

## Margie M. Paz, Ph.D.

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### Education

- Ph.D. Genetics, 1996  
Virginia Tech, Blacksburg, VA
- M.S. Plant Breeding (minor: Plant Physiology), 1990  
University of the Philippines, Los Baños, Philippines
- B.S. Agriculture, *Cum Laude*, 1983  
University of the Philippines, Los Baños, Philippines  
Major: Agronomy

### Professional Experience

- 8/2007 – present           Lecturer (Faculty), The University of Georgia
- 9/2005 – 4/2007           Laboratory Researcher (part-time), The University of Georgia
- 7/2003 – 6/2005           Assistant Scientist III, Iowa State University
- 2/2001 – 6/2003           Assistant Scientist II, Iowa State University
- 9/1998 – 2/2001           Postdoctoral Research Associate, Iowa State University
- 4/1997 – 8/1998           Research Associate, Iowa State University
- 1/1993 – 5/1996           Graduate Research Assistant, Virginia Tech
- 8/1992 – 12/1992          Graduate Teaching Assistant, Virginia Tech
- 1/1985 – 7/1992           Science Research Specialist, Dept. of Agriculture, Philippines
- 12/1983 – 12/1984        Research Assistant, University of the Philippines

### Teaching Experience

- Instructor, Plant Transformation and Transgene Analysis, Spring Semester 2002-2005, Iowa State University
- Mentor, Program for Women in Science and Engineering (PWSE), Summer 2001 & 2003, Iowa State University
- Mentor: undergraduate and graduate students, postdoctoral associates, and visiting scientists, 1998-2005, Department of Agronomy, Iowa State University
- Graduate Teaching Assistant, Horticulture – Indoor Plants, Fall Semester 1992, Virginia Tech

### Training

- Preparing the Future Professoriate, August 17-19, 1992, Virginia Tech
- Advanced Training in Cell and Molecular Biology, May 1994, Catholic University of America

**Refereed Journal Publications**

1. C.E.M. Champagne, T.E. Goliber, M.F. Wojciechowski, R.W. Mei, K. Wang, **M.M. Paz**, R. Geeta, and N.R. Sinha (2007) Compound leaf development and evolution in the legumes. *Plant Cell* (In Review).
2. B.R. Frame, J.M. McMurray, T.M. Fonger, M.L. Main, K.W. Taylor, F.J. Torney, **M.M. Paz**, and K. Wang (2006) Improved *Agrobacterium*-mediated transformation of three maize inbred lines using MS salts. *Plant Cell Rep* 25: 1024-1034.
3. **M.M. Paz**, J.C. Martinez, A. Kalvig, T. Fonger, and K. Wang (2006) Improved cotyledonary node method using an alternative explant derived from mature seed for efficient *Agrobacterium*-mediated soybean transformation. *Plant Cell Reports* 25: 206-213.
4. **M.M. Paz** and R.C. Shoemaker (2005) Genetic and physical map correlation. *Encyclopedia of Life Sciences*. <http://www.els.net>.
5. **M.M. Paz**, H. Shou, Z. Guo, Z. Zhang, A.K. Banerjee, and K. Wang (2004) Assessment of conditions affecting *Agrobacterium*-mediated soybean transformation using the cotyledonary node explant. *Euphytica* 136:167-179.
6. **M.M. Paz** and R.C. Shoemaker (2002) Genetic and physical map correlation. *Nature Encyclopedia of the Human Genome*.
7. L.F. Marek, J. Mudge, L. Darnielle, D. Grant, N. Hanson, **M. M. Paz**, Y. Huihuang, R. Denny, K. Larson, D. Foster-Hartnett, A. Cooper, D. Danesh, D. Larsen, T. Schmidt, R. Staggs, J. A. Crow, E. Retzel, N. D. Young, and R. C. Shoemaker (2001) Soybean genomic survey: BAC-end sequences near RFLP and SSR markers. *Genome* 44: 572–581.
8. K.L.E. Klos, **M.M. Paz**, L.F. Marek, P.B. Cregan, and R.C. Shoemaker (2000) Molecular markers useful for detecting resistance to brown stem rot in soybean. *Crop Science* 40:1445-1452.
9. **M.M. Paz** and R.E. Veilleux (1999) Influence of culture medium and *in vitro* conditions on shoot regeneration in *Solanum phureja* monoploids and fertility of regenerated doubled monoploids. *Plant Breeding* 118:53-58.
10. R.E. Veilleux, **M.M. Paz**, and D. Levy (1997) Potato germplasm development for warm climates: genetic enhancement of tolerance to heat stress. *Euphytica* 98:83-92.
11. **M.M. Paz** and R.E. Veilleux (1997) Genetic diversity based on RAPD polymorphism and its relationship with the performance of diploid potato hybrids. *J. Amer. Soc. Hort. Sci.* 122(6):740-747.
12. R.E. Veilleux, L.Y. Shen, and **M.M. Paz** (1995) Analysis of the genetic composition of anther-derived potato by randomly amplified polymorphic DNA and simple sequence repeats. *Genome* 38:1153-1162.

**Presentations (\*Presenter)**

1. B. R. Frame\*, J. M. McMurray, T.M. Fonger, M.L. Main, F.J. Torney, **M.M. Paz**, K.W. Taylor, and K. Wang (2005) *Agrobacterium*-mediated stable transformation of multiple maize inbred lines using a standard binary vector system. Poster presentation. 47<sup>th</sup> Annual Maize Genetics Conference. March 10-13, 2005. Lake Geneva, Wisconsin.
2. **M.M. Paz\***, Z.B. Guo, Z.Y. Zhang, A.K. Banerjee, and K. Wang (2003) Utilization of glufosinate selection and cysteine in *Agrobacterium*-mediated cotyledonary node transformation in twelve soybean cultivars. Poster presentation. Society for In Vitro Biology Meeting. May 31 - Jun. 4, 2003. Portland, Oregon.

3. L.F. Marek, J. Mudge, L. Darnielle, D. Grant, N. Hanson, **M. M. Paz**, Y. Huihuang, R. Denny, K. Larson, D. Foster-Hartnett, A. Cooper, D. Danesh, D. Larsen, T. Schmidt, R. Staggs, J. A. Crow, E. Retzel, N. D. Young, and R. C. Shoemaker (2001) Soybean genomic survey: BAC-end sequences near RFLP and SSR markers. Poster presentation. Plant and Animal Genome IX Conference. January 13-17, 2001. San Diego, California.
4. **M.M. Paz** \*, K.L.E. Klos, L.F. Marek, P.B. Cregan, and R.C. Shoemaker (2000) Molecular markers useful for detecting resistance to brown stem rot in soybean. Oral presentation. Soybean Disease Biotechnology Group Meeting. October 23-24, 1999. St. Louis, Missouri.
5. **M.M. Paz** \*, K.L.E. Klos, L.F. Marek, P.B. Cregan, and R.C. Shoemaker (2000) Molecular markers useful for detecting resistance to brown stem rot in soybean. Poster presentation. Plant and Animal Genome VIII Conference. January 9-12, 2000. San Diego, California.
6. J. Mudge\*, R. Denny, K. Larson, D. Foster-Hartnett, A. Cooper, D. Danesh, L.F. Marek. **M.M. Paz**, R.C. Shoemaker, and N. Young. 2000. Contig building and BAC end sequencing near RFLPs in the soybean genome. Poster presentation. Plant and Animal Genome VIII Conference. January 9-12, 2000. San Diego, California.
7. **M.M. Paz**\*, L.F. Marek, L.L. Darnielle, N. Hanson and R.C. Shoemaker (2000) A functional genomics program for soybean. Oral presentation. National Science Foundation Grants Meeting. January 9, 2000. San Diego, California.
8. **M.M. Paz**\* and R.C. Shoemaker (1999) Development of breeder-friendly markers to detect brown stem rot resistance. Oral presentation. Soybean Disease Biotechnology Meeting. February 6-7, 1999. Iowa State University, Ames, Iowa.
9. **M.M. Paz**\* and K. Wang (1997) Soybean transformation: PCR analysis of tissue culture regenerants (R<sub>0</sub>) and their progeny (R<sub>1</sub>). Research Meeting of the North Central Soybean Research Program (NCSRP). November 19-20, 1997. Iowa State University, Ames, Iowa.
10. **M.M. Paz**\*. Use of RAPD assay to investigate genetic diversity in potato. Seminar. December 4, 1995. Virginia Tech, Blacksburg, Virginia.
11. **M.M. Paz**\*. Progeny Analysis of Anther-Derived Homozygous Potato Using Molecular Markers. Seminar. November 28, 1994. Virginia Tech, Blacksburg, Virginia.

### Patent Applications

- DNA Markers for Detecting Resistance to Brown Stem Rot in Soybean (Iowa State University Research Foundation Ref. #02607). Inventors: **M. M. Paz**, K.L. Klos, L.F. Marek and R.C. Shoemaker.
- Soybean Regeneration and Transformation Using Embryonic Axes Explants (Iowa State University Research Foundation Ref. #02865). Inventors: Z. Guo, K. Wang, **M.M. Paz**
- Soybean Transformation and Regeneration Using Half-seed Explants (Iowa State University Research Foundation Ref. #03122). Inventors: **M. M. Paz** and K. Wang

### Grant Activity

- K. Wang and **M.M. Paz** (2003) Iowa State Transformation Service. Iowa Soybean Promotion Board. Amount: \$63,430.

### Honors and Affiliations

- Gamma Sigma Delta Honor Society of Agriculture

- Phi Sigma Biological Sciences Honor Society
- Society of In Vitro Biology
- American Association for the Advancement of Science
- Recipient, Philippine Tobacco Research and Training Center Scholarship (M.S. degree)
- Recipient, Philippine National Bank Scholarship (B.S. degree)

**Skills**

- Extensive knowledge in molecular biology, strong skills in microbiology and recombinant DNA technology using *Agrobacterium* methods and solid experience in plant transformation
- Molecular genetics, plant breeding, genetics and cytogenetic techniques and manipulations
- DNA analysis including PCR, SSR, RAPD, Southern, and Amplified Fragment Length Polymorphism (AFLP)
- Bacterial DNA preparation, plant DNA extraction, plasmid DNA isolation and DNA quantitation