-10-31.
- Suman D, A Bilgrami, Y Wang & R Gaugler. 2013. Ovicidal activity of three insect growth regulators against *Aedes* and *Culex* mosquitoes. *Acta Tropica* 128:103-9.
- Worobey J, L Lelah & R Gaugler. 2013. Environmental barriers to children's outdoor summer play. *J Behav Hlth* 2:362-5.
- Farajollahi A, G Williams, G Condon, B Kesavaraju, I Unlu & R Gaugler. 2013. Assessment of a direct application of two *Bacillus thuringiensis* var. *israelensis* formulations for immediate and residual control of *Aedes albopictus*. *J Am Mosq Control Assoc* 29:385-8.
- Sun D, E Williges, I Unlu, S Healy, G Williams, P Obenauer, T Hughes, G Schoeler, R Gaugler, D Fonseca & A Farajollahi. 2014. Taming a tiger in the city: comparison of motorized backpack applications and source reduction against the Asian tiger mosquito, *Aedes albopictus*. *J Am Mosq Control Assoc* 30:99-105.
- Unlu I, A Farajollahi, I Rochin, T Crepeau, D Strickman & R Gaugler. 2014. Differences in male-female ratios and spatial distribution of *Aedes albopictus* (Diptera: Culicidae) following ultra-low volume adulticide applications. *Acta Tropica* 137:201-5.
- Williges E, A Farajollahi & R Gaugler. 2014. Vertical oviposition preference in the Asian tiger mosquito, *Aedes albopictus* in temperate North America. *J Am Mosq Contr Assoc* 30:169-74.
- Dong, L M Sanad, Y Wang, Y Xu, M Shamseldean & R Gaugler. 2014. Mating clusters in the mosquito parasitic nematode, *Strelkovimermis spiculatus*. *J Invertebr Pathol* 117:19-25.

- Halasa Y, D Shepard, E Wittenberg, D Fonseca, A Farajollahi, S Healy, R Gaugler, K Healy, D Strickman & G Clark. 2014. Quantifying the impact of mosquitoes on quality of life and enjoyment of yard and porch activities in New Jersey. *PLoS ONE* 9:e89221.
- Shepard D, Y Halasa, D Fonseca, A Faraji, S Healy, R Gaugler, K Bartlett-Healy, D Strickman & G Clark. 2014. Economic evaluation of an area-wide integrated pest management program to control the Asian tiger mosquito in New Jersey. *PLoS ONE* 9:e111014.
- Farajollahi A, A Egizi, I Unlu, T Crepeau, S Healy, D Fonseca & R Gaugler. 2014. Comparative host feeding patterns of the Asian tiger mosquito, *Aedes albopictus*, in urban and suburban Northeastern USA and implications for disease transmission. *PLoS Negl Trop Dis* 8:e3037.
- Williams G, A Faraji, I Unlu, S Healy, M Farooq, R Gaugler, G Hamilton & D Fonseca. 2014. Area-wide ground applications of *Bacillus thuringiensis* var. *israelensis* for the control of *Aedes albopictus* in residential neighborhoods: from optimization to operation. *PLoS ONE* 9:e110035.
- Villiard A & R Gaugler. 2015. Long-term effects of carbohydrate availability on mating success of newly eclosed *Aedes albopictus* (Diptera: Culicidae) males. *J Med Entomol* 52:308-14.
- Faraji A & R Gaugler. 2015. Experimental host preference of diapause and non-diapause induced *Culex pipiens pipiens* (Diptera: Culicidae). *Parasit Vectors* 8:1-7.
- Suman D, Y Wang, K Chandel & R Gaugler. 2015. The insect growth regulator pyriproxyfen terminates egg diapause in the Asian tiger mosquito, *Aedes albopictus*. *PLoS ONE* 6:e0130499.
- Hashmi S, Y Wang, D Suman, R Parhar, K Collison, W Conca, F Al-Mohanna & R Gaugler. 2015. Human cancer: is it linked to dysfunctional lipid metabolism? *Biochim Biophys Acta (BBA) – General Subjects* 1850:352-64.
- Faraji A, I Unlu, T Crepeau, S Healy, S Crans, G Lizarraga, D Fonseca & R Gaugler. 2016. Droplet characterization and penetration of an ultra-low volume mosquito adulticide spray targeting the Asian tiger mosquito, *Aedes albopictus*, within urban and suburban environments of northeastern USA. *PLoS ONE* 11:e0152069.
- Chandel, K, D Suman, Y Wang, I Unlu, E Williges, G Williams & R Gaugler. 2016. Targeting a hidden enemy: pyriproxyfen autodissemination strategy for control of the container mosquito *Aedes albopictus* in cryptic habitats. *PLoS Negl Trop* 10.1186/s12986-017-0172-8. 10.1186/s13071-017-2034-7. .
- Lan Y, Y Wang & R Gaugler. 2017. The role of copulatory plugs in the mosquito-parasitic nematode *Strelkovimermis spiculatus*. *J Invertebr Pathol* 146:53-7.
- Sanad M, M Shamseldean, Y Wang, J Sun & R Gaugler. Superparasitism and population regulation of the mosquito-parasitic mermithid nematodes *Romanomermis iyengari* and *Strelkovimermis spiculatus*. *J Nematol* (in press).

PATENTS

- Gaugler R & M Hatab. 2002. Disposable bioreactor for culturing microbes and cells. U.S. No. 6,432,698.
- Gaugler R. 2002. Apparatus & method for production of insecticidal nematodes. U.S. No. 6,474,259.
- Gaugler R & I Brown. 2003. Apparatus and method for separation of nematodes. U.S. No. 6,532,891.
- Gaugler R, D Suman & Y Wang. 2016. Autodissemination of an insect growth regulator for insect management. U.S. No. 9,265,247.

- Gaugler R, Y Wang, K Chandel, D Suman. 2017. Collapsible stackable disposable inexpensive pesticide free traps for surveillance and control of *Aedes* container breeding mosquitoes and other container breeding insects. U.S. No. 20,170,000,101.
- Suman D, K Chandel & R Gaugler. Non-membrane feeding device for mosquitoes. RU2015-145, 2015.
- Wang Y & R Gaugler. Controlling container mosquitoes with habitat sharing non-conspecific insects carrying insect growth regulator. RU2013-058. November 2015.
- Williams G & R Gaugler. Mechanism for dispensing solid mosquito larvicides from unmanned aerial vehicles. RU 2016-076. January 2016.
- Gaugler R, Y Wang, D Suman & K Chandel. A gel formulation of insect growth regulator for auto-dissemination in pest management. RU2016-082. February 2016.
- Gaugler, R, K Chandel, D Suman & Y Wang. Mosquito oviposition attractant and process thereof. RU2016-137. May 2016.

TECHNOLOGY LICENSES

- Gaugler R. 1993. Exclusive for novel nematode strain to Biosys (U.S.).
- Gaugler R. 1994. Genetically improved nematode strain to Ecogen-Australia (Australia).
- Gaugler R. & R Stuart. 1996. Exclusive for genetically improved strain to Bio-Integrated Technol (Italy).
- Gaugler R. & M Hatab. 1998. Culture medium to Integrated BioControl Systems (U.S.).
- Gaugler R. 1999. Novel entomopathogen strain (#326) to SDS Biotech (Japan).
- Gaugler R. 2000 & 2009. Nematode micrographs (3) to Environ Factor (Canada), Bio-Insecta (Greece).
- Gaugler R. 2005. Novel entomopathogen strain to Nematoc (U.S.).
- Gaugler R. 2009. Novel entomopathogen strain to AEF Global (Canada).
- Gaugler R, Y Wang & D Suman. 2014. Option for auto-dissemination station to SpringStar (U.S.)

COMMERCIAL PRODUCTS

- VECTOR-WG*TM - Biosys (U.S.), 1993.
- OTINEM-HB*TM - Ecogen-Australia (Australia), 1994.
- CRUISER*TM - Ecogen (U.S.), 1995.
- NEMA-BIT*TM - Bio-Integrated Technologies (Italy), 1997,
- NEMA-TOP*TM & *NEMA-GREEN*TM - E-Nema GmbH (Germany), 1997.
- TERRANEM*TM - Koppert Biological Systems (The Netherlands), 2001.
- BIOTOPIA*TM - SDS Biotech (Japan), 2001.
- BIO-VANTAG*TM - Nematoc (U.S.), 2005.
- BIOPROTEC*TM - AEF Global (Canada), 2009.
- GRUB BUSTERS*TM - Environmental Factor (Canada), 2013.

INVITED PRESENTATIONS

1989 to present

- 1989** Department of Entomology, Ohio State University (OARDC).
 Dept. Crop Protection, University of Puerto Rico, Mayaguez., Puerto Rico.
 Biosys, Palo Alto.
 Projects Discovery, American Cyanamid, Princeton.
 New Jersey Society for Parasitology, Rahway.
 International Symposium on Entomopathogenic Nematodes, Asilomar.
 Entomological Society of America (EB), Providence.
 Chief Executive Officer, American Cyanamid, Princeton.
Department of Entomology, North Dakota State University, Fargo.
- 1990** Station de Zoologie, Centre de Recherches, INRA, Guadeloupe.
 Urania Corporation, Hamburg, West Germany.
 Ciba-Geigy Corporation, Basil, Switzerland.
 Entomological Society of America (EB), Baltimore.
CARDI, University of the West Indies, Jamaica.
- 1991** Society of Invertebrate Pathology, Flagstaff - 1.
 Society of Invertebrate Pathology, Flagstaff - 2.
 Turfgrass Research Workshop, New Brunswick.
 Biosys, Palo Alto.
 New Jersey Turfgrass Expo, Somerset.
 Entomological Society of America, Reno - 1.
 Entomological Society of America, Reno -2.
Table Ronde Roussel-Uclaf, Institute Scientifique Roussel, Paris, France.
- 1992** Department of Biology, Temple University, Philadelphia.
 Department of Entomology, University of Delaware, Newark.
 Ecogen, Langhorne.
 Division of Entomology, CSIRO, Canberra, Australia.
 Ecogen Australia, Hobart, Tasmania.
 National Turfgrass Breeders, New Brunswick.
 New Jersey Ornamental IPM Conference, Toms River.
 Department of Turf and Ornamentals, Ciba-Geigy, Orlando.
International Congress of Entomology, Beijing, China.
- 1993** U.S. Forest Service, All Scientists Meeting, Mobile.
 ARO-Volcani Center, Bet-Dagan, Israel.
 Entomological Society of America (EB), Williamsburg.
 Ecogen Board of Directors, Langhorne.
 Turfgrass Research Workshop, New Brunswick.
 Agricultura, Alimenti & Ambiente S.r.l., Todi, Italy.
 Northeast Crop Protection Meeting, New Brunswick.
 E-Tech Board of Directors, New York City.
 Natural Enemies Special Conference, Indianapolis.
 Ecogen Symposium, Club 21, New York City.
 Ecogen Seminar Series, Langhorne.
Department of Zoology, University of Cairo, Egypt.
- 1994** Vith International Colloquium of Invertebrate Pathology, Montpellier, France – 1.
 Vith Intern. Coll. Invertebrate Pathol., Montpellier, France - 2.
 APHIS Japanese Beetle Airport Management Meeting, Mt. Laurel.
 Entomological Society of America (EB), Newport.

- Northern Crops Research Laboratory, USDA-ARS, Fargo.
 Entomological Society of America, Dallas.
COST Meeting, Debrecen, Hungary.
- 1995** Czech Academy of Sciences, Czech Republic - 1.
 Czech Academy of Sciences, Czech Republic -2.
 Rutgers Turfgrass Symposium, New Brunswick.
 Institute of Electrical & Electronics Engineers, Amsterdam, Netherlands.
 Bodega Bay Marine Research Laboratory, Bodega Bay.
 Department of Nematology, University of California, Davis.
 Second International Symposium of Entomopathogenic Nematology, Honolulu.
 New Jersey Turf Expo, Atlantic City.
 Landscape Organic Producers, Boston.
Department of Entomology, Penn State University, State College.
- 1996** Genetic Engineering Institute, Chinju, South Korea.
 Sussex College, Sussex.
 Rutgers Turfgrass Science Seminar, New Brunswick.
 Integrated BioControl Systems, Aurora.
 Kyoto University, Kyoto, Japan.
 Saga University, Saga, Japan.
 National Institute of Forestry, Tsukuba, Japan.
Japanese Society of Applied Zoology & Entomology, Yamaguchi, Japan.
- 1997** COST Meeting, Antibes, France -1.
 COST Meeting, Antibes, France - 2.
 COST Meeting, Antibes, France - 3.
 Department of Entomology & Nematology, University of Florida, Gainesville.
 Rutgers Turfgrass Science Symposium, New Brunswick.
 New Jersey Society for Parasitology, Princeton.
Department of Entomology, Texas A&M University, College Station.
- 1998** Duke Seminar, North Carolina State University, Raleigh.
 Environmental Protection Agency, Washington D.C.
 Dept. Parasitology, University of Pennsylvania, Philadelphia.
 Rutgers Turfgrass Science Symposium, New Brunswick.
 Eco Soil Systems, San Diego.
 Entomological Society of America (EB), Cherry Hill.
 Tri-State Research Foundation, Elmsford.
 Alternative Paradigms for BioControl Workshop, New Brunswick.
 OECD Sustainable Pest Management Workshop, Montreal, Canada.
 VIIth International Colloquium on Invertebrate Pathology, Sapporo, Japan.
 Office of Research and Sponsored Programs, Rutgers University, Piscataway.
 Thermo Trilog Corporation, Columbia.
Plant Protection Research Institute, Ankara, Turkey.
- 1999** Instituto de Investigaciones Agropecuarias, Chillan, Chile.
 Johnson & Johnson World Headquarters, New Brunswick.
SARE Insecticidal Nematode Workshop, New Brunswick.
- 2000** Tri-State Research Foundation, Elmhurst.
 Rutgers Turfgrass Symposium, New Brunswick – 1.
 Rutgers Turfgrass Symposium, New Brunswick – 2.
 Halim University, South Korea.
 Kang Won University, South Korea.

- Yang Pharmaceuticals University, South Korea.
InBionet, South Korea.
International Congress of Entomology, Iguasso, Brazil.
- 2001** Kasetsart University, Bangkok, Thailand.
Organizacion de Nematologos de los Tropiclos Americanos, Varadero, Cuba.
Industrial Society for Microbiology, St. Louis.
Lockwood Lecture, Connecticut Agricultural Experiment Station, New Haven.
- 2002** U.S.-Egypt Biopesticide Workshop, Sharm El-Sheik, Egypt - 1.
U.S.-Egypt Biopesticide Workshop, Sharm El-Sheik, Egypt - 2.
U.S.-Egypt Biopesticide Workshop, Sharm El-Sheik, Egypt - 3.
Ethiopian Agricultural Research Organization, Ambo, Ethiopia.
Ministry of Agriculture, Ras-Al Khaimah, United Arab Emirates -1.
Ministry of Agriculture, Ras-Al Khaimah, United Arab Emirates - 2.
Royal Golden Jubilee Congress, Bangkok, Thailand.
Centro Nacional de Sanidad Agropecuaria, Havana, Cuba.
Plant Protection Conference, Cheng Mai, Thailand.
- 2003** Rutgers Turfgrass Science Symposium, New Brunswick.
Indian Agricultural Research Institute, Delhi, India.
Institute of Plant Protection, Ministry of Agriculture, Chisinau, Moldova.
American Phytopathology Society, Charlotte.
Third International Symposium on Entomopathogenic Nematodes, Eilat, Israel.
- 2004** Society of Invertebrate Pathology, Helsinki, Finland.
USDA-ARS Laboratory, Stoneville.
University of Neuchatel, Neuchatel, Switzerland - 1.
University of Neuchatel, Neuchatel, Switzerland - 2.
Shawnee State University, Portsmouth.
- 2005** CRDF & MRDA International Conf., Chisinau, Moldova.
International Conference, Chisinau, Moldova.
Chinese Academy of Sciences, Harbin, China.
Institute of Environment, Beijing, China.
(a) Chinese Academy of Sciences, Guangzhou, China.
(b) Chinese Academy of Sciences, Guangzhou, China.
University of Sao Paulo, Jacoticabal, Brazil.
Andermatt Biocontrol AG, Grossdietwil, Switzerland.
Biotechnology Conference, Cairo, Egypt.
- 2006** Egyptian Ministry of Agriculture, Cairo, Egypt.
Faculty of Agriculture, Cairo University, Cairo, Egypt - 1.
Faculty of Agriculture, Cairo University, Cairo, Egypt - 2.
Faculty of Science, Cairo University, Cairo, Egypt - 1.
Faculty of Science, Cairo University, Cairo, Egypt - 2.
Department of Entomology, Cairo University, Cairo, Egypt.
National Research Centre, Cairo, Egypt.
Fulbright Association, Washington D.C.
Chinese Academy of Sciences, Harbin, China.
Shanghai Forestry Station, Shanghai, China.
Chinese Academy of Sciences, Beijing, China.
VIIth Latin American Scarabaeoidology Meeting, Santa Cruz, Bolivia.
- 2007** Applied Centre for Entomonematology, Cairo University, Cairo, Egypt.
First International Forum on EPN, Quebec City, Canada.

- Vector Biology Summit, New Brunswick.
 Bolley Distinguished Alumni Lecture, North Dakota State University, Fargo.
 CSREES Review of NJAES, New Brunswick.
 NorthEast Mosquito Control Association, Plymouth.
Inaugural Distinguished Faculty Colloquium, Rutgers University, New Brunswick.
- 2008** Plant & Animal Genome XVIth Conference, San Diego.
 NJ State Mosquito Control Commission, New Brunswick.
 International Congress of Nematology, Brisbane, Australia.
 New Jersey Mosquito Control Association, Atlantic City.
 Heilongjiang Academy of Agricultural Sciences, Harbin, China
 Harbin Medical University, Harbin, China
 Northeast Agricultural University, Harbin, China
 Chinese Academy of Sciences, Harbin, China.
 New Jersey Quarterly Mosquito Biologists Workshop, New Brunswick.
US Naval Medical Research Unit No. 3, Cairo, Egypt.
- 2009** Keystone Symposia: Complications of Diabetes & Obesity, Vancouver, Canada.
 Chinese Academy of Sciences, Harbin, China.
 New Jersey Quarterly Mosquito Biologists Workshop, New Brunswick.
 New Jersey Mosquito Control Association, Atlantic City.
 Risk Assessment Modeling Workshop, New Brunswick.
Fulbright 60th Anniversary Symposium, Alexandria, Egypt.
- 2010** Deployed WarFighters Fund, New Brunswick.
 MGK Corp., New Brunswick.
 Clarke Mosquito Control, New Brunswick.
Chinese Academy of Sciences, Harbin, China.
- 2011** Naval Entomology Center for Excellence, Jacksonville.
 Valent Bioscience Corp., New Brunswick.
 Anastasia County Mosquito Control District, St. Augustine.
 Clarke Mosquito Control, New Brunswick.
 Northeast Agricultural University, Harbin, China.
 MGK Corp., New Brunswick.
International Conference on Biopesticides, Chiang Mai, Thailand.
- 2012** Chinese Academy of Sciences, Harbin, China.
 NorthEast Agricultural University, Harbin, China.
 US Naval Medical Research Unit No. 3, Cairo, Egypt.
 Cairo University, Cairo, Egypt.
 Naval Entomology Center for Excellence, Jacksonville.
 MGK Corp., Minneapolis.
Vector Biology Section, NAMRU3, Cairo, Egypt.
- 2013** Vector Biology Section, US Naval Medical Research Unit No. 3, Cairo, Egypt.
 Fulbright Enrichment Seminar Series, Cairo, Egypt.
 Agricultural Research Center, Cairo, Egypt.
 American Mosquito Control Association, Atlantic City.
 Department of Zoology, Cairo University, Cairo, Egypt.
 Fulbright Symposium, Za'afarana, Egypt.
Sumitomo Chemical, New Brunswick.
- 2014** Entomological Society of America, Portland.
 Department of Entomology, Rutgers University, New Brunswick.
 MGK Corp., Minneapolis.

NorthEast Agricultural University, Harbin, China.

Sumitomo Corp and MGK Corp, Minneapolis.

- 2015** AMCD 12th Annual Arbovirus Surveillance & Control Workshop, St. Augustine - 1.
 AMCD 12th Annual Arbovirus Surveillance & Control Workshop, St. Augustine - 2.
 Department of Entomology, Rutgers University, New Brunswick.
 EPN Production Technologies, Center for Vector Biology, Rutgers University, New Brunswick.
 Department of Entomology, Tarbiat Modares University, Kiraj, Iran.
 Department of Medical Entomology, University of Tehran, Iran.
 Department of Plant Protection, Ferdowsi University, Mashad, Iran.
 Department of Medical Entomology, Shiraz University of Medical Sciences, Shiraz, Iran.
 Iranian Research Institute of Plant Protection, Tehran, Iran.
 Daqing University, Daqing, China.
Center for Vector Biology, People's Liberation Army, Beijing, China.
- 2016** Keynote Address, West Central Mosquito & Vector Control Association, Grand Junction - 1
 West Central Mosquito & Vector Control Association, Grand Junction – 2
 Keynote Address, Williston Vector Control District Banquet, Williston.
 Center for Unmanned Aerial Systems, Rutgers University, Piscataway.
 Turfgrass Expo, Atlantic City.
Keynote Address, Mosquito Control of Australia Association, Gold Coast, Australia.
- 2017** Rollins Chemical Corporation, New Brunswick.
 American Mosquito Control Association, San Diego.
 5th Intern. Forum for Surveillance of Mosquitoes and Mosquito-borne Diseases. Nanking, China.
 Kolkata Zoological Survey of India, Kolkata, India.
 Pyriproxyfen autodissemination for Malaria Suppression Conference, Geneva, Switzerland
 Keynote Address, Utah Mosquito Control Association, Park City.

COMPETITIVE GRANTS

1989 to present (\$17.2 M)

- USAID-PSTC, 1987-89. Biocontrol of *Phyllophaga* spp. Gaugler & Gonzalez. \$125,000.
- USDA-CRGP, 1987-89. Genetic improvement of parasites. Gaugler & McGuire. \$90,000.
- SeaGrant, 1988-89. Mating habits of saltmarsh tabanids. Gaugler & Schutz. \$1300.
- USDA-CRGP, 1988-89. Advances with insect nematodes. Gaugler & Kaya. \$16,000.
- Turfgrass Research Fund, 1988-93. Host-parasite interactions with scarab larvae. Gaugler. \$69,000.
- USDA-Subtropical, 1988-91. Biocontrol of sweetpotato weevil. Jansson et al. \$135,000.
- BARD, 1989-92. Enhanced biocontrol potential by mutant analysis. Gaugler et al. \$220,000.
- USDA Subtropical, 1989-92. Biocontrol of *Liriomyza*. Hara, Kaya & Gaugler. \$125,000.
- USDA-IPM Pilot Project, 1990-93. Biocontrol of Japanese beetle. Klein et al. \$171,500.
- USAID, 1991-92. Development of biocontrol cottage industry. Jansson & Gaugler. \$5000.
- USDA, 1991-93. Biocontrol of white grubs. Harrison, Gaugler, Kaya & Klein. \$339,000.
- U.S. Golf Association, 1991-94. Environmental fate of entomopathogens. Klein et al. \$60,000.
- USDA-Subtropical, 1991-94. Soil characteristics of insect nematodes. Jansson et al. \$145,000.
- NJ Dept. Agriculture, 1992-95. Insect-parasite population dynamics in turf. Yoder et al. \$22,400.
- USDA-OICD, 1992. Biological insecticides for scarabs. Kaya & Gaugler. \$5000.
- BARD, 1992-95. Host selection & adaptation in an entomopathogen. Gaugler et al. \$220,000.
- USAID, 1992-95. Genetic engineering for environmental tolerance. Gaugler et al. \$600,000.
- USDA, 1993-95. Biocontrol of diamondback moth. Kaya, Tabashnik & Gaugler. \$134,000.
- BARD, 1993-96. Enhancement of pathogen stability by mutagenesis. Glazer et al. \$275,000.
- Turfgrass Research Fund, 1994-97. Development of bioinsecticides for scarabs. Gaugler. \$207,000.

- National Biological Control Institute, 1995. Intern. Symposium. Gaugler & Kaya. \$5000.
- LT/GCSANE Fund, 1995. Insect-nematode population dynamics. Lewis & Gaugler. \$8700.
- National BioControl Institute, 1996-97. Inoculative release strategies. Gaugler et al. \$18,750.
- CDFA, 1996-99. Comparing biocontrol vs diazinon. Kaya, Gaugler & Koppenhofer. \$140,000.
- USDA-NRI, 1996-98. Risk assessment of a transgenic organism. Gaugler et al. \$145,750.
- GCSAA Foundation, 1997-00. Culturing of white grub parasites. Gaugler. \$30,000.
- Foreign Agricultural Service, 1997-00. Parasite discovery: Chile. Gaugler & France. \$30,000.
- National Biological Control Institute, 1997-98. New biocontrol paradigms. Gaugler. \$5000.
- Tri-State Foundation, 1997-00. New technology for insecticidal nematodes. Gaugler. \$30,000.
- SARE, 1997-00. Multi-media aids & in-service training for a biological. Gaugler et al. \$59,000.
- Turfgrass Research Fund, 1997-04. Insect defenses against nematode infection. Gaugler. \$124,000
- USDA-SBIR, 1998. Nematodes as slug parasites. Shapiro et al. \$64,275.
- Geraldine Dodge Foundation, 1998. Alternative paradigms for biocontrol. Gaugler. \$10,000.
- Horticultural Research Institute, 1998-99. Biocontrol of mollusks. Gaugler & Wilson. \$10,000.
- USDA, 1998-01. Biocontrol of plant-parasitic nematodes. Sipes, Kaya & Gaugler. \$152,000.
- BARD, 1998-01. A molecular approach to entomopathogen stability. Gaugler et al. \$280,000.
- U.S.-Egypt Science & Techn. Fund, 1999-01. Parasite genetic engineering. Gaugler et al. \$50,000.
- Horticultural Research Institute, 1999-00. Introduction of exotic parasite. Brown & Gaugler. \$12,000.
- Thailand Research Fund, 2000-2002. Training in biological control. Gaugler. \$7900.
- USDA-NRI, 2000-03. New micro-fermentation technology. Gaugler. \$178,000
- Science & Technology Fund, 2001-02. International symposium. Gaugler et al. \$50,000.
- BARD, 2001-02. Entomopathogenic nematodes and symbionts. Gaugler & Glazer. \$35,000.
- U.S.-Egypt Science & Techn. Fund, 2002-04. In vivo mass production system. Gaugler et al. \$47,000.
- USDA-NRI, 2002-05. Genetic engineering anti-immune proteins. Cox-Foster et al. \$299,000.
- USDA-NRI, 2002-05. Entomopathogen strain stability. Shapiro, Gaugler & Adams. \$300,000.
- Civilian R&D Foundation, 2003-05. Discovery & ID of EPN. Gaugler & Gebre. \$35,000.
- Lindbergh Foundation, 2003-05. Achieving sustainability via biopesticides. Gaugler. \$10,580.
- Fulbright, 2005-06. Entomopathogen production in the Middle East. Gaugler. \$24,200.
- NIH, National Human Genome Research Institute, 2005-08. Genome sequencing of *H. bacteriophora*. Grewal, Adams, Ciche, Gaugler & Sternberg. \$1,840,000.
- NSF/NRI, 2006-08. The entomopathogenic nematode genome consortium: sequence annotation for *Heterorhabditis bacteriophora*. Grewal, Adams, Ciche, Gaugler & Sternberg. \$240,000.
- U.S.-Egypt Science & Technology Fund, 2007. Entomonematology training. Gaugler. \$51,870.
- EPA-PESP, 2007-08. New Jersey light traps and risk assessment. Reed et al. \$50,000
- NJDEP, 2007-09. Free-ranging birds and mosquito-borne arboviruses. Reed et al. \$51,029.
- Academic Excellence Fund, 2008-09. Climate & health initiative. Fefferman et al. \$75,000.
- Academic Excellence Fund, 2008-09. Climate change. Broccoli et al. \$75,000.
- Academic Excellence Fund, 2008-09. Risk assessment modeling. Fefferman et al. \$5760.
- USDA-CSREES, 2008-09. International Asian tiger mosquito symposium. Gaugler et al. \$10,000.
- Busch Biomedical Research Fund, 2008-10. RIDL transgenic mosquitoes. Gaugler et al. \$50,000.
- USDA-ARS, 2008-2013. Area-wide suppression of Asian tiger mosquito. Clarke et al. \$3,787,300.
- Deployed War Fighter Protection, 2010-12. Strategies for using pyriproxyfen. Gaugler et al. \$307,110.
- Proof-of-Concept Fund, Rutgers, 2011. Apparatus for autodissemination of an IGR. Gaugler. \$35,000.
- Robert Wood Johnson Foundation, 2011-13. Mosquitoes & child obesity. Worobey et al. \$124,015.
- NIH-SBIR, 2012-13. Phase I: Development of an AD station. Banfield & Gaugler. \$150,000.
- Deployed War Fighter Protection, 2012-15. Autodissemination technologies. Gaugler et al. \$300,000.
- USDA-ARS, 2014. Suppl: Area-wide suppression of Asian tiger mosquito. Clarke et al. \$115,803.

- NIH–SBIR, 2014-16. Phase II: Development of an AD station. Banfield, Wang & Gaugler. \$1,482,580.
- Ctr. for Unmanned Aerial Systems. 2016-17. Precision mosquito control. Gaugler & Williams. \$10,000.

CONTRACTS & GIFTS

- Various industry sources 1990-2006 (e.g., Biosys, Cyanamid, Ecogen, Mycogen, etc.). \$704,500.
- New Jersey State Mosquito Control Commission, 2006. \$192,028
- New Jersey State Mosquito Control Commission, 2007. \$246,442.
- Clarke Mosquito Control Company, 2008. \$160,000.
- Zoecon, 2008. \$76,000.
- NJ State Mosquito Control Commission, 2008. \$277,000.
- New Jersey & NorthEast Mosquito Control Association(s), 2008. \$3500.
- TIFA Worldwide, Adapco, SpringStar, 2009. \$4000.
- Clarke Mosquito Control, w/ Farajollahi, Crans et al., 2009. \$32,000.
- Valent, w/ Williams et al., 2009. \$22,000.
- NJ State Mosquito Control Commission, 2009. \$137,000.
- Clarke Mosquito Control, w/ Crans et al., 2010-11. \$52,000.
- Valent, w/ Williams & Farajollahi, 2010. \$20,000.
- MGK Corporation, 2010-12. \$100,000.
- Clarke Mosquito Control, w/ Crans et al., 2012-14. \$30,000.
- SpringStar, 2014-16. \$24,000

ADVISORY BOARDS

- Editorial Board (Associate Editor), *Journal of Nematology*, 1981-83.
- Review Panel, USDA Competitive Research Grants Program, Biological Stress, 1983, 1985 & 1987.
- Program Manager, USDA Competitive Research Grants Program, Biological Stress, 1988-89.
- Scientific Advisory Board, Biosys (Palo Alto, Calif.), 1989-92.
- Editorial Board, *Biological Control* (Academic Press), 1990-01.
- Scientific Advisory Board, Ecogen (Langhorne, Penn.), 1992-94.
- Editor, *Journal of Nematology*, 1992-96.
- Michigan Human Living Environment IPM Advisory Taskforce, 1994-95.
- Scientific Advisory Board, Chair, Ecogen-Europe (Perugia, Italy), 1994-95.
- Editorial Board, *Applied Soil Ecology*, 1997-2003.
- Review Team, USDA/ARS Application Technology Research Unit – Wooster, 1998.
- Board of Scientific and Policy Advisors, American Council on Science & Health, 1999-2010.
- Advisory Board, *International Journal of Biology & Biotechnology*, 2003-present.
- Scientific Advisor, International Foundation for Science (Sweden), 2003-08.
- External Review Team, Department of Plant & Soil Science, West Virginia University, 2003.
- Advisory Board, Applied Centre for Entomonematology, Cairo University, Egypt, 2005-present.
- Editorial Board, *Pakistan Journal of Nematology*, 2007-present.
- Editorial Board, *Trends in Biosciences*, 2008-present.
- Busch Biomedical Research Advisory Committee, 2010-present.
- Review Team, AAAS panel for King Abdulaziz City for Science & Technology (Saudi Arabia), 2010.
- New York City Zika Virus Expert Panel, 2016-present.

PROFESSIONAL SERVICE

- Program Committee, Entomological Society of America (EB), 1983.
- Local Arrangements Committee, Society of Nematologists, 1983-84.
- Membership Committee, Entomological Society of America (EB), 1983-84.
- Chair, Color Atlas Committee, Society for Invertebrate Pathology, 1983-86.
- Employment Committee, Entomological Society of America (EB), 1984-86.
- Linnaean Games Committee, Entomological Society of America (EB), 1984-86.
- Local Arrangements Committee, Entomological Society of America (EB), 1987.
- Chair, Tellers Committee, Society for Invertebrate Pathology, 1988.
- Secretary, Subsection Ce, Entomological Society of America, 1988-89.
- Display Presentations Coordinator, Entomological Society of America, 1989.
- Organizer (w/ H. Kaya), First International Symposium of Entomopathogenic Nematodes, 1989.
- Chair, Nematode Subcommittee, S-135 Regional Research Project, 1989-93.
- Chair-Elect, Subsection Ce, Entomological Society of America, 1989-90.
- ESCOP Working Group on Biological Control, 1991-99.
- Regulatory Workshop Organizing Committee, ESCOP WG on Biocontrol, 1990-91.
- Head Judge, President's Prize, Entomological Society of America, 1990.
- Tropical Pest Biology Center Organizing Committee, University of Hawaii, 1990-92.
- Chair, Subsection Ce, Entomological Society of America, 1990-91.
- Membership Committee, Society of Nematologists, 1991-92.
- Nominations Committee, Section C, Entomological Society of America, 1991.
- Honors and Awards Committee, Society of Nematologists, 1991-94.
- Liaison Journal Committee, Entomological Society of America, 1991-92.
- External Examiner, Institute of Plant Protection, Poznan, Poland, 1993-present.
- CSRS Study of the Science of Nematology, 1992-94.
- Entomophilic Nematode Executive Committee, Society of Nematology, 1992-96.
- Member-at-Large, S-235 Regional Research Project, 1992-94.
- Secretary, S-240 Regional Research Project, 1994-96.
- Coordinator, Student Awards Committee, Society of Invertebrate Pathology, 1995.
- Organizer (w/ H. Kaya), Second Intern. Symposium of Entomopathogenic Nematology, 1995.
- Black Fly Joint Study Group, Rutgers / New Jersey DEP / Pennsylvania DEP, 1995-97.
- Chair, S-265 Regional Research Project "Entomopathogens in IPM Systems", 1996-98.
- Co-Chair, ESCOP Working Group on Biological Control, 1996-99.
- Organizer, Alternative Paradigms for Commercializing BioControl Intern. Workshop, 1997-98.
- Co-Major Advisor, A. Sasnarukit, PhD Committee, Kasetsart University, Thailand, 1999-04.
- Board of Examiners, Randa Abdel Rahman, University of Cairo, 2000.
- Donors Relations Committee, Society of Nematologists, 2000-04.
- Board of Examiners, P. Sundararaj, Bharathiar University, India, 2001.
- Consultant for the Darwin Foundation, Galapagos Islands., 2001.
- Led fund-raising effort establishing the Entomophilic Nematode Endowment, 2001.
- Board of Examiners, Lourdes Portales, University of Havana, Cuba, 2002.
- Co-Organizer, U.S.-Egypt Symposium on Entomopathogenic Nematodes, Egypt, 2002.
- Board of Examiners, P. Alagesan, Madurai Kamaraj University, India, 2003.
- Co-Chair, Rules Committee, Entomological Society of America (EB), 2002-06.
- Co-Organizer, Rutgers – Ethiopian Agricultural Research Organization EPN Workshop, 2004.
- International Organizing Committee, International Conference on Biodiversity of Insects, 2005-06.

- Fulbright Orientation Leader for North Africa, Middle East and South Asia. Washington, DC, 2006.
- BioControl Review Committee (*Beddingsia* release petition), No. America Plant Protection Org., 2006.
- New Jersey West Nile Virus Task Force, 2006-09.
- Chair, NE-507 Multistate Research Project “Mosquitoes, Disease & Public Health,” 2008-present.
- Board of Examiners, Manar Sanad, University of Cairo, 2009-2013.
- Board of Examiners, Mustafa Hemmant, University of Cairo, 2010-13.
- EPA Experimental Use Permit awarded for pyriproxyfen, DWFP/IR4 Team, 2011.
- Board of Examiners, Hana Haji Allahverdi, University of Tehran, Iran, 2014-2017.
- Conference Council, 5th Intern Forum for Mosquito Surveillance & Disease. Nanking, China, 2017.

OUTREACH

Leader, Insecticidal Nematode Outreach Team, 1997-2001. Development of multi-media instructional aids (e.g., video, website, workshop, electronic expert panel, consumer guide, fact sheets, wall poster, manual, bibliography, etc.) that provide extension personnel with tools to assist growers in using nematodes effectively. Sixty team members from 21 states.

Consultant (e.g. Biosys, Integrated BioControl Systems, Ecogen, Great Lakes Chemical, Hyponex, Johnson & Johnson, Environmental Factor, ThermoTrilogy, etc.) in technology transfer.

Gaugler R. 1997. Nematodes. In “Biological Control: A Guide to Natural Enemies in North America” (Weeden et al., eds). <http://www.nysaes.cornell.edu/ent/biocontrol/pathogens/nematodes.html>.

Wilson M & R Gaugler. 1997. *Phasmarhabditis hermaphrodita*. In Biological Control: A Guide to Natural Enemies in North America (Weeden et al., eds). http://www.nysaes.cornell.edu/ent/biocontrol/pathogens/phasmarhabditis_h.html.

Gaugler R. 1997. Know your nematodes. *Golf Course Management*. December, pp. 64-68.

Graphics contributed and consultant for permanent nematode exhibit in Biodiversity Hall, American Museum of Natural History, 1998.

Leader, Nematode Poster Design Team. 1998. Developed educational wall poster on nematodes.

Executive Producer, "Nematodes as Pest Management Tools", 30 min training video, 1998.

Smith-Fiola D & R Gaugler. 1999. Everything you always wanted to know about beneficial nematodes. *The County Agent* 59:5-13.

Gaugler R. 1999. Matching nematodes to target hosts. Feature Article in *Midwest Biological Control News* 6(11):1-6. Reprinted as lead article in *The IPM Practitioner*, 2000.

Miles C, C Blethen & R Gaugler. 2000. Using beneficial nematodes for crop insect pest control. *Pacific NW Extension Publ* 544. 12 pp.

Gaugler R. 2000. Matching nematodes to target hosts. *The IPM Practitioner* 22(2):1-6.

Smith-Fiola D & R Gaugler. 2000. The nematode advantage. *Amer Nurseryman* 191:90-102.

Miles C, C Blethen & R Gaugler. 2001. Using beneficial nematodes for crop insect pest control. *Agrichemical & Environmental News*, Vol. No. 180, April.

Directed New Jersey state-wide arbovirus and adult mosquito surveillance programs, 2006-11.

Nelder M & R Gaugler. 2008. New Jersey black flies. NJAES Coop Extension Fact Sheet FS1090.

Miles C, C Blethen, R Gaugler, D Shapiro-Ilan & T Murray. 2012. Using entomopathogenic nematodes for crop insect pest control. *Pacific NW Extension Publ* 544. 11 pp.

Gaugler R & A Faraji. 2016. What New Jersey residents need to know about Zika virus. <http://vectorbio.rutgers.edu/Zika.htm>. New Jersey Agricultural Experiment Station.

TEACHING EXPERIENCE

Full member of Graduate Programs in 1) Ecology & Evolution
2) Entomology, and 3) Plant Biology

- General Biology
- Turfgrass Pest Science
- Biological Control
- Principles of Ecology
- Insect Ecology
- Short Course in Biological Control of Vectors (Chiapas, Mexico), 1983.
- Short Course in Entomopathogenic Nematology (Sao Paulo University, Brazil), 2005.
- Short Course in Entomopathogenic Nematology (Chinese Academy of Science, Harbin), 2006.
- Short Course in Insect Nematology (Cairo University), 2007.
- Contributor to: Advanced Insect Pathology (Cornell University), Host Recognition Short Course (University of Neuchatel, Switzerland), Advanced Training in Entomological Theory & Practice (Chinese Academy of Sciences, Beijing) and various courses at Cairo University (Egypt).

Teaching effectiveness rated 4.72 / 5.0 at <http://www.ratemyprofessors.com>

HONORS & AWARDS

- Outstanding College Athletes of America, 1970.
- National Science Foundation Graduate Traineeship, 1972-1974.
- Commencement Speaker, North Dakota State University at Bottineau, 1988.
- USDA Certificate of Appreciation for Outstanding Service, 1989.
- Athletic Hall of Fame, North Dakota State University at Bottineau, 1990.
- Research Excellence Award. Rutgers University, 1993.
- Fellow of the Japanese Society for the Promotion of Science, 1994.
- Team Research Excellence Award. Rutgers University, 1995.
- Sustained Research Excellence Award. Rutgers University, 1996.
- Fellow of the Society of Nematologists, elected 1997.
- Board of Trustees Award for Excellence in Research, Rutgers University, 1998.
- Communicator Award of Distinction (1999), Educational Award from the Board Certified Entomologists of Mid-America (2000), and Award of Excellence from The Videographer Awards (2000) as Executive Producer of 'Nematodes as Pest Management Tools' video.
- Excellence in Integrated Pest Management Award, Entomological Society of America, 1999.
- Fellow of the American Association for the Advancement of Science (AAAS), elected 1999.
- Education Award, 'Insect Nematodes' website, Certified Entomologists of Mid-America, 2000.
- Outstanding BARD Research Project (top 15%) (w/ I. Glazer), BARD 20-year review, 2001.
- Recognition Award in Entomology, Entomological Society of America, 2004.
- New species named *Mononchooides gaugleri*, 2005.
- Fellow of the Entomological Society of America, elected 2005.
- Fulbright Senior Scholar, Egypt, 2005-06.
- Development of "molecular methods for genetic improvement" one of top ten New Jersey Agricultural Experiment Station Research Milestones - 1862 to 2005.
- Listed among 'Prominent Nematologists' by Nematode-Plant Expert Information System, 2005.
- Listed among 'Pioneers in Insect Nematology,' *Journal of Invertebrate Pathology* 89:57, 2005.

- Adjunct Member, Chinese Academy of Sciences, 2006-present.
- Albert Einstein Professor of the Chinese Academy of Sciences, 2006. The 14 recipients included six Nobel laureates.
- Distinguished Lecturer (inaugural), School of Environmental & Biological Sciences, Rutgers U., 2007.
- Henry L. Bolley Alumni Achievement Award (inaugural), North Dakota State University, 2007.
- Hall of Fame, West Fargo High, 2010.
- Professorship for Senior International Scientists, Chinese Academy of Sciences, 2012.
- Golden Service Award, Dakota College, 2012.
- Invited Foreign Expert, China International Economic & Trade Exposition, 2012.
- International Excellence Award, School of Environmental & Biological Sciences, Rutgers, 2012.
- Fulbright Senior Scholar, Egypt, 2012-13.
- L.O. Howard Distinguished Achievement Award, Entomological Society of America (EB), 2012.
- Memorial Lecturer, American Mosquito Control Association, 2013.
- Team Excellence Award, School for Biological & Environmental Sciences, Rutgers University, 2014.
- Team Award, Entomological Society of America, 2014.
- Medal of Honor, American Mosquito Control Association, 2017.
- Distinguished Fulbright Chair, 2017-18.

CITATION INDICESGoogle Scholar Citations **13,076** h-index **62** i10 index **197**