

CURRICULUM VITAE

Benjamin P. Millett

Pioneer Hi-Bred International Inc.
7200 NW 62nd Ave, Johnston, IA 50131
(515) 248-4974, ben.millett@pioneer.com

EDUCATION

Ph. D. Plant Pathology. Molecular emphasis. NSF Graduate Research Fellow. January 2008. University of Minnesota, Department of Plant Pathology, St. Paul, Minnesota. Thesis: Characterization of transcription and function of foliar blight resistance gene *RB* in foliage and tubers of transgenic cultivated potato at different physiological ages.

B. A. Biology. Spanish minor. May 2003. Truman State University, Division of Science, Kirksville, Missouri.

ACADEMIC AND PROFESSIONAL POSITIONS

- 2010 Research Analyst. Field Research Information Management, North America Maize Product Development, Pioneer Hi-Bred Int'l Inc., Johnston, Iowa.
- 2008 - 2010 Postdoctoral research scientist. Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, Minnesota.
- Wild barley expression profiles in response to spot blotch and leaf rust infection.
 - Analysis of Affymetrix Barley1 GeneChip data
 - Semiquantitative RT-PCR validation of chip data
 - Sequencing and SNP mapping of genes important in the Barley- and Wheat-Fusarium head blight interactions.
 - Nucleic acid isolation, manipulation, and characterization
 - PCR techniques (PCR, RT-PCR, cDNA library generation)
 - Sanger and 454 sequence analysis
- 2003 - 2008 Graduate research assistant and NSF graduate research fellow. Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota.
- Investigation of expression of a late blight resistance gene in wild and transgenic potato species.
 - PCR techniques (PCR, RT-PCR, quantitative Real Time RT-PCR)
 - Allele-specific PCR assays
- 2002 - 2003 Undergraduate research assistant. Biology Discipline, Division of Science, Truman State University, Kirksville, Missouri.
- Isolation and characterization of maize peroxidases.
 - Protein isolation, quantification, and activity assay
- 2002 Intern and research assistant. Donald Danforth Plant Science Center, Creve Coeur, Missouri
- Isolation of genes involved in disease resistance response by screening *cdr1* suppressor mutations.
 - Nucleic acid hybridization

- Protein quantification and hybridization

TEACHING POSITIONS

- 2009 Spring Guest Lecturer. PLPA 5103/8103 “Molecular Plant-Microbe Interactions,” Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota.
- I lectured on tissue-specific and age-specific transcription and function of disease resistance genes and their products.
- 2004 Fall Teaching Assistant. PLPA 1005 “Plants get sick, too,” Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota.
- I co-led weekly laboratory sessions of the course, during which I administered quizzes and instructed the undergraduates in basic plant pathology lab skills, such as light microscopy, disease diagnosis, and implementation of Koch’s postulates. This course fulfilled the “Biological Science with a Lab” requirement for non-science majors.
- 2002 Fall Laboratory Assistant. BIO 106 “Introductory Biology I,” Biology Discipline, Division of Science, Truman State University, Kirksville, Missouri.
- I answered questions posed by the undergraduates during the laboratory section and helped the students understand the techniques and principles needed during each lab session.

PUBLICATIONS

- 2010 Jia, H, B.P. Millett, S. Cho, H. Bilgic, W.W. Xu, K.P. Smith, G.J. Muehlbauer. 2010. Quantitative trait loci conferring resistance to *Fusarium* head blight in barley respond differentially to *Fusarium graminearum* infection. *Funct. Integr. Genomics*. Online.
- 2009 Millett, B.P., Y. Xiong, S. Dahl, B.J. Steffenson, G.J. Muehlbauer. 2009. Wild barley expresses distinct sets of genes in response to pathogens of different trophic lifestyles. *Physiol. & Mol. Plant Path.* 74:91-98.
- Bradeen, J.M., M. Iorizzo, D.S. Mollov, J. Raasch, L. Colton Kramer, B.P. Millett, S. Austin-Phillips, J. Jiang, D. Carputo. 2009. Higher copy numbers of the potato *RB* transgene correspond to enhanced transcript and late blight resistance levels. *Mol. Plant-Microbe Interact.* 22:437-446.
- Millett, B.P., D.S. Mollov, M. Iorizzo, D. Carputo, J.M. Bradeen. 2009. Changes in disease resistance phenotypes associated with plant physiological age are not caused by variation in R gene transcript abundance. *Mol. Plant-Microbe Interact.* 22: 362-368.
- 2007 Millett, B.P., J.M. Bradeen. 2007. Development of allele-specific PCR and RT-PCR assays for clustered resistance genes using a potato late blight resistance transgene as a model. *Theor. Appl. Genet.* 114: 501-513.

RECENT PRESENTATIONS

- 2009 Millett, B.P., K.A. Beaubien, S.K. Dahl, B.J. Steffenson, K.P. Smith, G.J. Muehlbauer. Characterization of *Fusarium* head blight-responsive genes in diverse wild and cultivated barley. 2009 National *Fusarium* Head Blight Forum, Orlando Florida, 7-9 Jan. Poster.

- Millett, B.P., Y. Xiong, B.J. Steffenson, G.J. Muehlbauer. Wild barley expresses distinct sets of genes in response to pathogens of different trophic lifestyles. Plant & Animal Genome XVII, San Diego, California, 10-14 Jan. Poster.
- 2008 Millett, B.P., M. Iorizzo, D.S. Mollov, J.M. Bradeen. Foliar blight resistance transgene *RB* transcription levels correlated with blight resistance in tubers. Plant & Animal Genome XVI, San Diego, California, 12-16 Jan. Poster.

PROFESSIONAL/HONORARY AFFILIATIONS

American Phytopathological Society
 International Society for Molecular Plant Microbe Interactions
 Phi Beta Kappa, Delta of Missouri

SERVICE AND LEADERSHIP

- 2006 Fungal biologist search committee. Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota. Graduate student representative.
- 2005 - 2007 Education committee. Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota. Graduate student representative.
- 2005, 2007 Plant Pathology Graduate Student Symposium. Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota. Committee member, website administrator.
- 2004 Plant Pathology Graduate Student Association. Department of Plant Pathology, University of Minnesota, St. Paul, Minnesota. President.

GRANTS AND AWARDS

- 2008 - 2009 Microbial and Plant Genomics Institute Travel Grant, Travel, conference registration, housing. (MPGI, UofM)
- 2006 Ward C. Stienstra and Richard A. Meronuck Graduate Student Travel Award, Travel, conference registration, housing. (UofM)
- 2005 Phytophthora Molecular Genetics Research Collaboration Network Traineeship, Travel, food, and accommodation. (PMGN)
- 2004 - 2007 National Science Foundation Graduate Research Fellowship, tuition and stipend (NSF). I was the only Plant Pathology recipient of the 2004 NSF GRF.

ADDITIONAL SKILLS

Spanish language - near-fluency (written and oral)

PROFESSIONAL REFERENCES

Gary Muehlbauer

University of Minnesota, Professor & Endowed Chair in Molecular Genetics

muehl003@umn.edu 612-625-6228

James Bradeen

University of Minnesota, Associate professor

jbradeen@umn.edu 612-625-1211

Carolyn Young

Noble Foundation, Principal investigator

cayoung@noble.org 580-224-6860

Brian Steffenson

University of Minnesota, Associate professor & Lieberman-Okinow Endowed

Chair of Cereal Disease Resistance

bsteffen@umn.edu 612-625-4735