Section IV – Curriculum Vitae

Name: Ali Missaoui
Affiliations: Department of Crop and Soil Sciences
Institute of Plant Breeding Genetics and Genomics
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Athens, GA30602

Academic History

Education

1. Postdoctoral Research Associate in Soybean Breeding and Genetics. Department of Crop and Soil Sciences, University of Georgia, GA, USA, 2003
2. Ph.D. Plant Breeding and Genetics. Department of Crop and Soil Sciences, University of Georgia, Athens, GA, USA, 2003
3. Master of Science, Crop Science, Texas Tech University, Lubbock, TX, USA, 1998
4. Bachelor of Science, Range Science and Management, Oregon State University, Corvallis, OR, USA, 1987

Professional Experience

2013-Present Assistant Professor in Forage and Biomass Breeding and Genetics, Department of Crop and Soil Science and Institute of Plant Breeding Genetics and Genomics, University of Georgia, Athens, GA

1. Development of cultivars of cool season grasses and legumes adapted to the southeast. The species of focus are tall fescue, alfalfa, white clover, annual ryegrass, and red clover.
2. Evaluation of novel germplasm to incorporate genetic diversity and build a broad germplasm pool.
3. Actively pursue novel and more efficient approaches toward integrating conventional breeding methods with molecular technologies into the cultivar development process, to develop improved cultivars that provide stable supplies of forages and contribute to the sustainability of production systems in Georgia and the Southeast.
4. Manipulation of seasonal dormancy in perennial grasses and alfalfa through QTL mapping and development of genomic resources for markers assisted selection.
5. Priorities for discovery and application include increased yield, the manipulation of the length of production season for cool season perennials to increase forage production, enhanced tolerance to biotic and abiotic stresses as well as persistence under grazing.
6. In addition to the traditional forages-as-feed, evaluate potential perennial grasses as feedstocks and develop germplasm with improved suitability for use as biofuel.

2006-2013 Soybean Discovery Breeder, Monsanto Company, Huxley, IA

1. Manage the design, execution, and analysis of trait-marker association studies and proof of concept experiments for QTL discovery and introgression into soybean germplasm.
2. Leverage novel technologies and facilitate their adoption into breeding and cultivar development.
3. Development, evaluation, and validation of novel breeding methodologies and dissemination of proven technologies and procedures into the breeding organization for broad adoption.
4. Collaboration with USDA and University soybean breeders in the evaluation of global soybean

germplasm and development of strategies to leverage genetic resources.
5. Development of improved soybean germplasm using novel plant breeding methods including marker-assisted strategies.

2003-2006 Post-doctoral Research Associate, Center for Applied Genetic Technologies, the University of Georgia. Athens, GA 30602

1. Identification of yield enhancing genes in exotic soybean collections, and incorporation of these genes into elite US germplasm using molecular markers.
2. Confirmation of QTLs associated with drought tolerance, and Identification of molecular markers associated with carbon isotope discrimination (a surrogate for water use efficiency).
3. Confirmation of QTLs associated with resistance to frogeye leaf spot (a fungal disease of soybean) and development of SNP markers for marker assisted selection of resistant genotypes.
4. Optimization of cost-effective molecular marker techniques for gene discovery QTL mapping, and marker assisted selection.
5. Identification of differentially expressed genes conditioning palmitic acid using transcription profiling and DNA microarrays.

1998-2003 Graduate Research Assistant, the University of Georgia, Department of Crop and Soil Science. Athens, Georgia 30602.

1. Genome analysis and genetic mapping of switchgrass (*P. virgatum* L.) using DNA markers.
2. Identification of molecular markers for the classification of switchgrass germplasm.
3. Switchgrass improvement for bioenergy and bioremediation to excess phosphorus in soils heavily amended with animal waste.

1996-1998 Graduate Research Assistant, Texas Tech University, Plant and Soil Science Dept. Lubbock, Texas 79409-2122

1. Salt stress in bromegrasses and influence of biological stimulants on stress alleviation.
2. Potential use of forage grasses for phytoremediation to excess nitrogen from soils heavily amended with animal waste.

1991-1996 National Coordinator of Forage Seed development project, Office de l'Elevage et des Paturages, Kairouan, Tunisia 3100.

1. Coordinate the regional activities of a national forage germplasm program.
2. Work in collaboration with various international research institutions on the establishment of a national center of forage genetic resources, and the improvement of grass and legume ecotypes.
3. Administrative oversight and management of a germplasm research station and training of technicians in the field of seed production and processing.
4. Collection, maintenance, and evaluation of indigenous grasses and legumes and initial increase of suitable accessions.

1986-1990 Seed production Agronomist, Office de l'Elevage et des Paturages, Kairouan, Tunisia.

1. Provide technical assistance in seed production and processing to seed growers.
2. Develop cultural practices, management, and processing techniques for seed production of indigenous forage grass and legume species

Resident instruction and continuing education

Teaching

Instructor of record (9)

1. Advanced Plant Breeding (CRSS/PBGG 8140 – 3 credits),
2. Forage Management and Utilization (CRSS4260/6260– 3 credits)

Guest lectures (9)

1. Plant Breeding Practicum (CRSS/PBGG 6000),
2. Research Methods, (CRSS/PBGG 8010)
3. Plant Breeding (CRSS/PBGG, 4140/6140)

Supervision of Research and mentoring (20)

Graduate student advisory committee member (9)
Post-doctoral Scientist Supervision (3)
Undergraduate mentoring (12)

Scholarly activities

Articles published and accepted

1. Adhikari, L., Orville, L., Markham, J., & **Missaoui, A. M.** (2018). Dissecting key adaptation traits in the polyploid perennial *Medicago sativa* using GBS-SNP mapping. Frontiers in Plant Science, 9:934. https://doi.org/10.3389/fpls.2018.00934
2. Razar, R., & **Missaoui, A. M.** (2018). Phenotyping Winter Dormancy in Switchgrass to Extend the Growing Season and Improve Biomass Yield. Journal of sustainable bioenergy systems. Vol.8 No.1, DOI: 10.4236/jsbs.2018.81001.
3. Adhikari, L., Mohseni-Moghadam, M., & **Missaoui, A. M.** (2018). Allelopathic Effects of Cereal Rye on Weed Suppression and Forage Yield in Alfalfa. American Journal of Plant Sciences 09(04):685-700. DOI: 10.4236/ajps.2018.94054
4. **Missaoui**, A. M., Malinowski, D. P., Pinchak, W. E., & Kigel, J. (2017). Insights into the Drought and Heat Avoidance Mechanism in Summer-Dormant Mediterranean Tall Fescue. FRONTIERS IN PLANT SCIENCE, 8:1971, 13 pages. doi:10.3389/fpls.2017.01971.
5. Lee, D. K...., Hanna, W. W., ...**Missaoui, A. M.**,.... Anderson, W.....et al. (2017). Biomass Production of Herbaceous Energy Crops in the United States: Field Trial Results and Yield Potential Maps from the Multiyear Regional Feedstock Partnership. GCB Bioenergy. doi:10.1111/gcbb.12493.
6. Adhikari, L., Razar, R. M., Paudel, D., Ding, R., & **Missaoui, A. M.** (2017). Insights into Seasonal Dormancy of Perennial Herbaceous Forages. American Journal of Plant Sciences, 08(11), 2650-2680. doi:10.4236/ajps.2017.811179
7. Ding, R., & **Missaoui, A. M.** (2017). Candidate gene association with summer dormancy in tall fescue. Euphytica, Vol. 213 (pp. 22 pages). Springer. doi:10.1007/s10681-016-1810-3
8. Adhikari, L., & **Missaoui, A. M.** (2017). Nodulation response to molybdenum supplementation in alfalfa and its correlation with root and shoot growth in low pH soil. Journal of Plant Nutrition, 40(16), 2290-2302. doi:10.1080/01904167.2016.1264601.
9. El-Sharkawy, M. S., El-Beshsbeshy, T. R., Mahmoud, E. K., Abdelkader, N. I., Al-Shal, R. M., & **Missaoui, A. M.** (2017). Response of Alfalfa under Salt Stress to the Application of Potassium Sulfate Nanoparticles. American Journal of Plant Sciences, 08(08), 1751-1773. doi:10.4236/ajps.2017.88120.
10. EL-Sharkawy, M. S., EL-Beshbeshy, T. R., Hassan, S. M., Mahmoud, E. K., Abdelkader, N. I., Al-Shal, R. M., & **Missaoui, A. M.** (2017). Alleviating Salt Stress in Barley by Use of Plant Growth Stimulants and Potassium Sulfate. Journal of Agricultural Science, 9(4), 136. doi:10.5539/jas.v9n4p136.
11. El-Sharkawy, M. S., El-Beshbeshy, T. R., Hassan, S. M., Mahmoud, E. K., Abdelkader, N. I., Al-Shal, R. M., & **Missaoui, A. M.** (2017). Effect of Plant Growth Stimulants on Alfalfa Response to

Salt Stress. Agricultural Sciences 8(04):267-291. DOI10.4236/as.2017.84020
12. Bouton, J. H., Motes, B., Wood, D. T., **Missaoui, A.**, & Trammell, M. A. (2017). Registration of 'Renovation' White Clover. Journal of Plant Registrations, 11(3), 218.
13. Makaju, S. O., Jones, K., Adhikari, L., Kim, D. W., Khang, C. H., & **Missaoui, A. M.** (2016). Resistance of Annual Ryegrass Germplasm to a Highly Aggressive New Strain of Blast (Gray Leaf Spot). Journal of Crop Improvement, 30(3), 311-322. doi:10.1080/15427528.2016.1155192.
14. Ding, R., & **Missaoui, A. M.** (2016). Phenotyping Summer Dormancy in Tall Fescue: Establishment of a Surrogate Phenotype and a Dormancy Rating System in Humid Environments. CROP SCIENCE, 56(5), 2579-2593. doi:10.2135/cropsci2016.02.0092.
15. **Missaoui, A. M.**, & Young, J. (2016). Genetic gain from selection and potential for improving alfalfa phosphorus uptake and removal from soils heavily amended with poultry litter. EUPHYTICA, 209(2), 495-506. doi:10.1007/s10681-016-1677-3.
16. **Missaoui, A. M.**, & Hill, N. S. (2015). Use of accelerated aging as a surrogate phenotyping approach to improve endophyte survival during storage of tall fescue seed. FIELD CROPS RESEARCH, 183, 43-49. doi:10.1016/j.fcr.2015.07.016
17. Bhandari, H. S., **Missaoui, A. M.**, Bouton, J. H., & Saha, M. C. (2015). Switchgrass as a bioenergy feedstock: advances in breeding and genomics research. *TECHNOLOGY*, *03*(02n03), 127-140. doi:10.1142/S233954781540004X
18. Boerma, H. R., Monteros, M. J., Ha, B. -K., Wood, E. D., Phillips, D. V., Walker, D. R., & **Missaoui, A. M.** (2011). Registration of Asian Soybean Rust-Resistant Soybean Germplasm G01-PR16. JOURNAL OF PLANT REGISTRATIONS, 5(1), 118-122. doi:10.3198/jpr2009.12.0732crg.
19. Mian, M. A. R., **Missaoui, A. M.**, Walker, D. R., Phillips, D. V., & Boerma, H. R. (2008). Frogeye leaf spot of soybean: A review and proposed race designations for isolates of Cercospora sojina Hara. CROP SCIENCE, 48(1), 14-24. doi:10.2135/cropsci2007.08.0432.
20. **Missaoui, A. M.**, Phillips, D. V., & Boerma, H. R. (2007). DNA marker analysis of 'Davis' soybean and its descendants for the Rcs3 gene conferring resistance to Cercospora sojina. CROP SCIENCE, 47(3), 1263-1270. doi:10.2135/cropsci2006.07.0472.
21. **Missaoui, A. M.**, Ha, B. K., Phillips, D. V., & Boerma, H. R. (2007). Single nucleotide polymorphism detection of the Rcs3 gene for resistance to frogeye leaf spot in soybean. CROP SCIENCE, 47(4), 1681-1690. doi:10.2135/cropsci2006.11.0711.
22. Monteros, M. J., **Missaoui, A. M.**, Phillips, D. V., Walker, D. R., & Boerma, H. R. (2007). Mapping and confirmation of the 'Hyuuga' red-brown lesion resistance gene for Asian soybean rust. CROP SCIENCE, 47(2), 829-836. doi:10.2135/cropsci06.07.0462.
23. **Missaoui, A. M.**, Paterson, A. H., & Bouton, J. H. (2006). Molecular markers for the classification of switchgrass (Panicum virgatum L.) germplasm and to assess genetic diversity in three synthetic switchgrass populations. Genetic Resources and Crop Evolution, 53(6), 1291-1302. doi:10.1007/s10722-005-3878-9.
24. **Missaoui, A. M.**, Paterson, A. H., & Bouton, J. H. (2005). Investigation of genomic organization in switchgrass (Panicum virgatum L.) using DNA markers. THEORETICAL AND APPLIED GENETICS, 110(8), 1372-1383. doi:10.1007/s00122-005-1935-6.
25. **Missaoui, A. M.**, Boerma, H. R., & Bouton, J. H. (2005). Genetic variation and heritability of phosphorus uptake in Alamo switchgrass grown in high phosphorus soils. FIELD CROPS RESEARCH, 93(2-3), 186-198. doi:10.1016/j.fcr.2004.09.020.
26. **Missaoui, A.**, Fasoula, V., & Bouton, J. (2005). The effect of low plant density on response to selection for biomass production in switchgrass. EUPHYTICA, 142(1-2), doi:10.1007/s10681-005-0149-y.
27. **Missaoui, A. M.**, Allen, V. G., Green, C. J., & Brown, C. P. (2002). Response of Bromegrass to Nitrogen Fertilization. I. Grassland Matua Prairie Grass. Journal of Plant Nutrition, 25(9), 1895-1908. doi:10.1081/PLN-120013282.
28. **Missaoui, A. M.**, Allen, V. G., Green, C. J., & Brown, C. P. (2002). Response of Bromegrass to Nitrogen Fertilization. II. Grasslands Gala. Journal of Plant Nutrition, 25(9), 1909-1920.

doi:10.1081/PLN-120013283

Articles submitted and under review

1. Choi, S-H., Park, N., Lee, K-Y., **Missaoui, A.**, and G-J Lee. (2018). Differential gene expression in camelina plants in response to different moisture deficit levels. PLOS ONE. In Review.

* Underlined names are graduate students and postdocs from the program.

Articles in Extension magazines

1. **Missaoui, A. M.** (2017). Breeding alfalfa for low pH soils. Hay and Forage Grower, (November 2017), 6-7. https://hayandforage.com/article-1655-Breeding-alfalfa-for-low-pH-soils.html. Invited contrib.

Book Chapters

1. Missaoui, A. M., Hill, N. S., & Michael Collins. (2017). Forage Related Animal Disorders. In M. Collins, C. J. Nelson, K. J. Moore, & R. F. Barnes (Eds.), Forages: An introduction to Grassland Agriculture (Vol. 1, 7th ed., pp. 301-320). Wiley Blackwell. http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1119300649.html

Patents

1. Cocibido, V. S., Floyd, T. L., Husic, I., **Missaoui, A. M.**, Jia, H., Yates, J. L., & Ye, X. (2014). *62/096,304, METHODS FOR PRODUCING SOYBEAN PLANTS WITH IMPROVED FUNGAL RESISTANCE AND COMPOSITIONS THEREOF.* United States and worldwide. U.S. Application No. 62/096,304, filed December 23, 2014

Invited Presentations (16)

1. **Missaoui, A.M.** (2018). Advances in Forage Breeding and Opportunities for GA and the southeast. Georgia and Alabama Seed Associations Annual Convention. July 9-10. St. Simon, GA.
2. **Missaoui, A.M.** (2018). The Breeding process and IPBGG. Georgia Seed Development Commission and Georgia Crop Improvement Board meeting. Feb 27, 2018. Macon, GA.
3. **Missaoui, A. M.** (2017). From Gene functions to molecular breeding tools: Candidate gene association with summer dormancy in tall fescue. Translational Genomics Symposium. UAE University- Khalifa Center for Engineering and Biotechnology. April 10-12, 2017. https://www.uaeu.ac.ae/en/kcgeb/workshop/speakers.shtml
4. **Missaoui, A. M.** (2017). Research and Development in the Forage Breeding and Genetics at the University of Georgia. Georgia Crop Improvement Association Annual Meeting. March 21, 2017. Georgia Center for continuing Education, UGA.
5. **Missaoui, A. M.** (2017). Progress in tall fescue breeding at the University of Georgia. Tall fescue workshop. Athens. March 16, 2017.
6. Anderson, W., **Missaoui, A. M.**, Knoll, J., & Hale, A. (2017). Biomass Yields and Juice Production of Energy Cane at Two Locations in Georgia. In American Society of Sugar Cane Technologists (ASSCT) Joint Meeting. Crown Plaza Hotel. New Orleans, LA. February 15, 2017. http://www.assct.org/.
7. **Missaoui, A.M.** & Bouton, J. H. (2017). Alfalfa Breeding Progress and Trait Selection. Alfalfa Workshop and Field Day. Putnam County. June 9, 2017.
8. **Missaoui, A. M.** (2017). Genetic improvement of crops. Senior 4-H Camp lecture. June 1, 2017. UGA
9. **Missaoui, A. M.** (2016). Research and Development of forage crops: UGA forage breeding program as a model. 50th anniversary of the Office of animal husbandry and pastures, Ministry of Agriculture of Tunisia. 15-17 Dec 2016. Palais Des Congrès, Tunis, Tunisia
10. **Missaoui, A. M.** (2016). Importance of alfalfa in a forage/animal enterprise and the keys to success

of the crop. Southeast Hay convention, Moultrie, GA. March 8-9, 2016.

11. **Missaoui, A. M.** (2015). Forage Breeding and Genetics Program at UGA, September 10, 2015. Pennington seed Company, Madison, GA
12. **Missaoui, A. M.** (2014). Genetic improvement of forage crops for Georgia and the Southeast, JPC. January 3, 2014. Watkinsville, GA.
13. **Missaoui, A. M.** (2014). Traveling with the horse power: History of alfalfa in the Southeast. March 11, 2014, Southeast Hay Convention. Watkinsville, GA. March 11-12, 2014.
14. **Missaoui, A. M.** (2014). Manipulation of dormancy to improve yield and seasonal distribution of forage crops. 2014. Plant Center Retreat. Unicoi State Park, Helen, GA.
15. **Missaoui, A. M.** (2013). Improving cool season forage grasses and legumes for adaptation in the southeastern USA. November 4, 2013. PGG Wrightson seed company, Canterbury, New Zealand
16. **Missaoui, A. M.** (2013). Manipulation of flowering time genes to improve yield and seasonal distribution of forage crops. June 27, 2013. Noble Foundation, Ardmore, OK.

Conference posters and abstracts (27)

1. Razar, R. M. & **Missaoui, A. M.** (2018). Manipulating winter dormancy to extend the growing season of switchgrass in southern locations with mild winters. Center for Bioenergy Innovation annual meeting. June 4-6, 2018. Asheville, NC.
2. Adhikari, L., & **Missaoui, A. M.** (2018). Linkage analysis and QTL mapping of fall dormancy and winter-hardiness in alfalfa using GBS SNPs. Joint Conference NAAIC, Trifolium, & Grass Breeders. June 4-6, 2018 · Logan, UT.
3. Adhikari, L., & **Missaoui, A. M.** (2017). Construction of High Density Linkage Map in Alfalfa Using GBS. In Science Societies ASA, CSSA annual meeting: MANAGING GLOBAL RESOURCES FOR A SECURE FUTURE. Oct. 22-25, Tampa, FL. https://scisoc.confex.com/scisoc/2017am/webprogram/Paper108497.html
4. Razar, R. M. & **Missaoui, A. M.** (2017). PHENOTYPING FALL DORMANCY IN SWITCHGRASS ACCESSIONS. Poster session presented at the meeting of Crops: IMPROVING AGRICULTURE THROUGH GENOMICS. June 5-8, Huntsville, AL. http://hudsonalpha.org/crops
5. Adhikari, L., Lindstrom, O. & **Missaoui, A. M.** (2017). Understanding the Genetic Basis of Fall Dormancy and Winter Hardiness in Alfalfa through Genetic Mapping Using Genotyping-by-Sequencing. Poster session presented at the meeting of Crops: IMPROVING AGRICULTURE THROUGH GENOMICS. June 5-8, Huntsville, AL. http://hudsonalpha.org/crops.
6. Adhikari, L. & **Missaoui, A. M.** (2017). Understanding the Genetic Basis of leaf rust resistance in alfalfa. Poster session presented at the meeting of IPBGG Retreat.
7. Johnson, A., Chaluvadi, S., Pendergast, T., **Missaoui, A. M.**, Lindstrom, O., Bennetzen, J., & Devos, K. M. (2017). miRNA expression profiling in AMF inoculated upland and lowland switchgrass. Poster session presented at the meeting of ASPB Meeting.
8. Anderson, W., **Missaoui, A. M.**, Knoll, J., & Hale, A. (2017). Energy Cane Production and Characteristics in Georgia. ASA Section: Agronomic Production Systems. https://scisoc.confex.com/scisoc/2017am/webprogram/Paper105047.html
9. Bahri, B., Pendergast, T., Johnson, A., Chaluvadi, S. R., Qi, P., **Missaoui, A. M.** . . . Devos, K. (2017). QTL mapping of switchgrass biomass traits using a GBS-SNP based linkage map. Poster session presented at the meeting of Plant Center Retreat. Unicoi, Helen, GA.
10. Adhikari, L. lindstrom, O. & **Missaoui, A. M.** (2017). Construction of a pseudo-testcross Linkage Map in Tetraploid Alfalfa Using GBS. Poster session presented at the meeting of Plant Center Retreat. Unicoi, GA. October 2017.
11. Anderson, W., **Missaoui, A. M.**, Knoll, J., & Hale, A. (2017). Biomass Yields and Juice Production of Energy Cane at Two Locations in Georgia. In American Society of Sugar Cane Technologists (ASSCT) Joint Meeting. Crown Plaza Hotel. New Orleans, LA. June 14-16, 2017. http://www.assct.org/
12. Ding, R. and **A. M. Missaoui**. 2016. Candidate gene analysis of summer dormancy in tall fescue and

potential for marker assisted selection. 9th international symposium on molecular breeding of forage and turf. August 15-19. Lanzhou, China

13. Razar, R. M., & **Missaoui, A. M.** (2016). RELIABLE PHENOTYPIC SCORINGS FOR SWITHGRASS FALL DORMANCY. Poster session presented at the meeting of Plant Center Fall Retreat. Unicoi, Ga
14. Adhikari, L., & **Missaoui, A. M.** (2016). Understanding the Genetic Basis of Fall Dormancy and Winter Hardiness in Alfalfa. Poster session presented at the meeting of the Plant Center Retreat.
15. Adhikari, L., & **Missaoui, A. M.** (2016). Genetic Variation in Cold Tolerance and Dormancy in Bi□ parental Segregating Population Derived from a Wide Dormancy Cross. Poster session presented at the meeting of North American Alfalfa Improvement Conference 2016.
16. El-Sharkawy, M. S., & **Missaoui, A. M.** (2016). Effect of Plant Growth Stimulants on Barley Response to Salt Stress. In 5th Annual Interdisciplinary Grad. Plant and Soil Symposium. UGA.
17. Ding, R. & **Missaoui, A. M.** (2016). Candidate gene association with summer dormancy in tall fescue. Poster session presented at the meeting of ASA-CSSA-SSSA International Annual Meeting. https://scisoc.confex.com/scisoc/2016am/webprogram/Paper102917.html
18. Vencill. W., & **Missaoui, A.** (2016). Response of white clover to auxinic herbicides. In *Weed Science Society of America.*
19. Ding, R. & **Missaoui, A. M.**, (2015). Phenotyping Summer Dormancy in Tall Fescue: A Surrogate Approach. In Crop Science Society of America. Minneapolis, MN. https://scisoc.confex.com/scisoc/2015am/webprogram/Paper91687.html.
20. Qi, P., Schwoyer, C., Young, J., **Missaoui, A. M.**, Lindstrom, O. M., & Devos, K. M. (2015). Unraveling the genetics of frost tolerance in switchgrass. http://www.switchgrassconference.com/.
21. Ding, R., & **Missaoui, A. M.** (2015). Manipulating Summer Dormancy to Improve Forage Yield and Seasonal Distribution of Tall Fescue. In CROPS 2015: Improving Agriculture through Genomics. Huntsville, Alabama: HudsonAlpha Institute for Biotechnology. Retrieved from http://hudsonalpha.org/crops/schedule-at-a-glance/
22. Adhikari, L., Khang, C. H., Jones, K., & **Missaoui, A. M.** (2015). Incorporation of Gray Leaf Spot Resistance into Annual Ryegrass Germplasm and Development of a Low-cost Portable Screening Approach. In R. Lemus, & V. C. Olson (Eds.), Vol. 1 (pp. 43). Proceedings 69th Southern Pastures and Forage Crop Improvement Conference. http://agrilifecdn.tamu.edu/
23. Devos, K. M., Chaluvadi, S., Qi, P., Schwoyer, C., Young, J., **Missaoui, A. M.** . . . Bennetzen, J. L. (2015). Improving Cold Tolerance in Lowland Switchgrass. Poster session presented at the meeting of Genomic Science Contractors– Grantees Meeting XIII and USDA□DOE Plant Feedstock Genomics for Bioenergy Meeting, February 23□25, 2015, Tyson's Corner, VA.
24. Adhikari, L., and **A.M. Missaoui** (2015). Understanding The Genetic Basis of Fall Dormancy and winter hardiness In Alfalfa and Development of Genomic resource to manipulate the two traits. Poster presented at the Plant Center Retreat, Unicoi, Helen, GA.
25. Qi, P., Chaluvadi, S., Johnson, A., Schwoyer, C., Pendergast, T. H., **Missaoui, A. M**, . . . Devos, K. M. (2015). Understanding the genetic relationship between cold-tolerance and colonization by mycorrhizal fungi in order to improve the cultivation range of switchgrass. Poster session presented at the meeting of Plant Center Retreat, UGA, Oct 29-30, 2015.
26. Qi, P., Schwoyer, C., Young, J., **Missaoui, A. M.**, Lindstrom, O. M., & Devos, K. M. (2015). Unraveling the genetic s of frost tolerance in switchgrass. Retrieved from http://www.switchgrassconference.com/
27. Adhikari, L., Khang, C. H., Jones, K., & **Missaoui, A. M.** (2015). Incorporation of Gray Leaf Spot Resistance into Annual Ryegrass Germplasm and Development of a Low-cost Portable Screening Approach. In R. Lemus, & V. C. Olson (Eds.), Unknown Conference Vol. 1 (pp. 43). Proceedings 69th Southern Pastures and Forage Crop Improvement Conference. Apalachicola, FL. March 30-April 1, 2015. http://agrilifecdn.tamu.edu/spfcic/files/2013/02/Proceedings-69th-SPFCIC-Final.pdf

Research grants

Proposals funded (2013- 2017)

1. **$1,632,000** (to Missaoui). Rapid domestication and sustainability of switchgrass. The Center for Bioenergy Innovation DE-FOA-001540. **U.S Department of Energy**, 2017– 2022. **(co-PI).**
2. **$35,000.** Evaluating the Potential use of Alfalfa as a deterrent to Stem Maggot flies in Bermudagrass Pastures (FP00012529). **GA COMMODITY COMM FOR BEEF**, BF1819, January 1, 2018– December 31, 2018 **(PI).**
3. **$1,314,235** ($90,900 to Missaoui). Unraveling the genetics of two key biomass traits that differentiate upland and lowland tetraploid switchgrass ecotypes, colonization by mycorrhizal fungi and frost tolerance, **2014-2017. US DEPARTMENT OF ENERGY (Co-PI)**
4. **$202,145.** Collaborative research to develop and commercialize new white clover cultivars for the tall fescue belt and coastal plain in the southeastern United States, **2013-2017. GRASSLANZ TECHNOLOGY (PI)**
5. **$6,700.** Confirmation of PVP characteristics for Jessup MaxQ tall fescue, **2013. GSDC (PI)**
6. **$158,472.** Development of Auxin herbicide tolerance in white clover using EMS mutagenesis, **2014-2017. GRASSLANZ TECHNOLOGY (PI)**
7. **$52,000** (to Missaoui). Regional Biomass Feedstock Partnership - Herbacious Bioenergy Crop Field Trials, **2013-2015. US DEPARTMENT OF ENERGY, RF SUN GRANT (Co-PI)**
8. **$ 59,913.00.** Breeding and evaluation of three forage grass species, **2013. UGA RESEARCH FOUNDATION INC (PI)**
9. **$ 239,339.00**. Development of cool-season forage grass cultivars adapted to Georgia and the southeast, **2013-2017. UGA RESEARCH FOUNDATION INC (PI)**
10. **$ 211,337.00.** Development of cool-season forage legume cultivars adapted to Georgia and the southeast, **2014-2017. UGA RESEARCH FOUNDATION INC (PI)**

Meetings and Conferences (11)

1. Joint Conference NAAIC, Trifolium, & Grass Breeders. June 4-6, 2018 · Logan, UT.
2. Prairie & Native Grass International Conference. Genetics to Conversion Powering Solutions for Rural America, August 7-10, 2017. University of Nebraska–Lincoln, NE.
3. NE1710 Regional Forage Breeding meeting, July 25–26, 2017. Agriculture and Agrifood Canada, Halifax, Nova Scotia, Canada.
4. Crops 2017: IMPROVING AGRICULTURE THROUGH GENOMICS, June 5–8, 2017. HudsonAlpha Institute for Biotechnology, Huntsville, AL.
5. ASA-CSSA-SSSA International Annual Meeting: Resilience Emerging from Scarcity and Abundance, ASA, CSSA & SSSA, Phoenix, AZ, November 6-9, 2016
6. PAG XXIV - Plant & Animal Genome Conference, January 8-15, 2016, San Diego, CA
7. Switchgrass III, Prairie & Native Grass International Conference, September 30-October 2, 2015. Knoxville, TN
8. Joint Conference NAAIC, Trifolium, & Grass Breeders, July 8-10, 2014, Lethbridge, AB, Canada
9. 8th Int. Symposium on Mol. Breeding of Forage and Turf. June 9 – 12, 2014, Istanbul, Turkey.
10. 15th Australasian Plant Breeding Conference, 26-29th October 2014, Melbourne, Australia
11. ASA, CSSA and SSSA International Annual Meetings, Nov 3-6, 2013. Tampa, FL

Recognition and outstanding achievements

1. Technology Recognition Award. Monsanto Company, 2011
2. Business conduct award, Monsanto Company, 2008
3. Glen and Helen Bourton scholarship, The University of Georgia, 2001
4. Gamma Sigma Delta Honor society of Agriculture, 1997
5. Harold and Mary Dregne Graduate Endowment Fund Scholarship, Texas Tech University, 1997

Professional Affiliations & Academic Service

Professional affiliations (6)

1. National Association of plant breeders
2. Crop Science Society of America
3. Association for International Agriculture and Rural Development
4. American Association for the Advancement of Science
5. American Forage and Grasslands Council
6. North American Alfalfa Improvement Conference

Invited reviewer of manuscripts (34)

Journal of Crop Science and Biotechnology, Journal of Agricultural and Food Chemistry, Phytozome, Annals of Botany, Crop Science (12), Bioenergy Research (4), Plant Genome (2), Agronomy Journal (2), Plant Breeding, Chemosphere, Current Genomics (2), Molecular Breeding (2), Journal of plant registrations (2), Hortscience (2)

Invited reviewer of research grant proposals (12)

1. NSF, Plant Biotic Interactions (PBI) Program (NSF17-551) Jan 4, 2018 (1).
2. Natural Sciences and Engineering Research Council of Canada, Nov 23, 2017 (1).
3. NIFA, Alfalfa and Forage Research Program review panel 2015 (6)
4. NSF, IOS - PLANT GENOME RESEARCH PROJECT (2) 2013-2014
5. UGA Experiment Station Hatch proposals 2014, 2016 (2),

Public and University Service

Service to the public (10)

1. Associate editor, crop science 2017- present
2. Crop Science teaching improvement committee, CSSA. 2018-2022
3. Scientific advisory committee for the Global Conference on Plant Science and Molecular Biology. Rome, Italy. 2017– 2018
4. Board member of National Grass Variety Review Board, AOSCA, 2018-2021.
5. Board member of the National Alfalfa & Misc. Legumes Review Board, Association of Official Seed Certifying Agencies, 2016-2019
6. Advocacy committee of the National Association of Plant Breeders. 2016-
7. Plant breeding coordinating committee (PBCC). 2015-present.
8. ASA Undergraduate oral presentations competition judge, November 5, 2016.
9. Southeast Hay Convention speaker, 2014
10. Panel discussion with public and industry on the success and the future of alfalfa in the southeast of the US, 2015