

Jamshid Ashigh, Ph.D.

APPOINTMENT

- **75% Extension** (Dept. Extension Plant Sciences)
- **25% Research** (Dept. of Entomology, Plant Pathology and Weed Science)

EDUCATION

- **BSc. Botany**, University of Esfahan
- **Ph.D. Weed Science** (Herbicide Resistance), University of Guelph

WORK EXPERIENCE

New Mexico State University, Department of Extension Plant Sciences
Extension Weed Specialist/Assistant Professor, April 2008- Present

University of Guelph, Department of Environmental Biology
Postdoctoral Research Assistant, Jan.2007 – March 2008
Biochemistry and Chemistry of Herbicide Interactions

University of Guelph, Department of Plant Agriculture
Postdoctoral Fellow, Sept.2006 – Dec. 2006
Molecular Biology and Physiology of Herbicide Resistance

RESEARCH INTERESTS

- **Development and implementation of integrated weed management systems for field and horticultural crops grown in New Mexico.**
- **Characterization, ecology and management of herbicide resistance in weeds.**
- **Physiology of herbicide action.**
- **Economics of weed management and managing weeds with herbicides.**
- **Interaction of weeds and plant pathogens.**

AWARDS & SCHOLARSHIPS

- Natural Sciences and Engineering Research Council of Canada Industrial Postgraduate Scholarships-2. Awarded for 24 months (Jan. 2004 – Dec. 2005).
- Dow AgroSciences Travel Award, 2004 Canadian Weed Science Society meeting, Winnipeg, MB.
- Best Student Poster Award at the 2004 Ontario Pest Management Conference.

- Best Student Oral Presentation Award at the 2005 Canadian Weed Science Society meeting, Niagara Falls, ON.
- Syngenta Weed Science Travel Award, 2005 Canadian Weed Science Society meeting, Niagara Falls, ON.
- Best Student Poster Award at the 2005 Ontario Pest Management Conference.
- University Graduate Scholarship. An Institutional scholarship for academic achievement; tenure at the University of Guelph, for the years 2003 and 2005.
- Approved for NSERC Visiting Fellowship in Canadian Government Laboratories, August 2006.
- Pre-approved for NSERC Industrial R&D Fellowship, November 2007.

PROFESSIONAL ORGANIZATIONS MEMBERSHIP

- Weed Science Society of America
- Canadian Weed Science Society

TEACHING AND OTHER EXPERIENCE

Guest Lecturer

ENVB*4240 Biological Activity of Pesticides, senior level Degree course – winter 2008.
Developed and presented lectures on Herbicide Metabolism and Safeners, and Mode of action of: Glyphosate, Glufosinate, AHAS inhibitors, and Photosynthesis inhibitors.

CROP*4240 Weed Science, senior level Degree course - November 2002.

Developed and presented a lecture on herbicide resistant crops to senior undergraduate students.

Teaching Assistant

DTM*3300 Turf Insects and Weeds; Associate Diploma in Turf Course – Fall 2004, and 2005

CROP*4240 Weed Science; Senior Level Degree Course – Fall of 2002, 2003, and 2004.

DAGR*2210 Applied Weed Science, Associate Diploma Course – Winter 2003.

Reviewer

Served as a reviewer for the Canadian Weed Science Society proceeding. The first decade of herbicide-resistant crops in Canada, eds. Gulden R.H. and Swanton C.J. 2007.

Served as a reviewer for Journal of Pest Management Science. December 2007- present

PUBLICATIONS

Refereed Journal Articles

- Ashigh, J.**, and F. J. Tardif. 2006. AHAS-inhibitors resistance in populations of eastern black nightshade (*Solanum ptycanthum*) from Ontario. *Weed Technology*. 20:308-314.
- Ashigh, J.**, and F. J. Tardif. 2007. An Ala₂₀₅Val Substitution in Acetohydroxyacid Synthase of *Solanum ptycanthum* Reduces Sensitivity to Herbicides and Feedback Inhibitors. *Weed Science* 55:558–565.
- Ashigh, J.**, I. Rajcan, and F. J. Tardif. 2008. Genetics of resistance to acetohydroxyacid synthase-inhibitors in populations of eastern black nightshade (*Solanum ptycanthum*) from Ontario. *Weed Science* 56:210–215.

Submitted Articles

- Ashigh, J.**, and F. J. Tardif. An Amino Acid Substitution at Position 205 of the Herbicide Target Site Acetohydroxyacid Synthase Reduces Fitness under Optimal Light Availability in Resistant Populations of Eastern Black Nightshade (*Solanum ptycanthum*). *Weed Research*.
- Ashigh, J.**, and F. J. Tardif. Impact of water and temperature stress on the fitness of AHAS-inhibitors resistant populations of eastern black nightshade (*Solanum ptycanthum*). *Weed Research*.
- Corbett, C. L., **J. Ashigh**, P. J. Smith, J. Laplante, and F. J. Tardif. Characterization and detection of an Asp₃₇₆Glu mutation conferring resistance to acetohydroxyacid inhibitors in green pigweed. *Pest Management Science*.

Articles in Preparation

- Ashigh, J.**, and J. Christopher Hall. The chemical and biochemical bases of synergistic and antagonistic interactions of selected herbicides.

Conference Presentations

- Ashigh, J.**, and F. J. Tardif. 2006. Molecular genetics of resistance to ALS inhibitors in eastern black nightshade (*Solanum ptycanthum* Dun.) populations from Ontario. Meeting of the Weed Science Society of America, New York, New York, February 12 to 17, 2006, WSSA Abstract. 132. (Poster presentation)
- Ashigh, J.**, and F. J. Tardif. 2005. Characterization and genetic variation of ALS-inhibitors resistant and susceptible populations of eastern black nightshade (*Solanum ptycanthum* Dun.) from Ontario. Meeting of the Canadian Weed Science Society, Niagara Falls, ON, November, 2005. CWSS Abstracts. (Volunteered presentation)
- Ashigh, J.**, and F. J. Tardif. 2005. Characterization and genetic variation of ALS-inhibitors resistant and susceptible populations of eastern black nightshade (*Solanum ptycanthum* Dun.) from Ontario. Ontario Pest Management Conference. November, 2005. Guelph, ON. (Poster presentation)
- Ashigh, J.**, and F. J. Tardif. 2005. Impact of stress on fitness of ALS-inhibitors resistant eastern black nightshade (*Solanum ptycanthum*). Meeting of the Weed Science

- Society of America, Waikiki, Hawaii, February 7 to 11, 2005, WSSA Abstract. 390. (Volunteered presentation)
- Ashigh, J.**, and F. J. Tardif. 2004. Stress and fitness: using ALS-inhibitors resistant eastern black nightshade (*Solanum ptycanthum* Dun.) as a model. Meeting of the Canadian Weed Science Society, Winnipeg, MB, November, 2004. CWSS Abstracts. (Volunteered presentation)
- Ashigh, J.**, and F. J. Tardif. 2004. ALS-inhibitors resistance in populations of eastern black nightshade (*Solanum ptycanthum* Dun.) from Ontario. Ontario Pest Management Conference. November, 2004. Guelph. ON. (Poster presentation).
- Ashigh, J.**, and F. J. Tardif. 2004. ALS-inhibitors resistance in populations of eastern black nightshade (*Solanum ptycanthum*). Meeting of the Weed Science Society of America, Kansas City, MO, February 9 to 12, 2004. WSSA Abstracts. 163. (Volunteered presentation)

Extension Presentations

- Ashigh, J.** 2005. Impact of light and water stress on fitness of ALS-inhibitors resistant eastern black nightshade (*Solanum ptycanthum*). Ontario Weed Tour, Elora ON. July, 2005.
- Ashigh, J.** 2004. Impact of stress on fitness of ALS-inhibitors resistant eastern black nightshade (*Solanum ptycanthum*). Ontario Weed Tour, Elora ON. July, 2004.
- Ashigh, J.** 2003. ALS-Inhibitors resistant in populations of eastern black nightshade (*Solanum ptycanthum*): basis for resistance and management. Ontario Weed Tour, Elora ON. July, 2003.
- Ashigh, J.** 2002. ALS-Inhibitors resistant in populations of eastern black nightshade (*Solanum ptycanthum*). Ontario Weed Tour, Elora ON. July, 2002.

Non-refereed Publications

- Ashigh, J.**, F. J. Tardif., P. Smith., and M. Cowbrough. 2005. Eastern black nightshade: biology and management. Crop Pest Ontario. Ontario Ministry of Agriculture and food publication. Vol.10(5).
www.omafra.gov.on.ca/english/crops/field/news/croppest/2005/05cpo05.htm
- Ashigh, J.**, F. J. Tardif., P. Smith., and M. Cowbrough. 2005. Herbicide resistant eastern black nightshades are a problem, but solutions are in sight. Crop Pest Ontario. Ontario Ministry of Agriculture and food publication. Vol.10(6).
www.omafra.gov.on.ca/english/crops/field/news/croppest/2005/06cpo05.htm
- Kullik. S., and **J. Ashigh**. 2003. Activation tagging. Chapter 4, in: J. C. Hall. (Ed), Bioactivity and Metabolism of Pesticides: Molecular biology in weed science. Lecture Notes, Course ENVB-651. Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada.
- Ashigh, J.**, C. Corbett., S. Kullik., S. Makvandi- Nejad., F. Olea., T. Weinberg., and M. Wheeler. 2003. A role for molecular biology in weed science: towards the elucidation of the mechanism of action of the auxinic herbicides. Chapter 5, in: Hall. C. J. (Ed), Bioactivity and metabolism of pesticides: Molecular biology in weed science. Lecture Notes, Course ENVB-651. Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada.

Ashigh. J., and F. J. Tardif. 2003. ALS-Inhibitors resistant in populations of eastern black nightshade (*Solanum ptycanthum*): basis for resistance and management. Weed Research 2003: Annual Report. Department of Plant Agriculture, University of Guelph, Guelph, ON.