

Parwinder S. Grewal

A. Personal Information

Address 3101 Page Avenue, Edinburg, TX 78539, USA
Citizenship American
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B. Education

1990 Ph.D. Zoology, Imperial College London, United Kingdom
1983 MS Plant Pathology (Thesis: Nematology), Punjab Agricultural University, Ludhiana, Punjab, India
1981 BS Agriculture (Hons: Plant Protection), Punjab Agricultural University, Ludhiana, Punjab, India

C. Professional Positions Held

2018 - Executive Vice President for Research, Graduate Studies & New Program Development, University of Texas Rio Grande Valley, TX
2015 - 2018 Founding Dean, College of Sciences, University of Texas Rio Grande Valley, TX
2014 (3 mo) Fulbright Scholar, Stockholm Resilience Center, Stockholm University, Sweden
2013 - 2015 Department Head & Professor, Entomology and Plant Pathology, University of Tennessee, Knoxville, TN
2008 - 2013 Founder and Director, OARDC Research Internships Program, The Ohio State University, Wooster, Ohio
2006 - 2013 Professor of Entomology (with courtesy appointments in Plant Pathology and Environmental Science Graduate Program), The Ohio State University, Wooster, Ohio
2004 - 2013 Founder and Director, Center for Urban Environment and Economic Development, The Ohio State University, Wooster, Ohio
2003 - 2013 Founder and Director, Urban Landscape Ecology Program, OARDC, The Ohio State University, Wooster, Ohio
2002 - 2005 Associate Professor of Entomology (with courtesy appointments in Plant Pathology and Environmental Science Graduate Program), The Ohio State University, Wooster, Ohio
1997 - 2001 Assistant Professor of Entomology (with courtesy appointments in Plant Pathology and Environment Science Graduate Program), The Ohio State University, Wooster, Ohio
1997 (2 mo) Scientific Advisor to the Director, Bio Integrated Technology, Perugia, Italy
1995 - 1997 Research Group Leader, Biosys, Inc., Columbia, Maryland
1993 - 1995 Senior Scientist and Research Manager, Biosys, Inc., Palo Alto, California
1991 - 1993 Post-doctoral Research Associate, Entomology, Rutgers University, New Jersey
1990 - 1991 Higher Scientific Officer, Entomology, HRI, Littlehampton, England
1989 - 1990 Scientific Officer, Entomology, HRI, Littlehampton, England
1984 - 1987 Scientist, Entomology and Nematology, NCMRT, ARS, Solan, India

D. Awards

2013 Fulbright Scholar Award, US Department of State and Stockholm University, Sweden.
2011 University Distinguished Scholar Award, The Ohio State University, Columbus, Ohio.
2011 OARDC Innovator of the Year Award, The Ohio State University, Wooster, Ohio.
2009 Fellow of the Society of Nematologists, USA.

- 2009 OARDC Distinguished Senior Faculty Award, The Ohio State University, Wooster, Ohio.
- 2008 Recognition Award in Urban Entomology, Entomological Society of America, USA.
- 2003 Award for Excellence in Integrated Pest Management, Entomological Society of America, USA.
- 2002 Syngenta Crop Protection Award, Society of Nematologists, USA.
- 2002 OARDC Distinguished Junior Faculty Award, The Ohio State University.
- 2000 Educational Project Award by the Board Certified Entomologists of Mid-America for the Website on Insect-parasitic nematodes.
- 2000 Educational Project Award by the Board Certified Entomologists of Mid-America for the Video on insect-parasitic nematodes.
- 1999 Lindbergh Award for Environmental Achievement.
- 1999 OARDC Departmental Research Award for Innovation.
- 1991 Young Scientist of the Year-1991 Award by the UK Mushroom Growers Association.
- 1987 PhD Fellowship Award by the Royal Commission of London.
- 1983 University Gold Medal for All-round Best M.S. Agricultural Sciences Student.
- 1981 First Place in the All-India ICAR Junior Research Merit Scholarship Examination in Nematology.

E. Teaching and Student Service

1. Courses Taught

- 2015 EPP 520 (Nematology, 2+1 cr); SP. Bernard and Grewal
- 2014 EPP 604 (Advanced Topics in Nematology – Induced Systemic Resistance, 3 cr); AU. Grewal
- 2014 EPP 603 (Research Planning – Fungal Endosymbionts and Biological Control, 3 cr); AU. Grewal
- 2013 EPP 604 (Advanced Topics in Nematology – Foliar Nematodes, 3 cr); AU. Grewal
- 2012 Entomology 6701 (Biodiversity Analysis for Ecosystem Stability and Resilience, 2 cr); AU. Grewal
- 2011 Entomology 650 (Biological Control, 3+1 cr); SP. Grewal and Canas
- 2009 Entomology 694 (Urban Agriculture and Ecosystem Services, 4 cr); SU. Grewal, Kleinhenz, Ling
- 2007 Entomology 694 (Environmental Bioindicators, 3+2 cr); SU, Grewal
- 2007 Entomology 650 (Biological Control, 3+1 cr); SP. Grewal and Horn
- 2005 Entomology 795D (Ecological Landscape Design-II, 3+0 cr); AU, Grewal
- 2005 Entomology 694 (Ecological Landscape Design-I, 2+2 cr); SU, Grewal, Cardina, Georg
- 2005 Entomology 650 (Biological Control, 3+1 cr); SP, Grewal and Horn
- 2003 Entomology 694 (Ecological Nematology, 2+2 cr); SU, Grewal
- 2003 Entomology 650 (Biological Control, 3+1 cr); SP, Grewal and Horn
- 2002 Entomology 795D (Symbiosis and Biological Control, 2+0 cr); SU, Grewal
- 2001 Entomology 650 (Biological Control, 3+1 cr); SP, Grewal and Horn
- 1999 Entomology 650 (Biological Control, 3+1 cr); SP, Grewal, Horn, Hall

2. Graduate Students Mentored

a. Served as Major Professor [15 Ph.D. and 10 MS)

Janani Hariharan, M.S. Environmental Science, graduated July 2015

Thesis title: SOIL MICROBIAL COMMUNITIES UNDER DIFFERENT TYEPES OF TILLAGE AND CROP ROTATIONS

Kuhuk Sharma, Ph.D. Environmental Science, graduated July 2014

Thesis title: ASSESMENT OF HEAVY METAL CONTAMINATION AND RESTORATION OF SOIL FOOD WEB STRUCTURAL COMPLEXITY IN URBAN VACANT LOTS

Harit K. Bal, Ph.D. Entomology, graduated Jan 2013, Major Professor

Thesis title: DISPERSAL OF ENTOMOPATHOGENIC NEMATODES WITH CONTRSATING FORAGING BEHAVIOR

Jennifer Reeves, M.S. Environmental Science, graduated December 2012

Thesis title: ASSESSMENT OF SOIL HEALTH IN URBAN COMMUNITY GARDENS
Priyanka Yadav, M.S. Entomology, graduated March 2012

Thesis title: BELOW GROUND BIOLOGICAL CONTROL IN URBAN LANDSCAPES AND ASSESSMENT OF FACTORS INFLUENCING ITS ABUNDANCE
Patchareewan Maneesakorn, Ph.D., Entomology, graduated March 2010, Major Co-Professor

Thesis title: PHYLOGENETIC AND CO-PHYLOGENTIC RELATIONSHIPS BETWEEN ENTOMOPATHOGENIC NEMATODES AND THEIR SYMBIOTIC BACTERIA
Hanbae Yang, Ph.D. Environmental Science, graduated March 2010, Major Co-Professor

Thesis title: DEVELOPMENT OF A NEW BIPHASIC BIORETENTION SYSTEM FOR STORMWATER FLOW AND POLLUTANT MANAGEMENT IN URBAN LANDSCAPES
Priyanka Yadav, M.S. Environmental Science, graduated August 2009

Thesis title: FACTORS AFFECTING MOSQUITO POPULATIONS IN CREATED WETLANDS
SunJeong Park, Ph.D. Environmental Science, graduated August 2009

Thesis title: ANTHROPOGENIC INFLUENCE OF URBAN DEVELOPMENT ON THE SOIL NITROGEN FIXING BACTERIA, NEMATODE COMMUNITY, AND NUTRIENT POOLS
E. Erin Morris, MS. Entomology, graduated March 2009

Thesis title: DEVELOPMENT OF BIOLOGICAL CONTROL METHODS FOR THE ADULT JAPANESE BEETLE
Alfred Alumai, Ph.D. Entomology, graduated December 2008

Thesis title: URBAN LAWN MANAGEMENT: ADDRESSING THE ENTOMOLOGICAL, AGRONOMIC, AND SOCIAL DRIVERS
Zhiqiang Cheng, Ph.D. Environmental Science, graduated Aug' 2007

Thesis Title: ECOLOGY OF URBAN LAWNS: THE IMPACT OF ESTABLISHMENT AND MANAGEMENT ON PLANT SPECIES COMPOSITION, SOIL FOOD WEBS, AND ECOSYSTEM FUNCTIONING
Mamta Singh, Ph.D., Environmental Science, graduated Jul' 2007

Thesis Title: SOIL ORGANIC CARBON POOLS IN TURFGRASS SYSTEMS OF OHIO
Ruisheng An, Ph.D. Entomology, graduated June 2007

Thesis Title: GENE EXPRESSION IN *MORAXELLA OSLOENSIS*, *PHOTORHABDUS TEMPERATA* AND *XENORHABDUS KOPPENHOEFERI* DURING HOST INFECTION
Shabeg S. Briar, Ph.D. Plant Pathology, graduated March 2007, Co-Major Professor

Thesis Title: NEMATODES AS BIOINDICATORS OF SOIL FOOD WEB HEALTH IN AGROECOSYSTEMS: A CRITICAL ANALYSIS
Amr T. E. Saeb, Ph.D. Plant Pathology, graduated August 2006

Thesis Title: PHYLOGENETIC AND POPULATION GENETIC STUDIES ON SOME INSECT AND PLANT ASSOCIATED NEMATODES
Yadwinder S. Deol, M.S. Entomology, graduated August 2006

Thesis Title: DEVELOPMENT OF A NOVEL DELIVERY SYSTEM FOR ENTOMOPATHOGENIC NEMATODES
Prapassorn Bussaman, Ph.D. Entomology, graduated August 2005, Co-Major Professor

Thesis Title: BIOLOGY AND BIOLOGICAL CONTROL OF THE MUSHROOM MITE
Mussammat Nahar, Ph.D. Plant Pathology, graduated November 2005, Co-Major Professor

Thesis Title: DYNAMICS OF NEMATODES TROPHIC DIVERSITY AND NUTRIENT POOLS IN VEGETABLE FARMS TRANSITIONING FROM ORGANIC MANAGEMENT

Sukhinder K. Sandhu, M.S. Entomology, graduated July 2005

Thesis Title: GENETIC AND MOLECULAR ANALYSIS OF INFECTIVE JUVENILE LONGEVITY AND STRESS TOLERANCE IN THE ENTOMOPATHOGENIC NEMATODE *HETERORHABDITIS BACTERIOPHORA*

Corrie Yoder, M.S. Entomology, graduated in December 2004

Thesis Title: EVASIVE AND DEFENSIVE BEHAVIORS OF WHITE GRUB SPECIES AGAINST ENTOMOPATHOGENIC NEMATODES

Alfred Alumai, M.S. Entomology, graduated in December 2004

Thesis Title: THE EFFECTS OF TURFGRASS MANAGEMENT PRACTICES ON ENTOMOPATHOGENIC NEMATODES

Sandra Garces, M.S. Entomology, graduated in May 2004, Co-Major Professor

Thesis Title: POTENTIAL OF ENTOMOPATHOGENIC NEMATODES AND THEIR SYMBIOTIC BACTERIA FOR THE MANAGEMENT OF GRAPE PHYLLOXERA

Brian Kunkel, Ph.D. Entomology, graduated in January 2003

Thesis Title: PLANT FUNGAL ENDOSYMBIONTS ALTER HOST-PARASITE RELATIONSHIPS BETWEEN GENERALIST HERBIVORES (LEPIDOPTERA: NOCTUIDAE) AND AN ENTOMOPATHOGENIC NEMATODE

Li Tan, Ph.D. Entomology, graduated in December 2002

Thesis title: VIRULENCE MECHANISMS OF THE NEMATODE *PHASMARHABDITIS HERMAPHRODITA* AND ITS ASSOCIATED BACTERIUM *MORAXELLA OSLOENSIS* TO THE GRAY GARDEN SLUG *DEROCERAS RETICULATUM*

b. other student activities

Graduate Studies Committee member:

Satyendra Pothula, Ph.D. Nematology at the University of Tennessee at Knoxville (Major Advisor Ernest Bernard), 2015 -

Shalini Yerukala, Ph.D. Nematology at the University of Tennessee at Knoxville (Major Advisor Bonnie Ownley), 2015 -

Ratanasri Mallipedi, Ph.D. Entomology at the University of Tennessee at Knoxville (Major Advisor Juan Luis Jurat-Fuentes), 2015 -

Gary Philips, Ph.D. Nematology at the University of Tennessee at Knoxville (Major Advisor Ernest Bernard), graduated October 2017

Julia Ferguson, MS. Entomology (Major Advisor, Jerome Grant), graduated July 2016

Alemayehu W. Habteweld, Ph.D. student in Nematology at Michigan State University (Major Advisor Haddish Melakeberhan), graduated August 2015

Ellie Walsh, Ph.D. Plant Pathology (Major Advisor, Chris Taylor), graduated July 2015

Caitlin Burkman, M.S. Entomology (Major Advisor, Mary Gardiner), graduated July 2014

Christian Chiriboga, Ph.D. Entomology (Major Advisor, Dan Herms), graduated May 2013

Terri L. Hctor, MS. Entomology at Purdue University (Major Advisors Douglas S. Richmond and Timothy J. Gibb), graduated May 2011

Sougata Bardhan, Ph.D. Soil Science (Major Advisor, Warren Dick), graduated July 2010

Darlene Florence, MS Soil Science (Major Advisor, Warren Dick), graduated July 2009

Jennifer Andon, M.S. Entomology (Major Advisor, David Shetlar), graduated July 2008.

Stephanie Miller, M.S. Entomology (Major Advisor, Celeste Welty), graduated May 2005

Xiaodong Bai, Ph.D. Entomology (Major Advisor, Saskia Hogenhout), graduated July 2004

Janet Lawrence, Ph.D. Entomology (Major Advisor, Casey Hoy), graduated autumn 2004
Jane Patterson Fife, Ph.D. Food, Agricultural and Environmental Engineering, (Major Advisor, Erdal Ozkan), graduated May 2003
Heather Smith, M.S. Microbiology, University of Central Florida, Orlando, graduated July 2001

Independent Undergraduate Research Study Advisor:

Alexandra Knight, BS Biology, Walsh University, February, 2010- May 2011
Marc Christian, BS Biology and Mathematics, The College of Wooster, February, 2009- May 2010
Lorna Johnston, BS Biology, The College of Wooster, February 2007 – December 2008
Stephanie Wynderk, BS Biology, The College of Wooster, October 2004 to May 2005
Rajan Dhillon, Stanford University, January 1994- August 1994
Charles Shupe, Rutgers University, March 1992- December 1992

External Examiner for Ph.D. Theses:

Rosaline Mary, Bharthiar University, Coimbatore, India, 2012
Heba Mohammed Mahmoud Ahmed, Faculty of Science, Cairo University, Giza, Egypt, 2012
Nehad Abdel-Hameed S. Abdel-Rehman, Faculty of Science, Cairo University, Giza, Egypt, 2001

3. Postdoctoral Trainees

a. post-doctoral trainees (Name and dates in my laboratory)

Dr. Harit K. Bal from The Ohio State University, Ohio, April 2013- August 2016
Dr. Ruisheng An from The Ohio State University, Ohio, July 2007- November 2015
Dr. Zhiqiang Cheng from The Ohio State University, Ohio, September 2007- May 2013
Dr. Xiaodong Bai from The Ohio State University, Ohio, January 2006- June 2011
Dr. Jay Saimandir from Mississippi State University, Mississippi, July 2007-December 2008
Dr. Amr Saeb from The Ohio State University, Ohio, January 2007-February 2008
Dr. Loren Byrne from Pennsylvania State University, June 2006- June 2007
Dr. Ganpati Jagdale from Memorial University of Newfoundland, St John's, Canada, from November 1998-August 2007
Dr. Seppo Salminen from The Ohio State University, Wooster, Ohio, July 1999-July 2007
Dr. Andras Fodor from Evotos University, Budapest, Hungary, from January 2004 – May 2006
Dr. Douglas Richmond from The Ohio State University, July 2000- June 2004
Dr. Elizabeth De Nardo from the National Research Center for Environmental Monitoring and Impact Assessment, EMBRAPA, Jaguariuna-SP, Brazil- from January 2003 – November 2004
Dr. Sukhbir K. Grewal from the University of Maryland, Oct 1999 – January 2003
Dr. Somasekhar Nethi from Indian Council of Agricultural Research, Coimbatore, India, Jan 2000 – December 2001
Dr. Mavji Patel from Imperial College London, March 2001- July 2001
Dr. Xiaodong Wang from Tsukuba University, Japan, October 1998 - January 2001
Dr. Timothy Miklasiewicz from the Ohio State University - May 1998 - March 2000
Dr. Veriender S. Malik from Haryana Agricultural University, India, January 1999 - November 1999
Dr. Sudha Venkatachari from Indian Agricultural Research Institute, India, June 1995 - January 1997

4. Visiting scientists hosted (Name and dates in my laboratory)

Dr. Patchareewan Maneeshakorn, Research Scientist, Thailand Agricultural University, Bangkok, Thailand from March 2014 to August, 2014

Dr. Kamaljit S. Suri, Assistant Professor, Punjab Agricultural University, Ludhiana, India from December 2013 to May, 2014

Dr. Vikas Jindal, Assistant Professor, Punjab Agricultural University, Ludhiana, India from March 2010 to April, 2011

Dr. Geetika Banta, Assistant Professor, Punjab Agricultural University, Ludhiana, India from July 2010 to April, 2011

Dr. Ugur Uslu, Assistant Professor, Konya, Turkey for 6 months from February to July, 2009

Dr. Marcio Voss, Senior Scientist, EMBRAPA Trigo, Passo Fundo, Brazil from June 2005 to May 06

Dr. Angel Torres, Scientist, INIA-Tachira, Carretera Rubio-Delicias, Bramon, Tachira, Venezuela for one month in November 2004

Dr. Marinade Aguilera, Professor of Nematology at the Federal University, Arraras, Sao Paulo, Brazil for one week in October 2003

Dr. Arun K. Yadav, Professor of Entomology, Department of Zoology, N.E. Hill University, Shillong, India for one week in October 2003

Dr. Cisia Chkhubianishvili, Professor and Head, Department of Biological Control, Kanchaveli L. Research Institute of Plant Protection, Tbilisi, Republic of Georgia spent 10 days in November 2000

Dr. Manana Lortkipandize, Chief Scientist, Institute of Zoology, Georgian Academy of Sciences, Tbilisi, Republic of Georgia spent 10 days in November 2000

Dr. Krishnayya Pulipaka, Assistant Professor, Department of Entomology, ANGR Agricultural University, Bapatila, AP, India from July 2000 to November 2000

Dr. Elizabeth De Nardo, Coordinator of Quarantine Laboratory for biological control agents, National Research Center for Environmental Monitoring and Impact Assessment, EMBRAPA, Jaguariuna-SP, Brazil- from September 1998 to December 2002

Dr. Veriender S. Malik, Professor of Entomology, Haryana Agricultural University, Hissar, India - from September 1998 to February 1999

5. Outstanding achievements of graduate students

Janani Hariharan, M.S. student in Environmental Science Graduate Program

- Won \$5,000 in OARDC Director's Graduate Research Grants Competition, May 2014
- Won the OARDC Director's Graduate Fellowship, 2014-2015
- Won University Graduate Fellowship Program, 2013-2014

Kuhuk Sharma, Ph.D. student in Environmental Science Graduate Program

- Won \$1,000 SON Travel Award to attend the 6th International Nematology Congress in Cape Town, South Africa, May 2014
- Won \$5,000 in OARDC Director's Graduate Research Grants Competition, May 2012
- Won \$5,000 in Food Innovation Center's Graduate Research Grants Competition, Jan 2012
- Won Fay Fellowship from the Environmental Science Graduate Program, 2009-2010

Jennifer Reeves, Ph.D. student in Environmental Science Graduate Program

- Awarded the NSF-GK12 Fellowship, 2011-2012
- Won OSU Presidential Fellowship, 2010-2011

Priyanka Yadav, Ph.D. student in Entomology

- Won \$5,000 in OARDC Director's Graduate Research Grants Competition in May 2010

Harit Bal, Ph.D. student in Entomology

- Won \$700 SON Travel Award to attend the Annual Meeting of the Society of Nematologists in Georgia,

August 2012

- Won OSU Presidential Fellowship, 2011-2012
- Won \$5,000 in OARDC Director's Graduate Research Grants Competition, May 2011
- Won ESA President's Award for the Best K-12 Science Education Project from the Entomological Society of America, December 2010
- Won Mary Ellen Teaching Award from the Department of Entomology, May 2010
- Elected President of the Entomology Graduate Student Association

Erin Morris, MS student in Entomology

- Won second place in oral Student Competition for the President's Prize, Section IPMIS2. Integrative Physiological and Molecular Insect Systems at the Entomological Society of America meeting in Reno, Nevada, November 15-19, 2008
- Won the Department DeLong Travel grant competition to attend the 2008 ESA meeting in Reno, Nevada
- Invited to make a presentation in the K-12 Symposium at the 2008 ESA meeting in Reno, Nevada
- Won third place in MS Poster competition (\$100) at the OARDC Annual Conference, April 17, 2008
- Won second place in oral competition at the ESA NC Branch meeting, Columbus, Ohio, March 2008
- Won National Science Foundation's GK12 Fellowship. 2007-2008. This fellowship included a \$30,000 annual stipend, fringe benefits, tuition and fees and a travel allowance to attend a professional meeting.
- Elected President of the Entomology Graduate Student Association

SunJeong Park, Ph.D. student in Environmental Science Graduate Program

- Won third place in Ph.D. Poster competition (\$100) at the OARDC Annual Conference, April 17, 2008
- Conference Travel Award (\$600) sponsored by the National Science Foundation, April 2007 to attend the Emerging Issues along Urban/Rural Interfaces-II, Atlanta, GA
- Won Fay Fellowship from the Environmental Science Graduate Program, 2006-2007

Hanbae Yang, Ph.D. student in Environmental Science Graduate Program

- Won second place in Poster competition (\$300) at the OARDC Annual Conference, April 20, 2010.
- Awarded a Patent, April 20, 2010
- TechColumbus Green Innovation Awards, Finalist, TechColumbus, 2008
- Won \$1,970 in OSU Alumni Grants for Graduate Research and Scholarship (AGGRS), 2008
- Won First Place Poster Award at the GSA-SSSA-ASA-CSSA-GCAGS International Joint Annual Meeting, Houston, TX, Oct.5-9th, 2008, Division A-5 (Environmental Quality)

Alfred Alumai, Ph.D. student in Entomology

- Won second place in Poster competition (\$300) at the OARDC Annual Conference, April 20, 2006
- Won Department of Entomology's W. Fred Hink Research Paper Award (\$300), May 2006

Ruisheng An, Ph.D. student in Entomology (Completed in Summer 2007)

- Won \$5,000 in OARDC Director's Graduate Research Grants Competition in May 2006
- Won first place in Poster competition (\$500) at the OARDC Annual Conference, April 24, 2005
- Won Travel Grant (\$500) from the Society of Invertebrate Pathology (Bacteria Division) to attend the annual meeting in Anchorage, Alaska in August 2005

Zhiqiang Cheng, Ph.D. student in Environmental Science Graduate Program (Completed Summer 2007)

- Won third place in Poster competition (\$200) at the OARDC Annual Conference, April 26, 2007
- Conference Travel Award (\$600) sponsored by the National Science Foundation, April 2007 to attend the Emerging Issues – along Urban/Rural Interfaces-II, Atlanta, GA
- Won third place in Poster competition (\$200) at the OARDC Annual Conference, April 29, 2004.
- Won \$5,000 OARDC Director's Graduate Research Grants Competition in May 2005

Shabeg Briar, Ph.D. student in Plant Pathology (Completed in Spring 2007)

- Won the Best Paper Published in Environmental Bioindicators journal in 2007

Amr Saeb, Ph.D. student in Plant Pathology (Completed in Autumn 2006)

- Won first place in Poster competition (\$500) at the OARDC Annual Conference, April 20, 2006
- Inducted to the honorary society Phi Kappa Phi by the Ohio State University on May 25, 2004

Sukhinder Sandhu, Ph.D. student in Entomology (transferred to Molecular Genetics, August 06)

- Won \$2,500 in OARDC Director's Graduate Research Grants Competition in May 2006

Mamta Singh, Ph.D. student in Environmental Science Graduate Program (Completed in Summer 2007)

- Won Edward Ray Travel Grant Competition (\$750) from the Ohio State University to attend the First International Conference on Environment Science and Technology in New Orleans, LA, January 2005

Yadwinder S. Deol, M.S. student in Entomology (completed in Summer 2007)

- Won second place in Oral presentation competition at the Entomological Society of America Annual Meeting in Ft Lauderdale, December 14-19, 2005
- Won third place in Poster competition (\$200) at the OARDC Annual Conference, April 24, 2005
- Won \$2,500 OARDC Director's Graduate Research Grants Competition in May 2005

Sukhinder Sandhu, M.S. student in Entomology (completed in Summer 2005)

- Won first place in the Oral presentation competition at the Annual meeting of the Society of Nematologists at Ft. Lauderdale, FL, June, 2005
- Won second place in Poster competition (\$300) at the OARDC Annual Conference, April 24, 2005
- Won Nathan A Cobb Travel Grant (\$500) from the Society of Nematologists to attend the annual meeting in Ft. Lauderdale, Florida in July 2005

Corrie Yoder, M.S. student in Entomology (completed in Autumn 2004)

- Won Nathan A Cobb Travel Grant (\$500) from the Society of Nematologists to attend the annual meeting in Estes Park, Colorado August 2004
- Won first place in Poster competition (\$500) at the OARDC Annual Conference, April 29, 2004
- Won \$2,500 in OARDC Director's Graduate Research Grants Competition in May 2003
- Won Travel Grant (\$500) from the Society of Invertebrate Pathology (Nematode Division) to attend the meeting in Vermont August 2003

Alfred Alumai, M.S. student in Entomology (Completed MS in Autumn 2004)

- Won third place in Poster competition (\$200) at the OARDC Annual Conference, April 23, 2002
- Won \$2,500 in OARDC Director's Graduate Research Grants Competition in May 2003

Sandra Garces, M.S. in Entomology (Completed in Summer 2004)

- Won first place in Poster competition (\$500) at the OARDC Annual Conference, April 29, 2004

Brian Kunkel, Ph.D. student in Entomology (Completed in Winter 2003)

- Now an IPM Coordinator, University of Delaware, Delaware
- Won first place in the Oral presentation competition at the Annual meeting of the Society of Nematologists in Salt Lake, UT, August, 2001
- Won Department's W. Fred Hink Research Paper Award (\$300), May 2003
- Won the Graduate School Leadership Award (\$200), May 2002
- Won \$5,000 in OARDC Director's Graduate Research Grants Competition in May 2002.
- Won Department's Service Award (\$100) May 2002
- Organized two outstanding Insect Night Walks, June 2001/2002; over 200 participants in each

Li Tan, Ph.D. student in Entomology (Completed in Autumn 2002)

- Invited to present a symposium talk "Virulence mechanisms of the slug-parasitic nematodes and their associated bacteria" at the Third International Symposium on Entomopathogenic Nematodes and Their Symbiotic Bacteria, Wooster, Ohio, September 2003
- Awarded the most prestigious Frederick Gardner Cottrell Post-doctoral Enhancement Award (\$50,000 annual salary, plus travel funds) by the University of Alabama at Birmingham!
- Awarded OSU Presidential Fellowship for 2002
- Won the Martignoni Competitive Student Travel Award for 2002 by the Society of Invertebrate Pathology to attend the international meeting in Brazil
- Won Department's W. Fred Hink Research Paper Award (\$300), May 2002
- Invited to give a symposium talk "Virulence mechanisms of the slug-parasitic nematodes and their associated bacteria" at the International meeting of the Society of Invertebrate Pathology, Foz de Iguaçu, Brazil in August 2002

F. Extramural Research Funding [Career total = \$16,228,467; Lead PI = \$7,566,514]

2017	\$240,000	An Integrated Approach to Graduate Research, Education, and Engagement (IAGREE) in Sustainable Food and Agricultural Systems at the Hispanic-Serving Institution University of Texas-Rio Grande Valley (A. Racelis, P.S. Grewal, C. Gabler, Y. Mao, and G. Bennack). USDA-NIFA-NNF-Higher Education Grant 2017-2020.
2014	\$17,750	<i>Tuta absoluta</i> tomato survey (P.S. Grewal and F. Hale), USDA-APHIS Farm Bill Grant Agreement, 2014-2015.
2014	\$105,000	Tennessee Coordinated Agricultural Project Survey (F. Hale, J. Grant, S. Stewart and P.S. Grewal). USDA-APHIS CAPS Grant Agreement 2014-2015.
2013	\$100,000	Infection biology and management of foliar nematodes on hosta and other shade tolerant ornamentals (P.S. Grewal and R. An). American Hosta Society and University of Tennessee Competitive Research Grant. 2013-2015.
2012	\$750,000	Assessing, modeling, and maximizing ecosystem services in long-term and transitioning organic farming systems (P.S. Grewal, K.R. Islam, E.L. McCoy, S. Kumarappan, and A. Sundermeier), NIFA Organic Transitions Competitive Research Grant 2012-2015.
2012	\$200,000	Sustainable Management of grape root borer in vineyards (P.S. Grewal, G. Gao, Vickner, S. & H. Zhu), USDA-PMAP Competitive Research Grant 2012-2014.
2012	\$75,000	A demonstration pilot for urban agriculture, ecology, and entrepreneurs (K. Bennett, P.S. Grewal, J. Kovach, P. Ling, M. McMahon, J. Tansky, B. Hanlon, G. Kaye, E.M. Williams, M. Jones), OSU International Poverty Solutions Center and Food Innovation Center Joint Competitive Research Grant 2012-2013.
2012	\$25,000	Improving Local Food Security and Promoting Health in Urban Environments Through Window-based Hydroponic Food Production Systems (J. Lee, P.S. Grewal, and Z. Bohrerova), OSU Food Innovation Center Competitive Research Grant 2012-2013.
2012	\$50,000	A novel approach to plant protection through durable systemic resistance (P.S. Grewal and E. van der Knaap). OARDC Seeds Grant Competition, 2012-2013.
2012	\$6,000	Integrated control of pests and diseases in tomatoes (P.S. Grewal and P.L. Phelan). OARDC Small Industry Grant Competition, 2012-2013.
2011	\$178,929	Maximizing ecosystem services of the soil food web in organic farming systems (P.S. Grewal and K.R. Islam), The Ceres Trust Competitive Research Grant 2012-2014.
2011	\$25,000	A comprehensive costs and benefits analysis of urbanizing food systems (P.S. Grewal, M. Leiblein and R.L. Scharff), OSU Food Innovation Center Competitive Research Grant 2011-2012.
2010	\$870,000	An agrarian urbanist overlay for central city development (J. Tiniano, K.B. Jones, P.S. Grewal, M. Rabe, M. Wagenbrenner), US Department of Housing and Urban Development Community Challenge Planning Grant 2011-2013.
2010	\$25,000	Localizing urban food systems: Assessing capacity of an urban neighborhood for self-reliance in fresh produce (P.S. Grewal, M. Kleinhenz, P. Ling, J. Saldanha and T. Blaine), OSU Food Innovation Center Competitive Research Grant 2010-2011.
2010	\$10,000	OARDC Research Internships Program: Enhancing interest in science and technology by engaging high school and undergraduate students in real-time research projects (P. S. Grewal), GAR Foundation 2010-2011.
2009	\$279,500	Urban parks and vacant lands as mechanisms of ecological and social stability in the Cleveland Urban Ecosystem (B.M. Walton, J.J. Mach, T. Schwarz, P.S. Grewal and D. Beach), NSF-ULTRA-EX Competitive Research Grant 2009-2012.
2009	\$327,450	Increasing services invertebrate services in agroecosystems (C.W. Hoy and P.S. Grewal), USDA-NRI Competitive Research Grant 2009-2012.

2009	\$49,966	Identifying stakeholder needs for establishing vibrant urban specialty crops enterprises (P.S. Grewal, Batte, M., Cardina, J., Erbaugh, M., Hoy, C.W., Kleinhenz, M., and Ling, P.), USDA-SCRI Competitive Research Grant 2009-2010.
2009	\$59,894	OARDC Research Internships Program: Enhancing Interest in Science and Technology by Engaging High School and Undergraduate students in real-time research projects (P.S. Grewal), BETHA Grant 2009-2010.
2009	\$10,000	OARDC Research Internships Program: Enhancing Interest in Science and Technology by Engaging High School and Undergraduate students in real-time research projects (P.S. Grewal), GAR Foundation 2009-2010.
2009	\$12,000	OARDC Research Internships Program: Enhancing Interest in Science and Technology by Engaging High School and Undergraduate students in real-time research projects (P.S. Grewal), Ashland Bioscience Consortium 2009-2010.
2009	\$50,000	Effect of organic and inorganic fertilizers on turfgrass ecosystem health (P.S. Grewal). OARDC Matching Grant Competition, 2008-2010.
2008	\$126,045	Establishing entomopathogenic nematodes for long-term control of white grubs in nurseries (P.S. Grewal, D. Herms), USDA-PMAP Competitive Research Grant 2008-2011.
2008	\$100,000	Virulence mechanisms of the entomopathogenic <i>Photorhabdus</i> and <i>Xenorhabdus</i> bacteria (P.S. Grewal, G. Rajashekara, and D.H. Dean). OARDC Interdisciplinary Grant Competition, 2008-2010.
2008	\$125,000	Long-term effects of organic fertilizers on the soil food web, nutrient cycling, and turfgrass quality and resistance to biological and environmental stresses. (P.S. Grewal). MTD Corporation 2008-2011.
2008	\$10,500	Assessing nutrient runoff from lawns established on topsoil and sub soil (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2008-2009.
2008	\$11,000	Effect of timing of application of new <i>Bacillus thuringiensis</i> formulations for the curative management of white grubs (P.S. Grewal), Valent Bioscience, 2008.
2008	\$43,500	Evaluation of new formulations of various bifenthrin formulations for the control of white grubs and billbugs in turfgrass (P.S. Grewal), FMC Corporation, 2008.
2007	\$101,000	Center for Urban Environment and Economic Development (P.S. Grewal <i>et al.</i>). AgBiosciences Innovative Grants Program, 2007-2009.
2007	\$85,000	Effect of organic lawn fertilizers on quality and water stress of three turfgrass species (P.S. Grewal). MTD Corporation 2007-2008.
2007	\$10,000	Effect of turfgrass management practices on carbon sequestration in turfgrass (P.S. Grewal). Ohio Turfgrass Foundation, 2007-2008.
2007	\$8,000	Potential of nutrient runoff from lawns established on topsoil and sub soil (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2007-2008.
2007	\$24,000	Laboratory and field evaluations of new <i>Bacillus thuringiensis</i> formulations for the curative management of white grubs (P.S. Grewal), Valent Bioscience, 2007.
2007	\$12,000	Evaluation of formulations of various insecticides for the control of white grubs (P.S. Grewal), FMC Corporation, 2007.
2007	\$2,900,000	Linking watershed research and GK-12 education within an ecosystem context (R. Moore, L. Williams, C.W. Hoy, V. Bouchard, P. Goebel, A. Rodewald, D. Stinner, and P.S. Grewal). NSF GK-12 Competitive Research Grant 2007-2010.
2006	\$50,000	Developing a novel commercial delivery system for entomopathogenic nematodes (P. S. Grewal). OARDC New Enterprise Competitive Research Grant 2007-2009.
2006	\$75,000	Center for Urban Environment and Economic Development (P.S. Grewal <i>et al.</i>) AgBiosciences Innovative Grants Program, 2006-2007.

2006	\$40,000	Effect of organic lawn products on turfgrass quality, above and below ground biomass, tissue nutrients and alkaloids (P.S. Grewal). MTD Corporation 2006-2007.
2006	\$20,000	Development of a new biological product for slug control (P.S. Grewal). Horticulture Research Institute Competitive Grant 2006-2007.
2006	\$10,000	Effect of turfgrass management practices on carbon sequestration in turfgrass. (P.S. Grewal) Ohio Turfgrass Foundation, 2006-2007.
2006	\$7,000	Management of lawns established on top and sub soil: Nitrogen mineralization, nematode and microbial community dynamics, and insect and weed incidence (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2006-2007.
2006	\$16,000	Evaluation a new <i>Bacillus thuringiensis</i> formulations for the curative management of white grubs (P.S. Grewal), Valent Bioscience, 2006.
2006	\$1,400	Evaluation of new organic product for the white grub control (P.S. Grewal), Neudorff North America, 2006.
2005	\$1,840,000	Genome sequencing of <i>Heterorhabditis bacteriophora</i> : Exploiting the unique biology and biological pest control potential of an entomopathogenic nematode (P.S. Grewal, B.J. Adams, T. Ciche, R. Gaugler, and P. Sternberg). Jointly funded by the National Human Genome Research Institute and the USDA-NSF Microbial Genome Sequencing Competitive Research Grants Program 2005-2008.
2005	\$72,500	Building a novel participatory approach to implementing integrated pest management in commercial lawncare (P.S. Grewal, J. Cardina, D.J. Shetlar, J. Rimelspach, & J. Kovach). USDA-NC-IPM Competitive Research Grant 2005-2007.
2005	\$150,000	Center for Urban Environment and Economic Development (P.S. Grewal <i>et al.</i>). AgBiosciences Innovative Grants Program, 2005-2007.
2005	\$50,000	Development of a new biological product for the slug control (P.S. Grewal). OARDC New Enterprise Grant Competition, 2005-2007.
2005	\$19,000	Cost-effective long-term control of white grubs in nurseries through the establishment of entomopathogenic nematodes (P.S. Grewal, D. Herms, K.T. Power). Horticulture Research Institute Competitive Grant 2005-2006.
2005	\$10,000	Effect of turfgrass management practices on carbon sequestration in turfgrass. (P.S. Grewal) Ohio Turfgrass Foundation, 2005-2006.
2005	\$8000	Nitrogen mineralization, nematode and microbial community dynamics, and insect and weed incidence in urban lawns (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2005-2006.
2005	\$7,000	Evaluation of new formulations of insecticides for the curative management of white grubs (P.S. Grewal), Andersons Inc., 2005.
2005	\$5,000	Evaluation a new <i>Bacillus thuringiensis</i> bioinsecticide for the curative management of white grubs (P.S. Grewal), Abbott Bioscience, 2005.
2005	\$1,000	Evaluation different formulations of a <i>Bacillus thuringiensis</i> bioinsecticide for the curative management of white grubs (P.S. Grewal), SDS Corporation, 2004.
2004	\$250,000	Urban Landscape Ecology Program: an interdisciplinary research, education, and outreach initiative (P.S. Grewal <i>et al.</i>). OARDC Innovation Grants Program, 2004-2009.
2004	\$96,500	Developing an integrated pest management approach for lawns (P.S. Grewal, J. Cardina and D.S. Richmond). USDA-NC-IPM Competitive Research Grant 2004-2006.
2004	\$195,000	Optimizing white grub control with entomopathogenic nematodes: Interspecific variability in host parasite interactions (A.M. Koppenhoffer & P.S. Grewal). USDA-NRI Competitive Research Grant 2003-2005.
2004	\$200,000	Habitat characteristics and entomopathogenic nematode persistence in agroecosystems (C.W. Hoy and P.S. Grewal). USDA-NRI, 2004-2007.

2004	\$100,000	Virulence mechanisms of <i>Moraxella osloensis</i> to the slug <i>Deroceras reticulatum</i> (P.S. Grewal, S. Sreevatsan, and R. Hammond). OARDC Interdisciplinary Grant Competition, 2004-2006.
2004	\$6,000	Control of foliar nematodes in nurseries and landscapes (P.S. Grewal, G.B. Jagdale, and K.T Power). USDA-IR-4 Biopesticide Research Grant Competition, 2003.
2004	\$7000	Effect of sod on soil erosion control from urban lawns. (P.S. Grewal and E. McCoy). International Turf Producers Foundation Competitive Grants, 2004-2005.
2004	\$6000	A novel participatory approach to IPM in lawn care (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2004-2005.
2004	\$10,000	Effect of turfgrass management on soil ecosystem functioning: soil nematode community analysis and nutrient pools. (P.S. Grewal) Ohio Turfgrass Foundation, 2004-2005.
2004	\$3,200	Evaluation a new <i>Bacillus thuringiensis</i> bioinsecticide for the curative management of white grubs (P.S. Grewal), Dow Agrobiosciences, 2004.
2004	\$2,000	Evaluation different formulations of a <i>Bacillus thuringiensis</i> bioinsecticide for the curative management of white grubs (P.S. Grewal), SDS Corporation, 2004.
2003	\$25,000	Determining the mechanism of symbiosis between the slug-parasitic nematode <i>Phasmarhabditis hermaphrodita</i> and associated bacteria (P.S. Grewal and M.J. Wilson). OARDC Interdisciplinary Grant Competition, 2003-2004.
2003	\$6000	Effect of mowing practices on alkaloid production and pest resistance in endophytic grasses (P.S. Grewal). Ohio Lawn Care Association Competitive Grants, 2003-2004.
2003	\$16,000	Commercial potting media as delivery system for entomopathogenic nematodes (P.S. Grewal, G.B. Jagdale), OARDC Small Industry Competitive Grant, 2003-2004.
2003	\$25,000	Exploring additive and synergistic effects of newer insecticides for the curative management of white grubs (P.S. Grewal) Bayer Corporation, 2003.
2003	\$8,000	Essential oils as alternatives to chemical insecticides for caterpillars in turfgrass (P.S. Grewal, K.T. Power), USDA-IR-4 Biopesticide Research Grant Competition, 2003.
2003	\$10,000	Interactions between weeds and insects in turfgrass (P.S. Grewal), Ohio Turfgrass Foundation, 2003-2004.
2002	\$145,000	Implementing a novel biological approach for controlling plant-parasitic nematodes (P.S. Grewal, R. Giblin-Davis and W.T. Crow, USDA-PMAP Competitive Research Grant 2002-2005.
2002	\$400,000	Paths of transition: Strategies for peri-urban organic farmers (M. Kleinhenz, McSpadden Gardener, J. Cardina S.A. Miller, M. Batte, P.S. Grewal, D. Stinner, USDA-CSREES Competitive Research Grant 2002-2005.
2002	\$18,000	Assessing potential of molluscicidal nematodes for slug control (P.S. Grewal and S.K. Grewal). Horticultural Research Institute Competitive Grants, 2002-2003.
2002	\$7,500	Building a biologically based IPM approach for pest management in turfgrass (P.S. Grewal, D.S Richmond and J. Cardina). Ohio Lawn Care Association Competitive Grants, 2002-2003.
2002	\$10,000	Variation in the defensive behavior of white grub species against entomopathogenic nematode species (P.S. Grewal). Ohio Turfgrass Foundation, 2002-2003.
2001	\$70 000	A novel approach to expanding the use of entomopathogenic nematodes from soil to foliage (P.S. Grewal). OARDC Matching Grant Competition, 2001-2002.
2001	\$10,000	Factors affecting the natural occurrence of entomopathogenic nematode on golf courses in Ohio. (P.S. Grewal) Ohio Turfgrass Foundation, 2001-2002.
2001	\$65,000	Building a turfgrass research field facility in Wooster. (P.S. Grewal and E. McCoy) Ohio Turfgrass Foundation, 2001-2005.

2000	\$156,000	Longevity and stress tolerance of infective juvenile entomopathogenic nematodes (P.S. Grewal). USDA-NRI (Entomology/Nematology) Competitive Research Grant 2000-02.
2000	\$170,000	Building a biologically-based approach to manage insect and weed pests in turfgrass (P.S. Grewal & J. Cardina, USDA-NRI (Biologically-based pest management) Competitive Research Grant 2000-2003.
2000	\$144,000	Implementing insecticidal nematodes in nurseries, greenhouses and landscapes (P.S. Grewal, R.K. Lindquist & C. Young), USDA-PMAP Competitive Research Grant 2000-2003.
2000	\$1,800,000	Revitalizing small and mid-sized farms: Organic research, education, and extension (B. R. Stinner, S.A. Miller, D. Stinner, R. Moore, J. Cardina, C.W. Hoy, P.S. Grewal, M. Kleinhenz, D. Doohan, F. Michel & J. Kovach, USDA-IFAFS (Small Farms) Competitive Research Grant 2000-2004.
2000	\$98,000	A High Performance Liquid Chromatogram and electrospray Mass Spectrometer (P.S. Grewal, M. Klein, D. Doohan & D. Herms), OARDC Equipment Grant, 2000.
2000	\$24,000	Control of foliar nematodes infesting nursery ornamentals (P.S. Grewal) OARDC Small Industry Competitive Research Grant, 2000-2001.
2000	\$5,000	Biology and biological control of foliar nematodes infesting <i>Hosta</i> (P.S. Grewal & G.B. Jagdale) Horticultural Research Institute Competitive Grants, 2000-2001.
2000	\$14,000	Developing a novel white grub control strategy based on the synergism between entomopathogenic nematodes and Imidacloprid/Thiamethoxam (P.S. Grewal) OARDC Small Industry Competitive Research Grant, 2000-01.
2000	\$20,000	Population dynamics of an entomopathogenic nematode: Analyzing a sustained inoculative release of <i>Heterorhabditis bacteriophora</i> (R.A.J. Taylor & P.S. Grewal), OARDC Competitive Seed Grant 2000-2001.
2000	\$15,000	Filed evaluations of entomopathogenic nematode species and strains for the control of white grubs in turfgrass. (P.S. Grewal) Ohio Turfgrass Foundation, 2000-2001.
1999	\$100,000	Developing molluscicidal nematodes for biological control of mollusk pests (P.S. Grewal & R.H. Hammond), OARDC Matching Grant Competition, 1999-2000.
1999	\$100,000	Building an ecosystem approach to pest management in turfgrass: Evaluating interactions among endophytic grasses, herbivores, and weeds (P.S. Grewal, D. Doohan & M. Quigley), OARDC Interdisciplinary Team Research Competition, 1999-2000.
1999	\$10,580	Pesticide-free alternatives for control of agricultural pests: Multi-media aids and in-service training program for using insecticidal nematodes (P.S. Grewal), Lindbergh Foundation, 1999-2001.
1999	\$15,000	Biology and biological control potential of nematode parasites of slugs (P.S. Grewal) Horticultural Research Institute Competitive Grants, 1999-2000.
1999	\$30,000	Direct application of desiccated entomopathogenic nematodes for foliage pest control in turfgrass (P.S. Grewal) MicroBio Ltd., UK, 1999-2001.
1999	\$15,000	Interactions between insect pests and weeds in turfgrass (P.S. Grewal), Ohio Turfgrass Foundation, 1999-2000.
1998	\$100,000	Entomopathogenic nematodes for pest control in vegetables in the Great Lakes Region (P.S. Grewal & C.W. Hoy), USDA-PMAP Competitive Research Grant 1998-2001.
1998	\$310,000	Implementation of a novel biological control strategy for plant-parasitic nematodes (E.E. Lewis, M. Raupp, P.S. Grewal, M.G. Klein, S.R. Alm & G. Tylka), USDA-FRA, 1998-2000.
1998	\$150,000	Development of rearing techniques and biological control for the grape root borer (R.N. Williams & P.S. Grewal), USDA-Viticulture Consortium, 1998-2006.

1998	\$20,000	Heat-shock proteins of entomopathogenic nematodes (P.S. Grewal & D.L. Denlinger), OARDC Competitive Seed Grant 1998-1999.
1998	\$25,000	Biology, etiology, and biological control of foliar nematodes infesting Hostas (P.S. Grewal) American Hosta Society Competitive Grants, 1998-2000.
1998	\$36,000	Factors affecting the virulence of molluscicidal nematodes (P.S. Grewal) MicroBio Ltd., UK, 1998-2000.
1998	\$25,000	Developing application strategies for halofenozide (P.S. Grewal) Rohm & Haas, 1998-2000.
1998	\$23,500	Evaluations of insecticides against turfgrass insects (P.S. Grewal) several companies, 1998-2000.
1998	\$15,000	Variation in the entomopathogenic nematode species and strains for the control of white grubs in turfgrass. (P.S. Grewal) Ohio Turfgrass Foundation, 1998-1999.
1997	\$20,000	Longevity of infective juvenile entomopathogenic nematodes. (P.S. Grewal) OSU Competitive Seed Grant, 1997-1998.
1997	\$4,500	Autoclave for Thorne Hall: an Equipment Grant. (P.S. Grewal) OARDC, 1997-1998.
1997	\$15,000	Synergistic interactions between entomopathogenic nematodes and white grubs in turfgrass (P.S. Grewal) Ohio Turfgrass Foundation, 1997-1998.
1996	\$70,000	Development of the first biological control product for plant-parasitic nematodes (E.E. Lewis, M. Raupp & P.S. Grewal), Maryland Industrial Partnerships, 1996-1997.
1993	\$275,000	Genetic enhancement of environmental stability of nematodes for biological control (R. Gaugler, P.S. Grewal, S. Selvan & I. Glazer), BARD, 1993-1996.
1992	\$600,000	Enhanced biological control potential of entomopathogenic nematodes through genetic engineering for temperature tolerance (R. Gaugler, S. Selvan, P.S. Grewal & M. Shamseldean), USAID, 1992-1995.

H. Publications

1. Books, articles and other published papers (over 9,000 citations)

a. Book

Grewal, P.S., Ehlers, R.-U, and Shapiro-Ilan, D.I. [Editors]. 2005. *Nematodes as Biocontrol Agents*, CABI Publishing, CAB International, Wallingford, Oxfordshire, UK, 505pp.

b. chapters in edited books [Invited, peer reviewed: 23]

Bal, H.K. & Grewal, P.S. 2017. Entomopathogenic nematodes for management of insect pests of canola and other oilseed crops. In: *Integrated Pest Management of Canola and Other Oilseed Crops* (G.V.P. Reddy Ed.), CABI Publishing, Wallingford, UK, 130-146.

Grewal, P.S. 2012. Entomopathogenic nematodes as tools in integrated pest management. In: *Integrated Pest Management: Principles and Practice* (D.P. Abrol and U. Shankar, Eds.), CABI Publishing, Wallingford, UK, 162-236.

Grewal, P.S. 2012. From IPM to ecosystem management: the case of urban lawn. In: *Integrated Pest Management: Principles and Practice* (D.P. Abrol and U. Shankar, Eds.), CABI Publishing, Wallingford, UK, 450-488.

Jindal, V., Bal, H.K., An, R. & Grewal, P.S. (2012) Developments in the genetic improvement of entomopathogenic nematodes. In: *Biopesticides in Environment and Food Security: Issues and Strategies* (O. Koul, G.S. Dhaliwal, S. Khokhar and R. Singh, Eds). Scientific Publishers, Jodhpur, India, pp.112-141.

Grewal, P.S., Bai, X., Jagdale, G.B. 2011. Longevity and stress tolerance of entomopathogenic nematodes. In: *Molecular and Physiological Basis of Nematodes Survival* (R.N. Perry and D. Wharton, Eds.), CABI Publishing, Wallingford, UK, pp. 157-181.

- Goodrich-Blair, H. Clarke, D., Grewal, P.S. & Ciche, T.A. 2009. Methods in investigating nematode-bacterium-insect symbiosis. (S.P. Stock, N. Boemare, J. Vandenberg, and I. Glazer, Eds.), CABI Publishing, Wallingford, UK, pp. 239-269.
- Shapiro-Illan, D.I. & Grewal, P.S. 2008. Entomopathogenic nematodes. In: *Encyclopedia of Entomology* (J. Capinera, Ed.), Second Edition, Springer Science, Leipzig, Germany, pp. 1336-1340.
- Grewal, P.S. & Kaya, H.K. 2008. History of the development of nematodes as biocontrol agents. In: *An Anecdotal History of Nematology* (J. M. Webster, K. B. Eriksson & D. G. McNamara, Eds.), Pensoft Publishers, Sofia-Moscow, pp 246-257.
- Grewal, P.S. 2007. Mushroom Pests. In: *Field Manual of Techniques in Invertebrate Pathology* (L. Lacey and H.K. Kaya, Eds.), Second Edition, Kluwer Academic Publishers, The Netherlands, pp. 457-461.
- Klein, M.G., Grewal, P.S. & Jackson, T.A. 2007. Lawn, Turf and Grassland Pests. In: *Field Manual of Techniques of Invertebrate Pathology 2nd Edition* (L. Lacey and H.K. Kaya, Eds.), Springer, Dordrecht, The Netherlands, pp. 655-675.
- Grewal, P.S., Ehlers, R.-U. & Shapiro-Illan, D.I. 2005. Critical issues and research needs for expanding the use of nematodes in biocontrol. In: *Nematodes as Biocontrol Agents* (P.S. Grewal, R.-U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 479-489.
- Grewal, P.S. & Peters, A. 2005. Formulation and quality control of entomopathogenic nematodes. In: *Nematodes as Biocontrol Agents* (P.S. Grewal, R.-U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 79-90.
- Grewal, P.S., Koppenhofer, A.M. & Choo, H.Y. 2005. Turfgrass and pasture pests. In: *Nematodes as Biocontrol Agents* (P.S. Grewal, R.-U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 115-146.
- Lewis, E.E. & Grewal, P.S. 2005. Effects of entomopathogenic nematodes on plant-parasitic nematodes. In: *Nematodes as Biocontrol Agents* (P.S. Grewal, R.-U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 349-361.
- Koppenhofer, A.M. & Grewal, P.S. 2005. Interactions with other biological control agents and agrochemicals. In: *Nematodes as Biocontrol Agents* (P.S. Grewal, R.-U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 363-381.
- Wilson, M.J. & Grewal, P. S. 2005. Biology, production, and formulation of slug-parasitic nematodes. In: *Nematodes as Biocontrol Agents* (P. S. Grewal, R. U. Ehlers and D. Shapiro-Illan, Eds.), CABI Publishing, Wallingford, UK, 421-429.
- Grewal, P.S. 2002. Formulation and Application technology. In: *Entomopathogenic Nematology* (R. Gaugler, Ed.), CABI Publishing, Wallingford, UK, pp. 265-287.
- Grewal, P.S. 2000. Mushroom Pests. In: *Field Manual of Techniques of Invertebrate Pathology* (L. Lacey and H.K. Kaya, Eds.), Kluwer Academic Publishers, The Netherlands, pp. 497-503.
- Klein, M.G., Grewal, P.S. & Jackson, T.A. 2000. Lawn, Turf and Grassland Pests. In: *Field Manual of Techniques of Invertebrate Pathology* (L. Lacey and H.K. Kaya, Eds.), Kluwer Academic Publishers, The Netherlands, pp. 681-706.
- Grewal, P.S. & Georgis, R. 1999. Entomopathogenic nematodes. In: *Biopesticides: Use and Delivery* (Hall, F.R. & J.J. Menn, Eds.), Humana Press, Totowa NJ, pp. 271-299.
- Richardson, P.N. & Grewal, P.S. 1994. Insect parasitic rhabditid nematodes and the soil environment. In: *Ecology and Biology of Soil Organisms* (Bhandari, S. C. & L. L. Somani, Eds.), Agrotech Publishing Academy, Udaipur, pp. 106-130.
- Richardson, P.N. & Grewal, P.S. 1993. Nematode pests of glasshouse crops and mushrooms. In: *Plant Parasitic Nematodes in Temperate Agriculture* (K. Evans, D.L. Trudgill & J.M. Webster, Eds.), CAB-International, UK, pp. 501-544.
- Grewal, P.S. 1992. Laboratory techniques for studying insect-parasitic rhabditid nematodes. In: B.K. Dwivedi (Ed.) *Recent Advances in Nematology*, Bioved Research Society, Allahabad, India, pp. 51-61.

c. peer reviewed journal articles [career total = 194, plus 8 in progress]

- Grewal, P.S. & Barthel, S. 2019. Local self-reliance as a planning principle for building community and global resilience (in prep).
- Grewal, P.S. & Elmquist, T. 2019. Trophic downgrading of the soil food web: A looming crisis (in prep).
- Das, B., McCoy, E.L. & Grewal, P.S. 2019. Can cities become self-reliant in Water? A case study for Cleveland, Ohio. *Cities* (in draft).
- Sharma, K., Wallace, J., O'Brien, E., Sponsler, D., Randhawa, P., Li, Yang, L., Darrington, C., Hemmerle, J., Yang, X., Cheng, Z., H.K. Bal, Elmquist & Grewal, P.S. 2019. Do above ground anthropogenic alterations in habitat structural complexity and heterogeneity influence belowground biodiversity and soil food web structure: A multi-taxa analysis. *Ecography* (in draft).
- Sharma, K. & Grewal, P.S. 2019. A novel approach to restoring soil food web structural complexity. *PLoS One*. (in draft)
- Cheng, Z., Islam, R.K., & Grewal, P.S. 2019. A new soil health indicator: Integrating soil chemical and biological properties. *Appl. Soil Ecol.* (in review).
- Sengupta, A., Hariharan, J., Grewal, P.S., & Dick, W. A. 2019. Bacterial diversity of soils under long-term land-use and land-management practices in Ohio. *PLoS One*. (in review)
- Pothula, K., Grewal, P.S., Auge, R. M., Saxton, A.M., & Bernard, E.C. 2019. Agricultural intensification and urbanization negatively impact soil nematode richness but not abundance: A meta-analysis. *J. Nematol.* (in press)
- Cheng, Z., Malakeberhan, H., Mennan, S., & Grewal, P.S. 2018. Relationship between soyabean cyst nematode *Heterodera glycines* and soil nematode communities under long-term tillage and crop rotation systems. *Nematropica* 48, 101-115.
- Hebteweld, A.W., Brainard D., Kravchenko, A., Grewal, P.S. & Malakeberhan, H. 2018. Effect of plant and animal waste-based compost amendments on the soil food web, soil properties, and yield and quality of fresh market and processing carrot cultivars. *Nematology* 20, 147-168.
- An R., Suri, K.S., Jurat-Fuentes, J. & Grewal P.S. 2017. Dynamic transcriptomic response of *Heliothis virescens* during infection by the entomopathogenic nematode *Heterorhabditis bacteriophora* carrying *Photorhabdus temperata* bacteria. *Insect Molecular Biology* DOI: 10.1111/imb.12321.
- An R., Karthik, N.K. & Grewal P.S. 2017. Evaluation of botanical and chemical products for the control of foliar nematodes *Aphelenchoides fragariae* in floriculture. *Crop Protection* 92,107-113.
- Bal, H., Acosta, N., Cheng, Z., Grewal, P.S. & Hoy, C.W. 2017. Effect of habitat and soil management on dispersal and distribution patterns of entomopathogenic nematodes. *Appl. Soil Ecol.*, 121, 48-59.
- Hariharan, J., Sengupta, A., Grewal, P.S. & Dick, W.A. 2017. Functional predictions of microbial communities in soil as affected by long-term tillage practices. *Agric. Environ. Lett.* 2:170031 doi:10.2134/ael2017.09.0031.
- Taylor, R.A.J., Park, S.P. & Grewal, P.S. 2017. Nematode frequency distribution and the frequency of zeros in the samples. *Nematology* 19, 263-270.
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- d. reviews** [Invited and peer reviewed; Total published = 12]
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e. papers in proceedings [Total = 17]

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- Grewal, P.S. 1988. Stimulation of fungal control of mycophagous nematodes and weed molds in mushrooms. Brighton Crop Protection Conference, UK, pp. 1199-1204.
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2. Inventions and patents [Total = 7]

- Grewal, P.S., McCoy, E., Dick, W.A. & Yang, H. 2011. Biphasic Bioretention System. U.S. Patent No. 7,967,979.
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- Lewis, E.E. & Grewal, P.S. 1999. Control of Plant-parasitic nematodes with culture filtrates of *Xenorhabdus* species. U.S. Patent Application Serial No. 06,014,664.

I. Scientific Presentations

a. invited presentations (National and International: Total = 173)

- 2017 Sustainable food systems & security. Valley Environmental Summit, McAllen, TX, October 6, 2017.
- 2017 Local solutions to grand global challenges. UTRGV HIGH Scholars Program, June 9, 2017.
- 2016 Entomopathogenic nematode dispersal behavior: ambushers, cruisers, sprinters, and more. Annual Meeting of the Entomological Society of America, Orlando, FL, September 25-30, 2016.
- 2016 Sustainable food systems. Valley Environmental Summit, South Padre Island, TX, September 23, 2016.
- 2016 Building self-reliant cities: Thinking globally acting locally. UTRGV HIGH Scholars Program, July 15, 2016.
- 2015 Patterns and processes of soil nematode community and ecosystem services of the soil food web in urban ecosystems. Annual Meeting of the Entomological Society of America, Minneapolis, MN, November 15-18, 2015.
- 2015 Analyzing the resilience of urban soil nematode foodwebs. Annual Meeting of the Entomological Society of America, Minneapolis, MN, November 15-18, 2015. [With Satyendra Pothula]
- 2015 Entomopathogenic nematodes boost plant immunity: A novel approach to plant protection. Annual Meeting of the Entomological Society of America, Minneapolis, MN, November 15-18, 2015. [With Julia Ferguson and Ruisheng An]
- 2015 Endophytic entomopathogenic fungus *Beaveria bassiana*: A tool for comprehensive plant protection. Annual Meeting of the Entomological Society of America, Minneapolis, MN, November 15-18, 2015. [With Shalini Yerukala and Bonnie Ownley]
- 2015 Global food security through urban agriculture. Second International Conference on Agriculture in an Urbanizing Society, Rome, Italy, September 14-17, 2015.
- 2015 Patterns and processes of soil biodiversity in urban soils. 100th Annual Meeting of the Ecological Society of America, Baltimore, MD, August 9-14, 2015.
- 2015 Resilient food systems: Feeding the 9 billion through urban agriculture. Horticulture/Plant, Soil, and Microbial Sciences Departmental Seminar, Michigan State University, East Lansing, MI, April 16, 2015.
- 2015 Entomopathogenic nematodes: A tool in IPM systems. International IPM Symposium, Salt Lake City, Utah, March 24-25, 2015.
- 2015 Building Resilient Urban Food Systems. Global Forum on Innovations in Agriculture, Abu Dhabi, UAE, March 9-10, 2015.
- 2015 Ecosystem services of nematodes: From biocontrol to soil health. Plant Pathology Departmental Seminar, University of Georgia, Athens, Georgia, February 6, 2015.
- 2014 Patterns and processes of nematode biodiversity in urban soils. First Global Soil Biodiversity Conference, Dijon, France, December 2-5, 2014.
- 2014 Building community resilience through localization of food systems. Research Seminar, Heliospectra AB, Gothaburg, Norway, June 27, 2014.

- 2014 Belowground biodiversity and soil foodwebs in urban landscapes. Speed Talk, Stockholm Resilience Center, University of Stockholm, Stockholm, Sweden, June 17, 2014.
- 2014 Entomopathogenic nematodes and bacteria complexes: Symbiosis, virulence, and dispersal. Research Seminar, E-Nema, Schwentinental, Kiel, Germany, June 6, 2014.
- 2014 Drivers for sustainable urban food production: Academic, government and industry partnerships. 2014 Resilient Cities Conference, Bonn, Germany, May 28-31, 2014.
- 2014 Entomopathogenic nematodes and symbiotic bacteria complexes: Symbiosis and Infectivity. Departmental Seminar, University of Copenhagen, Copenhagen, Denmark, May 26, 2014.
- 2014 Resilient Cities. Speed Talk, Stockholm Resilience Center, University of Stockholm, Stockholm, Sweden, May 19, 2014.
- 2014 Implementation of entomopathogenic nematodes in pest management. Sixth International Nematology Congress, Cape Town, South Africa, May 10-14, 2014.
- 2014 Nematodes as model systems: Advancing frontiers of science from ecosystems to molecules. Entomology and Plant Pathology Departmental Seminar, University of Tennessee, Knoxville, TN, January 17, 2014.
- 2013 Ecosystem services of the urban soil food web and implication for urban agriculture. Annual Meeting of the Entomological Society of America, Austin, TX, November 10-14, 2013.
- 2013 Pedagogy and modern teaching methods in biological control. Annual Meeting of the Entomological Society of America, Austin, TX, November 10-14, 2013.
- 2013 Redesigning urban agriculture: lessons from the soil nematode community. Annual Meeting of the Society of Nematologists, Knoxville, TN, July 15-18, 2013.
- 2013 First complete genome sequence of entomopathogenic nematodes goes public. Annual Meeting of the Society of Nematologists, Knoxville, TN, July 15-18, 2013.
- 2013 Moving beyond IPM: building an ecosystem approach to sustainable pest management. Departmental Seminar, The Ohio State University, Wooster, Ohio, January 14, 2013.
- 2012 Ecosystem approaches to sustainable pest management. International Conference on Sustainable Agriculture for Food and Livelihood Security in Commemoration of the 50th Anniversary of the Punjab Agricultural University, Ludhiana, India, November 27-29, 2012.
- 2012 Biodiversity in soil food webs and its ecosystem services. Entomological Society of America, Knoxville, Tennessee, November 11-14, 2012.
- 2012 Urban agriculture, community resilience, and ecological footprint of cities. Public Lecture, Ashland University, Ashland, Ohio, October 11, 2012.
- 2012 Local solutions to grand global challenges. ORIP Lecture, OARDC, Wooster, Ohio, June 22, 2012.
- 2012 Entomopathogenic Nematodes: An attractive tool for biological pest control. International Conference on Plant Biotechnology for Food security: New Frontiers, New Delhi, India, February 21-24, 2012.
- 2012 Entomopathogenic nematodes: Model systems and tools in pest management. Entomology Division Lecture, Indian Agricultural Research Institute, New Delhi, India, February 23, 2012.
- 2011 Urban soil food webs and their ecosystem services. Entomological Society of America, Reno, Nevada, November 13-16, 2011.
- 2011 Cooperative endurance and pathogenesis: A story of the nematode and bacteria partnership. Entomopathogenic Nematodes: Their biology, ecology and application: A tribute to the dynamic career of Harry K. Kaya. Entomological Society of America, Reno, Nevada, November 13-16, 2011.
- 2011 Entomopathogenic nematodes and bacteria as models in fundamental research and pest management, Istanbul, Turkey, September 18-22, 2011.
- 2011 Global issues and local solutions: An ecological approach to urban landscaping. International Workshop on Urban Landscape, Bangkok, Thailand, August 18-29, 2011.
- 2011 Entomopathogenic Nematology since the 1990s: The openings of a new era. Symposium on EPNs as Model Systems in Stress Physiology and Evolutionary Biology at the 50th Annual Meeting of the Society of Nematologists, Corvallis, Oregon, July 17-20, 2011.

- 2011 Entomopathogenic nematode ecological modeling, from frontiers of ecology to the future of agriculture. Symposium on EPNs as Model Systems in Ecology at the 50th Annual Meeting of the Society of Nematologists, Corvallis, Oregon, July 17-20, 2011. [Co-author with Casey W. Hoy]
- 2011 In-vivo gene expression reveals differences in molecular features used by *Xenorhabdus* and *Photorhabdus* for virulence and symbiosis. Symposium on EPNs as Model Systems: Contributions to Symbiosis at the 50th Annual Meeting of the Society of Nematologists, Corvallis, Oregon, July 17-20, 2011. [Co-author with Ruisheng An]
- 2011 Grand global challenges but local solutions: Local self-reliance as an organizing principle for designing sustainable human communities. ORIP Lecture, OARDC, Wooster, Ohio, July 8, 2011.
- 2011 Nematodes as monitoring tools for soil food web development in organic farming systems. Ohio Ecological Food & Farming Association Annual Conference, Granville, Ohio, February, 20, 2011.
- 2011 Local self-reliance as an organizing principle for designing sustainable human communities. Institute Lecture, Indian Agricultural Research Institute, New Delhi, India, January 24, 2011.
- 2011 Entomopathogenic nematodes and their symbiotic bacteria as emerging model systems in biological sciences. Nematology Division Lecture, Indian Agricultural Research Institute, New Delhi, India, January 24, 2011.
- 2011 Towards self-reliant cities: An effective means to reducing ecological foot-print of human population. College Lecture, Government College of Education, Chandigarh, India, January 21, 2011.
- 2010 Urban Landscape Ecology Program: Interdisciplinary approaches to ecological urban landscaping. Environmental Science Graduate Program Seminar, The Ohio State University, Wooster, OH, November 5, 2010.
- 2010 Self-reliant cities. Scholarship for Entrepreneurial Engagement of Program of Ashland University, Hudson High School, Hudson, Ohio, October 30, 2010.
- 2010 Nematode communities and soil food web health in urban landscapes. S-1040 Annual Meeting. Northampton, Massachusetts, October 26-27, 2010.
- 2010 Harnessing the potential of entomopathogenic nematodes to control plant pests. Symposium on Challenges and Perspectives of Plant-parasitic and Beneficial Nematodes in Plant Production at the 70th Annual Meeting of the Northeastern Division of American Phytopathological Society, Northampton, Massachusetts, October 27-29, 2010.
- 2010 Local self-reliance as an organizing principle for city planning. Cleveland City Planning Commission, Cleveland, Ohio, August 18, 2010.
- 2010 Symposium on Expanding Frontiers of Nematology at the 49th Annual Meeting of the Society of Nematologists. Boise, Idaho, July 10-14, 2010.
- 2010 Partnership between entomopathogenic nematodes and their symbiotic bacteria. Symposium on Nematodes and Bacteria Interactions at 49th Annual Meeting of the Society of Nematologists, Boise, Idaho, July 10-14, 2010.
- 2010 A novel biphasic bioretention system for storm water management. Ohio Stormwater Conference, Sandusky, OH, June 10, 2010.
- 2010 Entomopathogenic nematodes and their symbiotic bacteria as emerging model systems. Department of Entomology Seminar, The Ohio State University, Wooster, OH, June 1, 2010.
- 2010 Roundworms: what are they? Circleville High School, Circleville, Ohio, May 18, 2010.
- 2010 Local self-reliance as an organizing principle for addressing global challenges: the role for agricultural sciences. Plenary Session Presentation at the Royal Golden Jubilee Congress XI. Jomtien Palm Beach Resort, Pattaya, Chonburi, Thailand, April 1-3, 2010.
- 2010 Molecular mechanisms of symbiosis and virulence of entomopathogenic nematodes and bacteria. Royal Golden Jubilee Congress XI. Jomtien Palm Beach Resort, Pattaya, Chonburi, Thailand, April 1-3, 2010.
- 2010 Entomopathogenic nematodes and bacteria and emerging model systems in biological sciences. Departmental Seminar, Kasertset University, Bangkok, Thailand, March 30, 2010.

- 2010 Local self-reliance and sustainable cities. Department of Biological, Geological, and Environmental Sciences Seminar, Cleveland State University, Cleveland, OH, March 12, 2010.
- 2010 Local self-reliance as an organizing principle for enhancing ecosystem resilience, human well-being, and global stability: the Cleveland ULTRA Experiment. Urban Ecosystems and human well-being: Integrating social and ecological systems Symposium. Minneapolis, Minnesota, January 25, 2010.
- 2010 Research without boundaries: An ecosystem to molecule approach. University Lecture at the Punjab Agricultural University, Ludhiana, India, January 7, 2010.
- 2009 Building an effective organic lawn care program. Ohio Turfgrass Conference, Columbus, Ohio, December 7-10, 2009.
- 2009 Insect resistance management strategies in turfgrass. Entomological Society of America, Indianapolis, Indiana, December 14-18, 2009.
- 2009 Technological needs for building self-reliant cities. Scholarship for Entrepreneurial Engagement of Program of Ashland University, Hudson High School, Hudson, Ohio, October 31, 2009.
- 2009 Soil food webs in urban Ecosystems. Joint Meeting of the Society of Nematologists and the Society of Soil Ecology, Burlington, Vermont, July 12-18, 2009.
- 2009 Molecular mechanisms of virulence and symbiosis in the entomopathogenic nematodes and bacteria. S-1040 Annual Meeting. Pine Mountain, Georgia, October 21-23, 2009.
- 2009 Progress in the research and commercial development of entomopathogenic nematodes. Royal Golden Jubilee Congress X. Jomtien Palm Beach Resort, Pattaya, Chonburi, Thailand, April 3-5, 2009.
- 2008 Grewal, P. S. What is subsoil and how it affects turfgrass management and water quality? 2008 Ohio Turfgrass Conference, Columbus, Ohio, December 8-11, 2008.
- 2008 Ecological lawn care: understanding and manipulating ecological interactions in urban lawns. Crystal Ball Meeting on Sustainability, Professional Landcare Network (PLANET), San Diego, California, November 12-15, 2008.
- 2008 Developing and implementing integrated pest management in commercial lawn care. Entomological Society of America, Reno Nevada, November 15-19, 2008.
- 2008 Expressed genome of the first entomopathogenic nematode. Departmental Seminar, Wooster Area Molecular Biologists Association (WAMBA), October 24, 2008.
- 2008 How do nematodes and bacteria gang-up on insects? Departmental Seminar, Department of Entomology, University of Georgia, Athens, Georgia, September 15, 2008
- 2008 Expressed genome of *Heterorhabditis bacteriophora* reveals interesting longevity and stress tolerance genes in entomopathogenic nematodes. Fifth International Congress of Nematology, Brisbane, Australia, July 12-18, 2008.
- 2008 Metapopulation biology of entomopathogenic nematodes. Fifth International Congress of Nematology, Brisbane, Australia, July 12-18, 2008.
- 2008 Interdisciplinary Research from Molecule to Ecosystem. ORIP Lecture, OARDC, Wooster, Ohio, June 15, 2008.
- 2008 Expressed genome of the entomopathogenic nematode *Heterorhabditis bacteriophora* reveals interesting differences from *Caenorhabditis elegans*. NSF/USDA CSREES Microbial Genome Sequencing Program Awardees Workshop, San Diego, California, January 11-12, 2008.
- 2007 Building an ecosystem management approach to lawn care: understanding a manipulating ecological interactions in urban lawns. Ecological Landscaping: from scientific principles to public practices and policies. Cleveland, Ohio, October 28-31, 2007.
- 2007 Lawn revolution and the emergence of urban environmentalism. Ecological Landscaping: from scientific principles to public practices and policies. Cleveland, Ohio, October 28-31, 2007.
- 2007 Expressed genome of the entomopathogenic nematode, *Heterorhabditis bacteriophora*. A workshop on functional genomics in a parasitic model. Plata Delgata, Azores, Portugal, September 19-24, 2007.
- 2007 Virulence of entomopathogenic nematodes and bacteria: gene expression profiles in the white grub host. International Meeting of the Society of Invertebrate Pathology and First Forum on

- Entomopathogenic Nematodes and the Symbiotic Bacteria. Quebec City, Canada, August 12-16, 2007.
- 2007 Entomopathogenic nematodes for turfgrass pest management: discovery, development and implementation. International Meeting of the Society of Invertebrate Pathology and First Forum on Entomopathogenic Nematodes and the Symbiotic Bacteria. Quebec City, Canada, August 12-16, 2007.
- 2007 Entomopathogenic nematodes: Research and application trends. A keynote speech at the XX Entomology Congress of Venezuela, San Cristobal, Venezuela, July 22-26, 2007
- 2007 Biological control of turfgrass pests. Department of Biology Seminar, Alliance College, Alliance, Ohio, June 5, 2007.
- 2007 Fungal endophytes and cultural practices influence alkaloid levels in turfgrasses. S-1024 Microbial Control and National Turfgrass Entomology Workshop, Wooster, Ohio, March 12-13, 2007.
- 2007 World trends in research and development of biocontrol agents: a key note address. Innovation Fund, Government of South Africa, Johannesburg, South Africa, February 22-23, 2006.
- 2007 Developing application technologies for biocontrol agents: An invitation to engineers. Food Agriculture, and Biological Engineering Department Seminar, Columbus, Ohio, February 16, 2007.
- 2007 An update on the genome sequencing of the entomopathogenic nematode *Heterorhabditis bacteriophora*. NSF/USDA CSREES Microbial Genome Sequencing Program Awardees Workshop, San Diego, California, January 14-15, 2007.
- 2006 The vision and role of the Center for Urban Environment and Economic Development in urban renewal. The Andersons, Maumee, Ohio, December 15, 2006.
- 2006 Power of the science of ecology in improving the predictability of biological pest control with entomopathogenic nematodes. Entomological Society of America, Indianapolis, December 7, 2006.
- 2006 Nematology: an exciting discipline. Plant Pathology Departmental Seminar, The Ohio State University, Wooster, Ohio, October 24, 2006.
- 2006 Virulence of *Moraxella osloensis*, a bacterium associated with the slug-parasitic nematode *Phasmarhabditis hermaphrodita*, to the slug *Deroceras reticulatum*. International Meeting of the Society of Invertebrate Pathology, Wuhan, China, August 27- September 1, 2006.
- 2006 New and upcoming target pests for entomopathogenic nematodes in North America. International Meeting of the Society of Invertebrate Pathology, Wuhan, China, August 27- September 1, 2006 [with Dr. David Shapiro-Illan]
- 2006 Development of novel natural products for the management of urban landscapes. The MTD Corporation, Ohio, July 18, 2006.
- 2006 New research developments on entomopathogenic nematodes. Passo Fundo, Brazil, June 26, 2006.
- 2006 The vision of the Center for Urban Environment and Economic Development for urban renewal. A meeting with Ohio senators, The Ohio State University, Wooster, Ohio, March 27, 2006.
- 2006 Ecosystem approach to urban lawn pest management. National Turfgrass Entomology Workshop, Garner, North Carolina, Feb 19-20, 2006.
- 2006 An update on the genome sequencing of the entomopathogenic nematode *Heterorhabditis bacteriophora*. NSF/USDA CSREES Microbial Genome Sequencing Program Awardees Workshop, San Diego, California, January 15-16, 2006.
- 2005 Building an ecosystem approach to turfgrass management: the final frontier. Entomological Society of America, Ft. Lauderdale, Florida.
- 2005 Entomopathogenic nematodes for pest management in turfgrass and ornamentals. Entomological Society of America, Ft. Lauderdale, Florida.
- 2005 Sequencing the genome of the entomopathogenic nematode *Heterorhabditis bacteriophora*: a foray into the first 1246 expressed sequences. International Meeting of the Society of Invertebrate Pathology, Anchorage, Alaska, August 7-11, 2005.
- 2005 Entomopathogenic nematode biology and evaluation techniques. Midwest institute for biological control techniques for evaluating natural enemies. Arden Shisler Conference Center, Wooster, Ohio, June 12-16, 2005.

- 2005 American lawn and the emergence of urban environmentalism. National Risk Management Research Laboratory, United States Environmental Protection Agency, Cincinnati, Ohio, April 14, 2005.
- 2005 Building an ecosystem approach to lawn management: the final frontier. Annual Meeting of the North Central Branch of the Entomological Society of America, West Lafayette, Indiana, March 20-23, 2005.
- 2005 Behavioral and physiological barriers to host range of entomopathogenic nematodes: A case study on white grubs. Annual Meeting of the North Central Branch of the Entomological Society of America, West Lafayette, Indiana, March 20-23, 2005.
- 2005 Molecule to ecosystem training as a framework for teaching and research in entomology. Entomology Department Seminar, The Ohio State University, Wooster, Ohio, February 8, 2005.
- 2005 Development of novel natural products for the management of urban landscapes. The Scotts Company, Marysville, Ohio, January 4, 2005.
- 2004 Building an ecosystem approach to turfgrass management. Annual Meeting of the Entomological Society of America, Salt Lake City, Utah, November 14-17, 2004.
- 2004 Building an ecosystem approach to lawn management. Urban Landscape Ecology Program, The Ohio State University, Wooster, Ohio, November 12, 2004.
- 2004 Physiology of entomopathogenic nematode cold tolerance. International Meeting of the Society of Invertebrate Pathology, Helsinki, Finland. (August 2004)
- 2004 Infected host's role in infection dynamics of entomopathogenic nematodes. International Meeting of the Society of Invertebrate Pathology, Helsinki, Finland. (August 2004)
- 2003 Ecological genetics. International Workshop on Entomopathogenic Nematodes and Symbiotic Bacteria, Elat, Israel, November 18-20, 2003.
- 2003 Accomplishments and future challenges in the scale-up of entomopathogenic nematodes. International Workshop on Entomopathogenic Nematodes and Symbiotic Bacteria, Elat, Israel, November 18-20, 2003.
- 2003 Metapopulation biology. Third International Symposium on Entomopathogenic Nematodes and Symbiotic Bacteria, The Ohio State University, Wooster, Ohio, September 3-7, 2003.
- 2003 Intra- and inter-specific competition between scarab species: role of niche partitioning and natural enemies. Annual Meeting of the Entomological Society of America, Cincinnati, Ohio, October 25-29, 2003.
- 2003 Making the transition from research to implementation: Scale-up for the production and formulation of entomopathogenic nematodes. Annual Meeting of the Entomological Society of America, Cincinnati, Ohio, October 25-29, 2003.
- 2003 Effect of turf mowing practices on alkaloid production and insect resistance by endophytic grasses. Annual Meeting of the Entomological Society of America, Cincinnati, Ohio, October 25-29, 2003.
- 2003 Opportunities for expanding the use of Entomopathogenic nematodes for turfgrass pest management. Annual Meeting of the Society of Nematologists, Ithaca, New York.
- 2003 Mechanisms of virulence of *Moraxella osloensis* against mollusks: a bacterium associated with slug parasitic nematodes. Annual Meeting of the International Organization of Biological Control, Keil, Germany.
- 2002 Entomopathogenic nematodes: Biological control potential and role in trophic cascades. Entomology Departmental Seminar, University of Kentucky, Lexington, Ky.
- 2002 *Heterorhabditis zealandica*: A new tool for the management of white grubs in turfgrass and nurseries. Formal Conference on Turf and Ornamentals, Entomological Society of America, Ft. Lauderdale, Florida.
- 2002 Evolution of Virulence in Entomopathogenic nematodes: is infectivity correlated with longevity? International Congress of Parasitology, Vancouver, Canada.
- 2002 Thermal adaptation of Entomopathogenic nematode. International Congress of Parasitology, Vancouver, Canada.
- 2002 Ecological Genetics of Entomopathogenic nematodes: Are there metapopulations? Research Trends in

- Entomopathogenic Nematode Research. International Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil.
- 2002 Production, formulation, and use of entomopathogenic nematodes (co-authored with H. K. Kaya). Current Status of Entomopathogenic Nematodes. International Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil.
- 2002 Non-target effects of entomopathogenic nematodes on the soil nematode community (co-authored with E. A. B. DeNardo). Research Trends in Entomopathogenic Nematology. International Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil.
- 2002 The mechanism of virulence of a slug-parasitic nematode and its associated bacteria to the grey garden slug. (Co-authored with L. Tan). Research Trends in Entomopathogenic Nematology. International Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil.
- 2002 Novel approaches for using entomopathogenic nematodes in urban landscapes. Scotts Company, Marysville, Ohio.
- 2002 Nematology in Throne Hall: Ecosystem to Molecule. Departmental Seminar, Department of Entomology, The Ohio State University, Wooster, Ohio.
- 2001 Milestones in Entomopathogenic Nematology during the Twentieth Century. National Congress on the Centenary of Nematology in India, New Delhi, India.
- 2001 Prospects for Developing Entomopathogenic Nematology in India. A Lecture at the Haryana Agricultural University, Hissar, India.
- 2001 Unraveling Mechanisms of longevity and stress tolerance in *Heterorhabditis bacteriophora*. Third International Meeting on Entomopathogenic Nematodes and bacteria, Madison, Wisconsin.
- 2001 Mass-production of Entomopathogenic Nematodes: Demand, Supply and Quality. SICOBIAL-2001, Sao Paulo, Brazil.
- 2000 Entomopathogenic nematodes: Exploration and use in Brazil. Federal University, Arararas, Brazil.
- 2000 Integrated pest management of scarabs in North America. International symposium on the Management of Scarabs at the 21st International Congress of Entomology, Iguassu Falls, Brazil.
- 2000 Entomopathogenic nematodes: A global journey. EMBRAPA-Cerrados Center, Brazillia, Brazil.
- 2000 Molluscicidal nematodes for the management of slugs. International symposium on entomopathogenic nematodes at the 33rd Meeting of Society of Invertebrate Pathology, Guanajuato, Mexico.
- 2000 Nematicidal effects of entomopathogenic nematodes and their symbiotic bacteria against plant-parasitic nematodes. International symposium on diseases of non-insecta at the 33rd Meeting of Society of Invertebrate Pathology, Guanajuato, Mexico.
- 2000 Molluscicidal Nematodes for slug control on Hostas. Annual Meeting of the Entomological Society of America, Montreal, Canada.
- 2000 Fascinating world of nematodes: associations with plants, insects, and bacteria. Plant Pathology Department Seminar Series, The Ohio State University, Wooster, Ohio.
- 2000 Variation in the virulence of entomopathogenic nematodes to white grubs. National Turfgrass Entomologists Workshop, Geneva, New York.
- 2000 Non-target effects of entomopathogenic nematodes on soil nematodes. Southern Regional Project S-265 Committee Meeting, Orlando, Florida.
- 1999 Anhydrobiosis and storage stability of entomopathogenic nematodes. International meeting on Entomopathogenic Nematodes and their Symbiotic Bacteria. University of Wisconsin, Milwaukee, WI.
- 1999 Biological control: Longevity and environmental stress tolerance of infective juvenile entomopathogenic nematodes. Seminar at USDA Forest Service, Delaware, Ohio.
- 1999 Insect-parasitic Nematodes: Tools for insect pest management - A video presentation. Entomology Department Seminar, The Ohio State University, Columbus, Ohio.
- 1999 A New Insect-parasitic Nematode website. Southern Regional Project S-265 Committee Meeting, Orlando, Florida.

- 1998 Long-term experiences with bioassays for monitoring quality of entomopathogenic nematodes. COST Action 819 Working Group 2 Meeting: Quality of entomopathogenic nematodes, Merelbeke, Belgium.
- 1998 Developments in formulation, storage, and application technology of entomopathogenic nematodes. National Meeting of the Entomological Society of America, Las Vegas, Nevada.
- 1998 Formulations of entomopathogenic nematodes for storage and application. International Symposium on Entomopathogenic Nematodes, Japanese Society of Nematology, Tsukuba, Japan.
- 1998 Survival of formulated nematodes. International Symposium on Ecophysiological survival of entomopathogenic nematodes, Society of Invertebrate Pathology, Sapporo, Japan.
- 1998 Who killed microbial control in turfgrass? August 1998. Microbial Control: Novelty or necessity? International Symposium, Society of Invertebrate Pathology, Sapporo, Japan.
- 1998 First successful inoculative release of an entomopathogenic nematode *Heterorhabditis bacteriophora*. Alternative paradigms for commercializing biological control workshop. New Brunswick, New Jersey.
- 1998 Mechanisms of synergism between entomopathogenic nematodes and Imidacloprid insecticide. S-265 Committee Meeting, Orlando, Florida
- 1998 Potential markets for entomopathogenic nematodes in the USA. MicroBio Ltd., Cambridge, England.
- 1998 Impact of chemical insecticides on the sustainability of entomopathogenic nematodes in turfgrass. National Turfgrass Entomologists Workshop, Dallas, Texas.
- 1997 Entomopathogenic nematodes for pest control in turfgrass: nematode host finding, virulence, and interactions with grass endophytes. Horticulture and Crop Sciences Department, The Ohio State University, Wooster, Ohio.
- 1997 Biological Control of turfgrass pests with nematodes and endophytes. Entomology Department, The Ohio State University, Wooster, Ohio.
- 1997 Biological Control of turfgrass pests with nematodes and endophytes. Department of Entomology, The Ohio State University, Columbus, Ohio.
- 1997 Challenges and opportunities for the commercialization of entomopathogenic nematodes. Bio Integrated Technology, Perugia, Italy
- 1996 Assessing quality of entomopathogenic nematodes. Third International Nematology Congress, Pointe-Pitre, Guadeloupe.
- 1995 Nematode quality. Second International Symposium on Entomopathogenic Nematodes and their Symbiotic Bacteria, Honolulu, Hawaii.
- 1995 Systematics of Steinernematidae and Heterorhabditidae, August 1995, University of California Davis, Davis, California.
- 1994 Fundamental research on entomopathogenic nematodes: An industrial perspective. VIth International Colloquium on Invertebrate Pathology and Microbial Control, Montpellier, France.
- 1994 Predictors of nematode foraging strategy. COST Symposium, Debrecen, Hungary.
- 1993 Entomopathogenic nematode adaptive strategies and their consequences for commercial development, Biosys, Inc., Palo Alto, California.
- 1993 Foraging strategies of entomopathogenic nematodes, University of California Davis, Davis, California.
- 1992 Nematode chemotaxis and host recognition, Rutgers Univ., New Brunswick, New Jersey.
- 1992 Use of entomopathogenic nematodes in mushrooms. Monterey Mushrooms, Watsonville, California.
- 1992 Biological control of mushroom sciarids with nematodes, University of Delaware, Delaware.
- 1992 Biological control potential of entomopathogenic nematodes against white grubs. Grass Breeders Work Planning Conference, Rutgers Univ., New Brunswick, New Jersey.
- 1991 Symbiosis as a key factor in economic control of insect pests with nematodes. Symposium on Symbiosis and Crop Growth, Rank Prize Foundation, Grasmere, Scotland.
- 1990 Saprophagous nematodes in mushrooms, Institute of Horticultural Research, Littlehampton, England.

b. contributed presentations with my students, postdocs and collaborators = total 224

I. Extension and Continuing Education Instruction

- a. invited in-state or out-of-state extension presentations = 75*
- b. extension bulletins: 9*
- c. extension publications: 36*

J. Professional service

1. Editorships or service as a reviewer for journals or other learned publications

Editorial Board, *International Journal of Nematology (UK)*, 1991 - present

Editorial Board, *Annals of Applied Biology (UK)*, 2005 - 2008

Editorial Board, *Biocontrol Science and Technology (UK)*, 2001 - 2006

Editorial Board, *Biological Control (USA)*, 2001-2004

Editor, *Journal of Nematology (USA)*, 1999-2001

Reviewed over 300 papers for 39 journals

2. Professional societies

Hosted the 52nd Annual Meeting of the Society of Nematologists, Knoxville, TN, July 2013

Past President, Society of Nematologists, 2011-2012

President, Society of Nematologists, 2010-2011

President Elect, Society of Nematologists, 2009-2010

Vice President, Society of Nematologists, 2008-2009

Program Chair for the 49th Annual Meeting of the Society of Nematologists, 2010

Society of Nematologists 50th Anniversary Meeting Adhoc Committee Chair, 2008-2011

Chair, 2004-2006; Vice Chair, 2002-2004, Member since 1999, Nematode Division, International Society of Invertebrate Pathology

Chair, 1999-2000; Vice Chair, 1998-1999, Member since 1997, Entomophilic Nematodes Committee, Society of Nematologists

Chair, 2000-2001; Vice Chair, 1999-2000, Member 1998-2001, Industry Committee, Society of Nematologists

Member from 2005- present, Awards Committee, Society of Nematologists

Member, Committee on National Needs and Priorities in Nematology, Society of Nematologists, 1992-1993

Member of the American Association for the Advancement of Science, since 1997

Member of the Entomological Society of America since 1991

Member of the Society of Invertebrate Pathology since 1989

Member of the Society of Nematologists since 1989

Member of the European Society of Nematologists since 1988

Member of the Association of Applied Biologists since 1987

3. Consultation (industry, education, government)

Served on Technical Advisory Board to the Ohio Turfgrass Foundation, 1997-2013

Advised MicroBio Ltd, Cambridge, England on fermentation, formulation, and commercialization of entomopathogenic nematodes, 1997- 2003

Advised SC Johnson Wax on Turfgrass insect pest biology and management, May 1998 - April 1999

Advised Eagle-Picher Minerals Inc., Reno, Nevada on Turfgrass insect pest biology and management approaches, April, 2000- March 2001

Advised Bio Integrated Technology Company, Perugia, Italy on formulations and fermentation of entomopathogenic nematodes, February 1997 to May 1997

4. Other professional/public service

a. grant review panels

Panel Manager, USDA-NRI Integrative Biology of Arthropods and Nematodes, 2006
Panel Member, Fulbright Scholar Regional Panel, 2016
Panel Member, NIFA-Pre-doctoral and Post-doctoral Fellowships Program, 2012
Panel Member, NIFA-Pre-doctoral and Post-doctoral Fellowships Program, 2011
Panel Member, USDA-NRI Integrative Biology of Arthropods and Nematodes, 2005
Panel Member, USDA-NRI Entomology/Nematology Competitive Grants, 2001
Chair, New Enterprise Grants Panel, OARDC Research Enhancement Committee, 1999, 2000
Chair, Matching Grants Panel, OARDC Research Enhancement Committee, 2000
Panel Member, Seed Grants, OARDC Research Enhancement Committee, 2000
Panel Member, Graduate Research Grants, OARDC Research Enhancement Committee, 2000
Panel Member, International Grants, OARDC Research Enhancement Committee, 1999

b. reviewer of competitive grants: reviewed regularly for 8 different agencies

c. regional projects/symposia/sessions

Organized and Chaired the second national conference on "Ecological Landscaping: Enhancing Self-Reliance and Resilience of Cities" in Cleveland, Ohio, December 1-3, 2009. [108 participants]

Organized and Chaired the first national conference on "Ecological Landscaping: From Scientific Principles to Public Practices and Policies" in Cleveland, Ohio, October 28-31, 2007 [105 participants]

Co-Organized and Co-chaired the "First Forum on Entomopathogenic Nematodes and Bacteria" at the 40th Annual Meeting of the Society of Invertebrate Pathology, Quebec City, Canada, August 11-16, 2007

Chair (2005-2008), Secretary (2003-2005), Member-At-Large (2001-2003), Member (since 1998), Cooperative Southern Regional Project S-1024 (Microbial Control)

Organized and chaired the S-1024 Southern Regional Project Annual Meeting in Wooster, Ohio, 11-12 March 2007 [30 participants]

Organized and chaired the National Turfgrass Entomologists Workshop in Wooster, Ohio, 12-13 March 2007 [75 participants]

Co-Organized and chaired a symposium on "Nematodes and bacteria: from virulence to symbiosis" at the 39th Annual Meeting of the Society of Invertebrate Pathology, Wuhan, China, 15-19 August 2006

Organized and chaired a symposium on the "Genomics of Entomopathogenic Nematodes and their Symbiotic Bacteria" at the 38th Annual Meeting of the Society of Invertebrate Pathology, Anchorage, Alaska, 7-11 August 2005

Organized and chaired a symposium on the "Ecology of Entomopathogenic Nematodes" at the 38th Annual Meeting of the Society of Invertebrate Pathology, Anchorage, Alaska, 7-11 August 2005

Co-organized the "OARDC Annual Research Conference on Bringing Value to the Ecological Paradigm", Wooster, Ohio, April 21, 2005. [105 participants]

Co-organized the "OARDC Annual Research Conference on Bioterrorism and Food Security", Wooster, Ohio, April 29, 2004. [125 participants]

Organized the "Third International Symposium on Entomopathogenic Nematodes and their Symbiotic Bacteria", Wooster, Ohio, September 4-7, 2003. [105 participants from 16 countries]

Co-organized the "OARDC Annual Research Conference on Carbon Sequestration and Global Climate Change: Environmental, Social, and Economic Issues", Columbus, Ohio, April 24, 2003

Organized the "Northeast Ohio Lawn Care Seminar" at the Ohio Agricultural Research and

Development Center, Wooster, Ohio, in association with the Ohio Lawn Care Association Annually from 2003-2009 [105 -145 participants]

Co-organized a symposium on the "Research Trends in Entomopathogenic Nematology" at the 35th Annual Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil, 18-23 August 2002

Chaired a contributed paper session at the Annual Meeting of the Society of Invertebrate Pathology, Foz do Iguassu, Brazil, 18-23 August 2002

Organized a symposium on the "Evolution of Parasitism in Nematoda" at the 40th Annual Meeting of the Society of Nematologists, Salt Lake City, Utah, 25 August 2001

Co-chaired the sub-project on Soil Insects of the Cooperative Regional Project S-301 on Microbial Control, 2001- 2004

Co-chaired the Biological Control Session at the National Turfgrass Entomologists Workshop, Geneva, NY, 2000

Chaired a session of Nematode Application at the International Meeting on Entomopathogenic Nematodes and their Symbiotic Bacteria at University of Wisconsin, Milwaukee, 1999

Chaired a session on Quality Evaluation at the COST Action 819 Working Group 2 Meeting on the Quality of Entomopathogenic Nematodes at Merelbeke, Belgium, 1998

Served on the Michigan State Legislature Task Force on the Safety and Efficacy of Entomopathogenic Nematodes in the Human Living Environment, 1995

Co-chaired a symposium on Nematode Chemotaxis at the Third International Nematology Congress, Velthoven, The Netherlands, 1990

5. Other Administrative Service

a. departmental committees

Search Committee for the Veterinary Entomologist 2010-2011

Search Committee for the Insect Population Geneticist 2006-2007 (Chair)

Department Curriculum Committee, 2007-2008, 2009-2010 (Chair), 2010-2011, 2011-2012

Adhoc Graduate Curriculum Committee, 2005-2006 (Chair)

Department Administrative Advisory Committee, 2005-2006, 2006-2007

CSREES Department Review Committee, 2003-2004

Seminar Committee - 1999-2000 (Chair), 2001-2003

Search Committee for Molecular Entomologist, 1998-1999

Awards and Scholarships Committee, 1997-2004

Safety Committee, 1997-2005 (Chair), 2005-2006

b. college and university committees

UTRGV Blue Ribbon Committee, 2017

UTRGV Quality Enhancement Plan Committee, 2016

UTRGV Strategic Planning Committee, 2016-2017

UTRGV Research Centers and Institutes Review Committee, 2015-2017

UT Institute of Agriculture Future Priorities Committee (Chair, 2012-2013)

Environmental Science Graduate Program's Curriculum Committee, 2007-2010 (Chair, 2007-2008; Chair, 2008-2009; Chair, 2012-2013)

College Promotion and Tenure Committee, 2006-2009

Environmental Science Graduate Program's Graduate Studies Committee, 2004-2006 (Chair, 2005-2006, 2006-2007)

College of Engineering Strategic Planning for Graduate Education Committee, 2006-2007

OARDC William E. Krauss Director's Award Committee, 2005-2007

OARDC Director's Fellowship Selection Committee, 2002-2005 (Chair, 2004)

OARDC Annual Conference Committee, 2003-2005

CFAES International Programs in Agriculture Committee, 2003-2004, 2007-08

OARDC Research Enhancement Advisory Committee, 1998-2001

Environmental Science Graduate Program's Seminar Committee, 1999-2000