

EDUCATION

Audited Courses (Graduate Level)

Plant Pathology Department

The Ohio State University/Ohio Agricultural Research and Development Center

- ◆ Agricultural Genomics: Principles and Applications, 2001
- ◆ Field Plant Pathology, 2000
- ◆ Plant Microbe Interactions, 2000
- ◆ Plant Cell Transformation, 1999

Master of Science

Plant Sciences Department

University of Western Ontario and Agriculture and Agri-Food Canada 1998

Master Thesis: "Characterization of a Novel Gram-positive Atrazine-degrading Bacterium"

Honours Bachelor of Science

(graduated with honours)

University of Guelph 1995

- ◆ major emphasis in microbiology
- ◆ courses of study included bacterial genetics, bacterial pathogenesis, bacterial ecology, techniques in microbiology, soil microbiology, microfungi, metabolic processes and statistics

LABORATORY WORK

- ◆ skilled in molecular techniques including primer development, PCR DIG-labeling, dot-blot hybridization, PCR, rep-PCR, real-time PCR, plasmid isolation, DNA extraction, agarose gel electrophoresis and PFGE
- ◆ skilled in ELISA
- ◆ competence in classical microbiological techniques such as plating, media preparation, dilutions, enumeration of bacterial cells and fungal spores and culture storage
- ◆ familiar with the workings and usage of a variety of laboratory equipment including autoclaves, spectrophotometers, sonicators, UV crosslinkers, bead beaters, pH meters, light microscopes, transmission electron microscopes and liquid scintillation counters
- ◆ experienced in fatty acid extraction and reverse phase HPLC analysis
- ◆ familiar with radioactive compounds (^{14}C atrazine), mineralization experiments
- ◆ bacterial pathogen detection and isolation from vegetable plants, including seeds and fruit
- ◆ competence in the preparation (fixation and embedding) of samples for TEM
- ◆ enhanced written and oral communication skills through the preparation and presentation of research reports, posters, publications and seminars

- ◆ familiar with internet tools for genetic analysis including Genbank, EMBL and Blast

EMPLOYMENT HISTORY

Part-time Instructor

The University of Akron/ Wayne College (Spring 2005-present)

Orville, OH

- ◆ instructor for the lecture and laboratory sections of the “Natural Science and Biology” course in the Department of Biology at Wayne College

Research Associate

Ohio Agricultural Research and Development Center

Ohio State University (January 1999- present)

Wooster, OH

- ◆ support research in detection and biological control of bacterial and fungal diseases of vegetable crops (field and greenhouse)
- ◆ manage PCR laboratory (for diagnostics), including training and supervision of various users from other laboratories, purchasing of laboratory supplies, grant writing for equipment funds and organizing monthly laboratory meetings
- ◆ manage day-to-day operations of general laboratory

Laboratory Assistant

Southern Crop Protection and Food Research Centre

Ontario Agri-Food Research Foundation (September 1998-December 1998)

London, Ontario

- ◆ development of a sensitive and reliable molecular based assay for detecting bacterial spot-infested tomato and pepper seed lots

Biology Teaching Assistant

University of Western Ontario (September 1996-April 1998)

London, Ontario

- ◆ preparation and presentation of short laboratory talks to introduce students to techniques and subject matter
- ◆ assist students with laboratory procedures

PRESENTATIONS

- ◆ “Characterization of a Novel Gram-positive Atrazine Degrading Bacterium”, Wooster Area Molecular Biology Association (WAMBA), 1999.
- ◆ “Effect of Elevate on the Control of Botrytis Gray Mold in Greenhouse Tomatoes”, Tomato Disease Workshop, 2001.

WORKSHOPS AND SCHOLARSHIPS

- ◆ Dreamweaver MX (2004)
- ◆ SAS (2002)
- ◆ Tomato Disease Workshop (1999-2002)
- ◆ Tomato Symposium (2000-2002, 2004)
- ◆ FrontPage 2000 (1999)
- ◆ Recipient of the Professional Growth and Development Scholarship at OSU/OARDC (1999-2005)

EXTRACURRICULAR ACTIVITIES

- ◆ OARDC Staff Council Member (2000-2003), Co-chair (2000-2001), Chair (2001-2002)
- ◆ American Phytopathological Society member (1999-present)

PUBLICATIONS

Peer Reviewed Journal Articles:

Yang, W., E.J. Sacks, M.L. Lewis Ivey, S.A. Miller, and D.M. Francis. 2005. Resistance in *Lycopersicon esculentum* intraspecific crosses to race T1 strains of *Xanthomonas campestris* pv. *vesicatoria* causing bacterial spot of tomato. *Phytopathology*. 95: 519-527.

Geiser, D.M., M.L. Lewis Ivey, G. Hakiza and J.H. Juba 2005. *Gibberella xylarioides* (anamorph: *Fusarium xylarioides*), a causative agent of coffee wilt disease in Africa, is a previously unrecognized member of the *G. fujikuroi* species complex. *Mycologia*. 97(1): 191-201.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of fungicides for the management of clubroot in mustard greens, 2004. *Fungicide and Nematicide Tests* (online.) Report No. 60:V100. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of fungicides and bactericides for the control of foliar and fruit diseases of processing tomatoes, 2004. *Fungicide and Nematicide Tests* (online.) Report No. 60:V110. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of fungicides for the control of anthracnose on immature pepper fruit, 2004. *Fungicide and Nematicide Tests* (online.) Report No. 60:V095. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of fungicides for the control of bacterial leaf spot of bell peppers, 2004. *Fungicide and Nematicide Tests* (online.) Report No. 60:V096. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of fungicides for the management of *Rhizoctonia hypocotyl* rot, clubroot and downy mildew in radishes, 2004. *Fungicide and Nematicide Tests*

for the control of powdery mildew of winter squash, 2004. Fungicide and Nematicide Tests (online.) Report No. 60:V099. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Response of radish cultivars to *Rhizoctonia hypocotyl* rot, clubroot and soft rot, 2004. Biological and Cultural Tests for Control of Plant Diseases (online). Report No. 20:V001. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN..

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2005. Evaluation of biorational products for the control of powdery mildew on winter squash, 2004. Biological and Cultural Tests for Control of Plant Diseases (online). Report No. 20:V001. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN..

Lewis Ivey, M.L., C. Nava Diaz, and S.A. Miller. 2004. Identification and management of *Colletotrichum acutatum* on immature bell peppers. Plant Dis. 88:1198-1204.

Lewis Ivey, M.L. and S.A. Miller. 2004. Evaluation of hot water seed treatment for the control of bacterial leaf spot and bacterial canker on fresh market and processing tomatoes. Acta Horticulturae. Accepted October 2004.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2004. Evaluation of fungicides for the control of foliar and fruit diseases of processing tomatoes, 2003. Fungicide and Nematicide Tests (online.) Report No. 59:V021. DOI:10.1094/FN58. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2004. Evaluation of fungicides for the control of bacterial foliar and fruit diseases of processing tomatoes, 2003. Fungicide and Nematicide Tests (online.) Report No. 59:V020. DOI:10.1094/FN58. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2004. Evaluation of fungicides for the control of the foliar phase of *Phytophthora* blight of peppers, 2003. Fungicide and Nematicide Tests (online.) Report No. 59:V019. DOI:10.1094/FN58. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2004. Evaluation of fungicides for the control of *Septoria* leaf spot of parsley, 2003. Fungicide and Nematicide Tests (online.) Report No. 59:V018. DOI:10.1094/FN58. The American Phytopathological Society, St. Paul, MN.

Lewis Ivey, M.L., Mera, J., and Miller, S.A. 2003. Evaluation of fungicides and a biocontrol agent for the control of anthracnose on green pepper fruit, 2002. Fungicide and Nematicide Tests (online.) Report No. 58:V062. DOI:10.1094/FN58. The American Phytopathological Society, St. Paul, MN.

Miller, S.A., Lewis Ivey, M.L., and Mera, J. 2002. Evaluation of fungicides for the control of anthracnose on green pepper fruit, 2001. Fungicide and Nematicide Tests (online.) Report No. 57:V054. DOI:10.1094/FN57. The American Phytopathological Society, St. Paul, MN.

Miller, S.A., Lewis Ivey, M.L., and Mera, J. 2002. Resistance of pepper cultivars to anthracnose, 2001. Biological and Cultural Tests for Control of Plant Diseases (online). The American Phytopathological Society, St. Paul, MN..

fruit diseases of processing tomatoes, 2001. Fungicide and Nematicide Tests (online.) Report No. X:X. The American Phytopathological Society, St. Paul, MN.

Sahin, F., P. A. Abbasi, M.L. Lewis Ivey, J. Zhang and S. A. Miller. 2002. Diversity among strains of *Xanthomonas campestris* pv. *vitians* from lettuce. *Phytopathology*. 93: 64-70.

Topp, E., H. Zhu, S. Nour, S. Houot, M. Lewis and D. Cuppels. 2000. Characterization of atrazine-degrading *Pseudaminobacter* sp. isolated from Canadian and French agricultural soils. *Appl. Environ. Microbiol.* 66:2773-2782

Miller, S.A., Lewis Ivey, M.L., and Mera, J. 2001. Evaluations of fungicides for the control of foliar and fruit diseases of processing tomatoes. *Biological and Cultural Tests for Control of Plant Diseases* (online). The American Phytopathological Society, St. Paul, MN..

Miller, S.A., Lewis Ivey, M.L., and Mera, J. 2001. Resistance of pepper varieties to bacterial spot. *Biological and Cultural Tests for Control of Plant Diseases* (online). The American Phytopathological Society, St. Paul, MN..

Peer Reviewed Notes:

Lewis Ivey, M.L., S. Wright and S.A. Miller. 2002. Report of bacterial leaf spot on collards and turnip leaves in Ohio. *Plant Dis.* 86:186.

Lewis Ivey, M.L. and S.A. Miller. 2000. First report of bacterial canker of pepper in Ohio. *Plant Dis.* 84:810.

Abstracts:

Lewis Ivey, M.L., S.A. Miller, N. Opina, and G. Tusime. 2005. Molecular characterization of *Ralstonia solanacearum* strains from eggplant grown in the Philippines. *Phytopathology*. Austin, Tx.

Miller, S.A., M.L. Lewis Ivey and E. Hirzel. 2004. Bacterial disease management in tomatoes: The role of clean seed. 1st International Symposium on Tomato Diseases and the 19th Annual Tomato Disease Workshop. Orlando, Fl.

Lewis Ivey, M.L., S.A. Miller, G. Hakiza and D.M. Geiser. 2003. Characterization of the coffee wilt pathogen in Uganda. *Phytopathology*. Charlotte, NC.

Lewis Ivey, M.L., C. Nava-Diaz and S.A. Miller. 2003. Characterization of anthracnose on immature bell pepper in Ohio and pepper cultivar response. Eight International Congress of Plant Pathology. Christchurch, NZ.

Lewis Ivey, M.L., G. Hakiza, S. A. Miller and D. M. Geiser. 2002. Strain characterization and diversity of the coffee wilt pathogen, *Fusarium xylarioides*, in Uganda. Integrated Pest Management Conference for Sub-Saharan Africa. Kampala, Uganda.

Topp, E., H. Zhu, M. Lewis, and D. Cuppels. 1998. Triazine herbicide degradation in soils. Abstr. SA2, p. 62. Programme and Abstracts of the 48th Annual Canadian Society of Microbiologists. Guelph, ON.

Topp, E., L. Tessier, and M. Lewis. 1997. Characterization of atrazine-degrading bacteria isolated from agricultural soils. Abstr. Q-407, p. 523. Abstracts of the 97th General meeting of the American Society of Microbiology. Washington, D. C.

Fact Sheets and Bulletins:

Miller, S.A., and M.L. Lewis Ivey. Hot Water and Chlorine Treatment of Vegetable Seeds to Eradicate Bacterial Plant Pathogens. 2005. The Ohio State University Extension. HYG-3085-05.

Lewis Ivey, M.L., and S.A. Miller. Anthracnose Fruit Rot of Pepper. 2004. The Ohio State University Extension. HYG-3307-04.