

# Safaa H. Al-Hamdani

Biology Department

Jacksonville State University ( <http://www.jsu.edu/>)

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## **Educational Background:**

- Post-doctoral (1990-1992), Department of Botany, Miami University (Ohio, USA)
  - Post-doctoral (1988-1990), Department of Botany, Oklahoma State University (Oklahoma, USA)
  - Ph.D. in Botany (1983-1988), Oklahoma State University (Oklahoma, USA)
  - M.S. in Plant and Soil Science (1980-1983), Tuskegee University (Alabama, USA)
  - B.S. in Agronomy (1973-1977), Baghdad University (Baghdad, Iraq)
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## **Current Position:**

- 2003-Present: Professor, Department of Biology, Jacksonville State University (Alabama)
- 2005-Present: Editor in Chief of Alabama Academy of Science Journal

## **Professional Experience:**

- **1997-2003:** Associate Professor, Department of Biology, Jacksonville State University (Alabama)
  - **2001-2002:** Fulbright Scholar, Department of Biology, Yarmouk University, Jordan.
  - **1992-1997:** Assistant Professor, Department of Biology, Jacksonville State University (Alabama)
  - **1990-1992:** Visiting Assistant Professor, Department of Botany, Miami University (Ohio).
  - **1988-1990:** Visiting Assistant Professor, Department of Botany, Oklahoma State University (Oklahoma)
  - **1983-1988:** Graduate Research Assistant, Department of Botany, Oklahoma State University (Oklahoma)
  - **1980-1982:** Graduate Research Assistant, Agronomy Department, Tuskegee University (Alabama)
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## **Research Interests:**

I am plant stress physiologist. My primary interest is to investigate:

- The influence of selected environmental stresses on plants.
  - Phytoremediation, using plants for remediation of heavy metals.
  - Identify the role of particular molecules in selected medicinal plants.
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## **Teaching Specialty:**

General Biology; Introductory Botany; Plant, Humanity and Environment; Biological Diversity; Cell Biology, Plant Growth and Development; Plant Physiology; Advanced Plant Biology; Physiological Ecology; Plant Response to Environmental Stress and Biostatistics.

## **Distinguished Faculty Achievement Awards:**

Since I came to Jacksonville State University, I have been Awarded number of honors include:

- **Jacksonville State University the Faculty Scholar Lecture Award (2015-2016).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of scholarship.*
- **Jacksonville State University, College of Arts and Sciences' the Distinguished Research Award (2010).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of scholarship.*
- **The Association of Southern Biology Meritorious Teaching Award (2007).** *This award is given once a year to one selected faculty from one the universities out of the Southeastern United States*  
([http://www.jsu.edu/news/jan\\_june2007/04242007e.html](http://www.jsu.edu/news/jan_june2007/04242007e.html)).
- **Distinguished Achievement Award (2007).** *Presented By the Cultural Office of the Embassy of Republic of Iraq, Washington DC. This award is given to select expatriate Iraqi those excelled and Distinguished in their profession.*
- **Baghdad University Service Award (2006).** *. This award is given to one selected individuals for their significant contribution to Baghdad University.*
- **Jacksonville State University, College of Arts and Sciences' Service Award (2006).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of service.*
- **Jacksonville State University the Education, and Service Award (2005).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of Education and service.*
- **Jacksonville State University, College of Arts and Sciences' Community Dean's Award for Institutional Service (2005).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of service.*
- **Jacksonville State University the Faculty Scholar Research Award (2004-2005).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of scholarship.*
- **Fulbright Scholarship (Yarmouk University, Jordan) for the academic year (2001-2002).**
- **Faculty Appreciation Award, International Student Organization (2000).** *Awarded occasionally to those individual make a significant contribution to the international student's program.*
- **Jacksonville State University the Faculty Scholar Research Award (1998-1999).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of scholarship.*

### **Distinguished Faculty Achievement Awards (Continued):**

- **Jacksonville State University, College of Arts and Sciences' the Distinguished Research Award (1997).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of scholarship*
  - **Jacksonville State University, College of Arts and Sciences' Dean's Award for Institutional Service (1996).** *Awarded once a year recognizing the most accomplished faculty for the outstanding performance in the area of service.*
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### **Publications:**

- **Al-Hamdani, S. H.,** and G. W. Todd. 1989. The Carbohydrate Trend in Alfalfa Root for the Period Between the Last Cut in the Fall and the First Cut in the Spring. *Proc. Oklahoma Academy of Science* 69:11-14.
- **Al-Hamdani, S. H.,** and G. W. Todd. 1990. Effects of Temperature on Photosynthate Partitioning in Alfalfa. *Canadian. Journals of Plant Science.* 70:203-208.
- **Al-Hamdani, S. H.,** and G. W. Todd. 1990. Temperature Effects on Photosynthesis, Respiration and Growth Components of Alfalfa. *Proc. Oklahoma Academy of Science* 70:1-4.
- **Al-Hamdani, S. H.,** and G. W. Todd and D. A. Francko, 1990. Response of Wheat Growth and CO<sub>2</sub> Assimilation to Altering Root-Zone Temperature. *Canadian Journal of Botany.* 68:2698-2702.
- **Al-Hamdani, S. H.,** J. Murphy and G. W. Todd. 1991. Stomatal Conductance and CO<sub>2</sub> Assimilation as Screening Tools for Drought Resistance in Sorghum. *Canadian Journal of Plant Science.* 689-694.
- **Al-Hamdani, S. H.,** and G. W. Todd. 1990. Temperature Effects on Photosynthesis, Respiration and Growth Components of Alfalfa. *Proc. Oklahoma Academy of Science* 70:1-4.
- **Al-Hamdani, S. H.,** and G. W. Todd and D. A. Francko, 1990. Response of Wheat Growth and CO<sub>2</sub> Assimilation to Altering Root-Zone Temperature. *Canadian Journal of Botany.* 68:2698-2702.
- **Al-Hamdani, S. H.,** J. Murphy and G. W. Todd. 1991. Stomatal Conductance and CO<sub>2</sub> Assimilation as Screening Tools for Drought Resistance in Sorghum. *Canadian Journal of Plant Science.* 689-694.
- **Al-Hamdani, S. H.,** and D. A. Francko. 1992. Effects of Light and Temperature on *Nelumbo lutea* Pers. Photosynthetic Carbon Assimilation. *Aquatic Botany.* 44:51-58.
- Francko, D. A., L. Delay, and **S. H. Al-Hamdani.** 1993. Effects of Chromium (VI) on Photosynthetic Rates and Seedling Growth in *Nelumbo lutea*. *Journal Aquatic Plant Management.* 31:29-33.
- Francko, D. A., **S. H. Al-Hamdani,** and G. J. Joo. 1994. Enhancement of Nitrogen Fixation in *Anabaena flos-aquae* through ultrasonic treatment. *Journal of Applied Phycology.* 6:455-458.

### **Publications (Continued):**

- **Al-Hamdani, S. H.**, and A. J. Hueta, and D. A. Francko. 1995. The Effects of Root-Zone Temperature on Stomatal Conductance and CO<sub>2</sub> Assimilation of Wheat. *Plant Physiology. (Life Sci. Adv).* 14:21-25.
- Wilson, J. G., and **S. H. Al-Hamdani**. 1997. Effects of Cr (Vi) and Humic Substances on Selected Physiological Responses of *Azolla caroliniana*. *American Fern Journal*. 87(1): 17-27.
- Gardner, J., and **S. H. Al-Hamdani**. 1997. Interactive Effects of Aluminum and Humic Substances on *Salvinia*. *Journal of Aquatic Plant Management*. 35:1-5.
- Ayala-Silva, T, and **S. H. Al-Hamdani**. 1997. Interactive Effect of Aluminum and Polymer L-lactic Acid on Growth and Physiology of *Azolla caroliniana*. *American Fern Journal*. 87(4): 120-126.
- Ayala-Silva, T., and **S. H. Al-Hamdani**. 1997. Physiological Responses of *Azolla caroliniana* to the Polymer L-lactic Acid. *Alabama Academy of Science*. 68(4):290-295.
- **Al-Hamdani, S. H.**, Burnett, C., and G. Durant. 1998. Effect of Low-Dose Ultrasound on *Spirulina maxima*. *Aquacultural Engineering* 19:17-28.
- Nichols, B.P., J. Couch, **S.H. Al-Hamdani**. 2000. Physiological Responses of *Salvinia* to Cr (VI) and its Potential use in Phytoremediation. *Aquatic Botany*. 68: 313-319.
- **Al-Hamdani, S. H.**, and T. S. Thomas. 2000. Influence of Root Chilling on Winter and Spring Wheat Growth and CO<sub>2</sub> Assimilation. *Acta Agriculture Scandinavica (B) Soil and Plant Science* 50:149-154.
- Connell, S.L., and **S.H. Al-Hamdani**. 2001. Selected Physiological Responses of Kudzu to Different Chromium Concentrations. *Canadian Journal of Plant Science* 81:53-58.
- **Al-Hamdani, S. H.**, P. Brent Nichols, and George R. Cline. 2002. Seasonal Changes in the Spectral Properties of Mountain Laurel (*Kalmia latifolia* L., Ericaceae) in north east Alabama. *Castanea*. 67(1):25-32.
- **Al-Hamdani, S. H.** and T. W. Barger. 2003. Influence of Water Stress on Selected Physiological Responses of Three Sorghum Genotypes. *Italian Journal of agronomy*. 7(1):15-22.
- **Al-Hamdani, S. H.** 2004. Influence of Varies NaCl Concentrations on Selected Physiological Responses of Kudzu. *Asian Journal of Plant Science*. 3(1):114-119.
- **Al-Hamdani, S. H.** and Blair, S. 2004. Influence of Copper on Selected Physiological Responses of *Salvinia Minima* and Its Potential Use in Copper Remediation. *American Fern Journal*. 94 (1):1-9.
- **Al-Hamdani, S. H. and Cynthia B. Sirna. 2008.** Physiological Responses of *Salvinia* to Different Phosphorus and Nitrogen Concentration. *American Fern Journal*. 98: 71-82.
- **Al-Hamdani, S. H. 2008.** Selected *Salvinia* Responses to Different NaCl Concentration. 2007. *Aquatic Plant Management*. 46: 172-175.

### **Publications (Continued):**

- **Safaa H. Al-Hamdani** and Jamil J. Ghazal. 2009. Selected Physiological Responses of *Salvinia minima* to Various Temperatures and Light Intensities. *American Fern Journal*. 99(3): 155-161.
  - David M. Ponder and **Safaa H. Al-Hamdani**.2011 Selected physiological responses of Kudzu to different levels of induced water stress. *Alabama Academy of Science Journal*.82:44-53.
  - Kristin KMS Schwarzauer, **Safaa SAH Al-Hamdani**, James JRR Raybrun, and Nixon NOM Mwebi.2013 Utilization of Kudzu as a Lead Phytoremediator and the Impact of Lead on Selected Physiological Responses *Canadian Journal of Plant Science*, 93(5): 951-959 .
  - **Safaa H Al-Hamdani** and David Marc Ponder. 2014. The evaluation and comparison of selected antioxidant concentrations in kudzu and three common food sources. *Journal of Alabama Academy of Science*, 85(1): 1-7.
  - **Safaa Al-Hamdani**, Austen Stoelting and Mustafa Morsy.2014. Influence of symbiosis between fungus, virus, and tomato plant in combating heat stress. *Journal of Alabama Academy of Science*, 85(3-4): 150-159.
  - **Safaa Al-Hamdani**, Austen Stoelting and Mustafa Morsy.2015. Influence of symbiotic interaction between fungus, virus, and tomato plant in combating drought stress. *American Journal of Plant Sciences*, 6: 1633-1640
  - Dawn Evans and **Safaa Al-Hamdani** .2015. Selected physiological responses of roselle (*Hibiscus sabdariffa*) to drought stress. *Journal of Experimental Biology and Agricultural Sciences*,3(6): 500.507
  - Dawn Evans, **Safaa Al-Hamdani**, Dennis Shannon and Tia Gonzales.215. Evaluation of Ecological Fitness and Nutrition Assessment of Two Varieties of Roselle in Alabama. *Journal of Alabama Academy of Science*,86( 3-4)176-186.
  - Dylan Glass, **Safaa Al-Hamdani**. 2016. Kudzu forage quality evaluation as an animal feed source. *American Journal of Plant Sciences*, 7: 702-707.
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### **Presentations/Abstracts:**

- Selected Physiological Responses of Roselle (*Hibiscus sabdariffa*) to Drought Stress and Evaluation of Antioxidant and Nutrient Content. 2016 *Alabama Academy of Science* 93<sup>rd</sup> Annual Meeting. University of North Alabama, Florence, AL.
- The Medicinal Property of Roselle (*Hibiscus sabdariffa*) Medical Plant. Medicinal plant of Alabama. Auburn University, Auburn AL. Summer 2016.
- Determination of Selected Physiological Responses of Roselle (*Hibiscus sabdariffa*) to Drought Stress and Evaluation of Antioxidant and Nutrient Content. Paper Presented at the Third Euro-Mediterranean Conference of Natural Products from Biotechnology to NanoMedicine. 4-6 January, 2014. Cairo-Egypt

### **Presentations/Abstracts (Continued):**

- Evolution of Kudzu as Medical Plant. Medicinal plant of Alabama. Tuskegee University, Tuskegee AL. Fall 2014.
- Utilization of Kudzu in Phytoremediation and the Role of Antioxidants in the Detoxification Process. Paper Presented at Biology Department, UAB. Birmingham AL, October. 2012
- Nutrition Assessment of Kudzu as Food Source” Paper presented in BioNat-II, Alexandria, Egypt. December 11-13, 2011.
- Title: “Role of Kudzu as an Alternative Food Crop and Phytoremediator of Selected Metal” Author: Safaa Al-Hamdani, David Ponder, and Kristin Schwarzauer, Biology Department, Jacksonville State University. Meeting: Biochemistry and Biotechnology 108<sup>th</sup> Annual Meeting of The Southern Association of Agricultural Scientists Corpus Cristi, TX, Feb 7, 2011, TX
- Comparison of Antioxidant concentrations between Kudzu and Selected Common Food Sources Paper was presented at the 1<sup>st</sup> Euro-Mediterranean Conference on “Plant Natural Products: from Biodiversity to Bioindustry” This meeting was held in December 2009 Cairo, Egypt.
- Potential Use of Kudzu in Phytoremediation. Presented at Setac North America Annual meeting 2009 New Orleans, LA
- Evaluation of Kudzu in Phytoremediation of Heavy Metal and its Potential of Positive Utilization in Selected Environments. Paper Presented at the Southern Association of Agricultural Scientist Mobile, AL (February, 2007)
- Plant Stress Identification by Remote Sensing. Paper was presented at the Alabama Academy of Science Eightieth Annual Meeting at Jacksonville State University. (March, 2003).
- Examination of the Possibility of Using Kudzu as a Replacement Crop in Polluted Areas. Paper was presented at the Association of Southeastern Biologists 64<sup>th</sup> Annual meeting at Washington, D.C. (April, 2003).
- Remote Sensing As a Tool for Plant Stress Identification. Seminar was presented at Yarmouk University, Jordan (June, 2001).
- Potential Role of Salvinia In Remediation of Nitrogen and Phosphorous From a Eutrophic Habitat. Paper was presented at the Association of Southeastern Biologists 62<sup>nd</sup> Annual meeting at New Orleans, LA (April, 2001).
- Remote Sensing As a Tool for Plant Stress Identification. Paper was presented at the Association of Southeastern Biologists 62<sup>nd</sup> Annual meeting at New Orleans, LA (April, 2001).
- Evaluation of Salvinia as a Biological Agent in Remediation of Heavy Metals. Poster Presented At The Society Of Environmental Toxicology and Chemistry Meeting, Nashville, Tennessee (November, 2000).
- Salvinia Is a Victimized Plant in Its New Ecosystem. Paper was presented at the Association of Southeastern Biologists 61<sup>st</sup> Annual meeting at Chattanooga, Tennessee (April 2000).
- Seasonal Changes on the Spectral Properties of Mountain Laurel in the Deciduous Forest. Poster presented at American Society of Plant Physiologists Meeting, San Diego, California (July, 2000).

### **Presentations/Abstract (Continued):**

- Spectral Characteristics and Gas Exchange of *Kalmia latifolia*. Paper was presented at the Association of Southeastern Biologists 60th Annual Meeting in Wilmington, NC. (April, 1999).
- Influence of Light and Temperature on *Salvinia Minima* Growth, CO<sub>2</sub> Assimilation and Photosynthetic Pigments. Paper was presented at the Association of Southeastern Biologists 60th Annual Meeting in Wilmington, NC. (April, 1999).
- Kudzu Response to Selected Concentration of Cr (VI). Paper was presented at the Association of Southeastern Biologists 60th Annual Meeting in Wilmington, NC. (April, 1999).
- Salinity Influence on Selected Physiological Responses in *Salvinia minima*. Paper was presented at the Association of Southeastern Biologists 60th Annual Meeting in Wilmington, NC. (April, 1999).
- Effects of Chromium (VI) on *Salvinia* Growth and Carbohydrate Accumulation. Paper was presented at the Association of Southeastern Biologists 59th Annual Meeting in Monroe, LA. (April, 1998).
- Effects of Root-zone Temperature on Invertase Activity and Carbohydrate Accumulation of Winter and Spring Wheat. Paper was presented at the Association of Southeastern Biologists Annual meeting in Orlando, Florida (April, 1994).
- Effect of Aquatic Humus on Chromium Toxicity to *Azolla caroliniana*. (Paper was presented at the Association of Southeastern Biologists Annual Meeting in Orlando, Florida (April 1994).
- Effects of Drought on Selected Physiological Response in Three Sorghum Genotypes". Paper was presented at the Association of Southeastern Biologists Annual meeting in Statesboro, Georgia (April, 1996).
- Responses of Winter Wheat to Chilling Temperature. Poster presented at American Society of Plant Physiologists Meeting, Pittsburgh, Pennsylvania (July, 1992).
- The Magnitude and Persistence Effects of Altering Root-Zone Temperature on Stomata Conductance of Wheat. Poster presented at Plant Biochemistry and Physiology Symposium Annual Meeting, University of Missouri-Columbia (April, 1991).
- Effect of Lowering Root-Zone Temperature on Stomatal Conductance and CO<sub>2</sub> Assimilation. Paper given at Ohio Academy of Science Annual Meeting, Ohio State University (April, 1991).
- Response of Wheat Growth and CO<sub>2</sub> Assimilation to Altering Root-Zone Temperature. Poster presented at American Society of Plant Physiologists Meeting, Indianapolis, Indiana (July, 1990).
- Photosynthetic Characterization of *Nelumbo lutea* (Willd) Pers. Seedling. Paper was presented at American Society of Limnology and Oceanography Annual Meeting, College of William and Mary, Williamsburg, Virginia. (July, 1990).

### **Presentations/ Abstract (Continue):**

- Effect of Temperature on Photosynthate Partitioning in Alfalfa. Poster was presented at Plant Biochemistry and Physiology Symposium Annual Meeting, University of Missouri-Columbia, Columbia, Missouri (April, 1988).
- Effect of Temperature on Photosynthesis, Respiration and Carbohydrate Accumulation in Alfalfa. Paper given at Oklahoma Academy of Science Annual Meeting, Northwestern State University, Alva, Oklahoma (April, 1987).
- The Carbohydrate Trends in Alfalfa Roots for the Period Between the Last Cut in the Fall and First Cut in the Spring. Paper given at Oklahoma Academy of Science Annual Meeting, Oklahoma Baptist University, Shawnee, Oklahoma (April, 1986).

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### **Research Grants:**

- **Research Corporation Technologies**, Research Grant awarded for the amount of 1,000. (1992).
- **Jacksonville State University**, Research Grant awarded for the amount of \$2,663. (1992).
- **Jacksonville State University**, Faculty Computer Resources Grant awarded for the amount of \$5017. (1993).
- **Jacksonville State University**, Research Grant awarded for the amount of \$1,700 (1994).
- **Jacksonville State University**, Research Grant awarded for the amount of \$2,787 (1994).
- **NASA Research Grant** awarded for the amount of \$230,748. Myself as a Co-PI (1994).
- **National Science Foundation**, Grant awarded for the amount of \$67,900. Myself as a Co-PI. (1995).
- **Jacksonville State University**, Research Grant awarded for the amount of \$2,500. (1995).
- **Jacksonville State University**. Research Grant awarded for the amount of \$2,550 (November 1997).
- **NASA Research Grant**, awarded for the amount of \$21,000. Myself as principal investigator (1997).
- **NASA Research Grant**, awarded for the amount of \$35,000. Myself as principal investigator (98).
- **Jacksonville State University**, Research Grant awarded for the amount of \$2,900 (1998).
- **NASA Research Grant**, awarded for the amount of \$35,000. Myself as principal investigator (1999).
- **Jacksonville State University**, Research Grant awarded for the amount of \$2,900 (1999).
- **NASA Research Grant**, awarded for the amount of \$30,000. Myself as principal investigator (2000).



### **Research Grants (Continued):**

- **NASA Research Grant**, awarded for the amount of \$66,000. Myself as principal investigator (2001).
  - **Jacksonville State University**, Research Grant awarded for the amount of \$2,918 (2002).
  - **American View**, Research Grant awarded for the amount of \$5,500. Myself as principal investigator (2005)
  - **American View**, Student Scholarship Grant awarded for the amount of \$1,000. Myself as principal investigator (2005).
  - **American View**, Research Grant awarded for the amount of \$4,500. Myself as principal investigator (2006).
  - **American View**, Research Grant awarded for the amount of \$6,000. Myself as principal investigator (2007).
  - **Jacksonville State University**, Research Grant awarded for the amount of \$2,918 (2009).
  - **Impact of Hydrocarbon Oil Spill on Coastal Plant Community**. Total of \$15,000. Myself as principal investigator (2011).
  - **BP. Research Grant**, **Impact of Hydrocarbon Oil Spill on Coastal Plant Community**, Awarded for the Amount of \$15,000. 2011-2012.
  - **Jacksonville State University**, Research Grant awarded for the amount of \$2,000, 2012-2013.
  - **The Alabama Commission on Higher Education (ACHE)**, Assessment for IMPACTSEED Project, Contract for the Amount of \$8,200, 2012-2013.
  - **The Alabama Commission on Higher Education (ACHE)**, Assessment for IMPACTSEED Project, Contract for the Amount of \$8,200, 2013-2014.
  - **The Alabama Commission on Higher Education (ACHE)**, Assessment for IMPACTSEED Project, Contract for the Amount of \$7,200, 2014-2015.
  - **Jacksonville State University**, Research Grant awarded for the amount of \$2,200, 2014-2015.
  - **Jacksonville State University**, Research Grant awarded for the amount of \$1,800, 2015-2016.
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### **Masters Students Supervised:**

- **Ayala-Silva, Tomas (MS), 1995**. Interactive Effect of Aluminum and Polymer L. Lactic Acid on growth and Physiology of *Azolla caroliniana*.
- **Barger, Terry Wayne (MS), 1996**. Cell Membrane Stability, Leaf Surface Wax Content and Carbohydrate Accumulation as affected by Water Stress in Three Sorghum Genotypes.
- **Blair, Stacy (MS), 2001**. Influence of Selected Concentrations of Cu on Photosynthesis, Carbohydrate Accumulation and Growth of *Salvinia*.
- **Burnett, Chris (MS), 1996**. Physiological Responses of *Azolla* and *Anabaena flos-aquae* (Cyanobacteria) to Low-Dose Ultrasonic Treatment.
- **Connell, Shounda (MS), 1999**. Evaluation of Kudzu as a Biological Agent for the Remediation of Cr (VI).

## **Masters Students Supervised (Continued):**

- **Couch Jimmy. (MS), 2000.** Physiological Responses of *Salvinia* to Cr (VI) and its Potential Use in Phytoremediation
  - **Glass, Dylan (MS) 2016.** Kudzu forage quality evaluation as an animal feed source.
  - **Evans, Dawn (MS) 2016.** Evaluate of Antioxidant Content, Anti-Microbial Properties, and the Medicinal Value of Roselle (*Hibiscus sabdariffa*)
  - **Gardner, Jeff (MS). 1996.** Interactive Effects of Aluminum and Humic Material on *Salvinia minima* Growth, Photosynthetic Rates, and Carbohydrate Accumulation.
  - **Matson, David (MS). 2016.** Influence and Light Intensity on Gas Exchange in Nutritional Value of Turmeric.
  - **Nichols, B.P (MS), 2000.** Seasonal Changes in the Spectral Properties of Mountain Laurel (*Kalmia latifolia* L., Ericaceae) in north east Alabama.
  - **Ponder, David MS). 2009.** Comparative Chemical Composition And Antioxidant Activities of Kudzu And Selected Food Sources.
  - **Schwarzauer, Kristin (MS). 2009.** Utilization of Kudzu as a Lead Phytoremediator and the Impact of Lead on Selected Physiological Responses.
  - **Sirna, Cynthia (MS). 2001.** Evaluation of *Salvinia* as an alternative food source to selected animals.
  - **Stoelting, Austen (MS) 2014.** The Role of Trehalose in Combating Water Stress As Influenced By Three-Way Symbiosis.
  - **Thomas, Travis Scott (MS). 1997.** Physiological Responses of Winter and spring Wheat to Altering Root-zone temperature.
  - **Wilson, Jimmy Glenn (MS). 1995.** Effect of Aquatic Humus on Chromium toxicity to *Azolla caroliniana* growth and Physiology.
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## **Professional Societies:**

- American Society of Plant Physiologists
  - Association of Southeastern Biologists
  - Alabama Academy of Science
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