April 2, 2014

Dr. Kimberly Williams
Chair of Search Committee
Department of Horticulture, Forestry
& Recreation Resources
Kansas State University
Manhattan, KS 66506-5506

Dr. Michael Kane
7731 SW 47th Lane
Gainesville, FL 32608
353-359-3565
micropro@ufl.edu

Dear Dr. Williams:

I am writing in response to the advertised position of *Professor and Head, Department of Horticulture, Forestry, and Recreation Resources.* After very deliberate review of my professional goals and close consultation with my family, I have become very interested in being considered for this position. As you are aware I had the opportunity to join the K-State faculty about seven years ago but after family considerations, I decided to decline the offer. My brief visit to K-State in 2007 left an indelible memory with me. I met a very dedicated and talented faculty and staff who shared common family values, were student-focused and a strong commitment to the land-grant tradition. While it was a very difficult decision, at that time it was the correct one.

My years at the University of Florida have been personally rewarding. I would like to describe my qualifications and diverse professional experiences as they relate to fulfilling the requirements of the HFRR Head position. I consider my 29 years professional experience in environmental horticulture, natural resource development, appreciation for both fundamental and applied plant science research, and dedication to promoting quality teaching and outreach programs to be strong credentials for fulfilling the responsibilities of this position.

Both my undergraduate and graduate experiences at the University of Rhode Island were focused on various aspects of botany. During my MS program I studied environmental and developmental plant physiology. My thesis research incorporated both field and laboratory experiments concerning the environmental and physiological control of leaf development in heterophyllous aquatic plants. During the summer months I was employed as an Environmental Educator for the Youth Conservation Corps. (YCC). I supervised the construction and repair of nature/interpretive trails and observation towers by high school students. After receiving my MS Degree in 1976, I became employed as an Environmental Planner for the Tampa Bay Regional Planning Council in St. Petersburg, Florida. Responsibilities of this position included writing components of the *Areawide Water Quality Management Plan* for the Tampa Bay Region. I provided project overview and feedback to various environmental, engineering and management consultants funded to provide technical input for the project. My other responsibilities were diverse, including review of environmental impact statements and Development of Regional Impact (DRI) reports. While in this position, I received excellent training in the political realities of environmental regulation, protection and urban planning. I also learned that development of truly sound environmental regulatory policy should only be based on strong scientific data! This experience was very beneficial when writing research proposal.

After several years, I decided to return to academia to pursue a Ph.D. in Biological Sciences to continue my research on plant developmental physiology. I received additional training at the W. Alton Jones Cell Science Center, Lake Placid, NY, to develop *in vitro* plant culture (tissue culture) procedures to more precisely study the physiological control of plant development, During my doctoral studies, I also worked part-time as an Aquatic Botanist at the U.S. Environmental Protection Agency's Marine Research Laboratory, Narragansett, RI during which toxicological bioassays using marine algae were developed.

After completing my doctorate in 1984, I accepted a Post-Doctoral Research Associate position at the University of Florida in the Environmental Horticulture Department. In this position, I was responsible for developing *in vitro* propagation (micropropagation) protocols for production of native woody shrub and tree species used for upland habitat restoration. Since October 1987, I have been a faculty member with teaching (30%) and research (70%) responsibilities. In 2005, I assumed the responsibilities as both Assistant Chair (until 2012) and Undergraduate Coordinator with major emphasis on coordinating our statewide undergraduate teaching program and curriculum development.

Hopefully, my record will demonstrate that I have a deep "footprint" in both teaching and research. I have also participated in many extension programs, including our statewide Master Gardener Program and in-service training. Most of my federally funded research projects have a strong outreach component. As an instructor, I strive to provide *quality learning experiences* both in and out of the classroom. I am still very excited about teaching and convey that enthusiasm to my students. It has been my philosophy that both undergraduate and graduate students should understand that I do work diligently for them and that; in return, I expect no less from them. By developing strong teacher/student relationships based on mutual respect, students typically respond by wanting to do excel. This has proven to be a strong motivator for learning.

I teach undergraduate and graduate-level offerings of plant micropropagation (plant tissue culture) and plant propagation. Providing opportunities for enhancing graduate student professional development has been a personal long-term passion. Since 1999 I have taught ALS 5934 Graduate Student Professional Development. Three years ago, I revised the course for web-based asynchronous delivery to graduate students state-wide. To assist both graduate students and their faculty mentors, I have organized numerous college-wide educational workshops on enhancing graduate student professional development.

My instructional activities have not just been centered on undergraduate and graduates. Each fall semester I participate in the team-taught *Teacher's College*, a course designed to assist CALS faculty members seeking to improve their teaching skills, and engage as a community of practice around learner-centered teaching. I also offer a four-day workshop during summer to train high school and college teachers to introduce plant tissue culture into their curricula. This workshop has been extremely popular and also helps to inform teachers of the career opportunities in agriculture (student recruiting tool). I am very committed to providing and <u>preserving</u> hand-on learning experiences in our curriculum.

During my service as Graduate Coordinator for six years, dealing with graduate education policies and student personal challenges became important activities of my position. With valuable input

from our graduate students, we developed the *Environmental Horticulture Graduate Student Handbook*. This publication actually became the model for development of similar handbooks in other departments. These experiences have allowed me to become familiar with the issues and opportunities related to graduate student education and recruitment. Being a graduate student's mentor is a very serious responsibility. I have always endeavored to promote excellence in my graduate students by having them take pride in their research. I treat them almost as colleagues and encourage them to be involved in activities that will enhance their own professional development, including grant writing, publishing, teaching, peer mentoring, and service in professional societies. In 2006 a graduate student in my laboratory, Dr. Carmen Valero Aracama, was the recipient of the College of Agricultural & Life Sciences (CALS) Outstanding Dissertation Award! Similarly, in 2009, now Dr. Daniela Dutra received the CALS Outstanding Master's Thesis Award. To see very well-deserving students be recognized for their efforts is the ultimate "perk" of my job!

After reading my teaching-related activities, you might be surprised by the fact that I have only a 30% teaching appointment! I have developed a unique and productive biotechnology research program. My research, centered in the *Plant Restoration, Conservation and Propagation Biotechnology Program*, is focused on development of commercially viable and ecologically-sound procedures to select and propagate genotypes of native aquatic, wetland and coastal plant species used for planting stormwater retention ponds, wetland habitat restoration and coastal dune restoration and stabilization. Our research incorporates the use of DNA markers to genetically characterize plants and micropropagation, greenhouse and field studies to determine the advantages and limitations of this approach. This approach is also applied to native orchid production and conservation. From both a commercial and ecological perspective, we have validated this approach by developing collaborative relationships between commercial micropropagation laboratories, native plant nurseries, the Florida Parks System and US Fish &Wildlife Service. Whether it involves freshwater or coastal habitats, one could characterize our research projects as attempts to develop improved restoration techniques by injecting more science into the art of habitat restoration. My research experience would allow me to bring a unique and non-traditional perspective to the HFRR Head position.

Seven years ago I stated in my application cover letter to K-State that: *The winds of change are impacting the traditional land-grant university mission, the perceived importance of research, teaching and extension, and the expectations placed on faculty. We need to look at innovative ways to embrace these changes and most effectively position our programs. Programs must continually evolve to remain relevant. This will require developing collaborative interdisciplinary relationships*. This statement remains just as relevant today (maybe even more). I am convinced that the days of single-faculty-based research programs have come to an end. At the University of Florida, we created a consortium for horticultural applications in ecosystem conservation which uses the expertise of two junior faculty and myself. Very recently I participated in a two-day meeting organized by the Smithsonian's Environmental Research Center. The goal of this meeting was to form the North American Orchid Conservation Consortium consisting of about 25 orchid conservation researchers and botanical garden managers to seek funding for multidisciplinary orchid research projects.

For many years, I have been actively involved in bringing positive change with respect to teaching evaluation, improvement, recognition and reward. For example, in 1994 we developed the current

college-wide faculty-approved system for evaluating teaching effectiveness and quality for tenure and promotion through the use of teaching portfolio analysis and peer evaluation. As might be expected, this was an emotionally charged process when it came time to vote. However, it was important to both faculty and students. My colleagues view me as being honest and driven by a strong sense of integrity. From 2006 to 2009 I was selected to serve as the Roche Professor for Teaching Excellence. Responsibilities include reviewing the then teaching peer review process and organizing faculty and administrator workshops to nurture the culture of teaching improvement in our college. From these efforts revised teaching peer assessment/evaluation guidelines were developed which minimized some of the limitations of previous models. Recently, I became a member of the UF Academy of Distinguished Teacher Scholars, where much effort is being placed on developing a series of workshops: *Campus-wide Conversations on Teaching Peer Assessment*. I was not surprised when I learned that the HFRR faculty are very active in promoting this at K-State.

Finally, at any university, it's critical that a work environment exists that promotes faculty and staff investments in their jobs. *This requires that clear channels of communication, mutual respect and trust be developed between administration and faculty.* This is the basis for shared governance of which I am a committed supporter. I currently serve as Institute of Food & Agricultural Sciences Faculty Assembly Chair, our shared governance body. In this capacity I have worked closely with faculty, deans and our Senior Vice President to resolve some important issues. This has been a very positive, albeit somewhat bumpy, learning experience.

So why would I once again be interested in being considered for an administrative position? With shrinking budgets, changing priorities and increased faculty workloads these are challenging times for administrators, faculty and staff. A quick review of my professional "footprint" will demonstrate my long service as a mentor and collaborator. I thoroughly enjoy working with others, creating a positive work environment, and meeting new challenges. My mantra has always been: *When you are successful I am successful*. Ten years ago I participated in the ESCOP/ACOP Leadership Development Program (now Lead21). This provided me the opportunity to gain feedback regarding my leadership strengths and weaknesses and develop new skills. To be honest, I have been nominated for various administrative positions here at UF and elsewhere (I'm not sure why) but I have always declined such offers. However, the diverse and highly recognized HFRR faculty and their excellent programs could offer opportunities for me to work with a faculty who share my common values. However, my impressions are based on a K-State administrative and academic culture that existed seven years ago. I am curious to learn how this culture has changed and what opportunities may exist for me to utilize my leadership skills and continue to enjoy what I do.

I hope that my application will be given serious consideration (once again). As requested, I have included the names and contact information for five references. Please contact me should additional information be required.

Sincerely,

Michael Kane

Michael E. Kane, Ph.D.
Distinguished Teacher Scholar & Professor

Administrative Philosophy and Vision of Future Needs for
HFRR Teaching, Research and Extension

Dr. Michael Kane

In my cover letter I provided a professional footprint which represented my commitment to excellence in teaching, research and outreach. However, I would like to provide more details how this relates to my administrative philosophy.

I believe the HFRR Head must work collaboratively with the Dean and the upper administrative team to fulfill the overall goals of the University. I would strive to develop a strong working relationship based on trust and respect. Likewise, it is the responsibility of the Head to clearly communicate the goals and needs of the Department's teaching, research and extension programs to the upper administration and the appropriate clientele. I would actively promote the Department to outside clientele and seek opportunities for extramural funding. I would utilize discipline based advisories committees to obtain feedback.

Within the Department; the Head must develop an environment of trust, confidentiality and open communication. This requires a strong commitment to shared governance. I believe it critical that both faculty and staff be actively involved in the decision-making process through the activities of stakeholder advisory committees and regular faculty/staff meetings. Administratively, my broad background in botany, plant biotechnology, horticulture, forestry, USFWS wildlife refuge system and resource development and conservation would help me to understand and support the teaching, research and extension activities within each of the diverse HFRR disciplines. For me, this would be the easiest position responsibility to fulfil.

It is the ultimate responsibility of the Head and senior faculty to ensure that an effective mentoring system is in place so that all junior faculty are provided sufficient guidance to be professionally successful. When available, resources should be used to provide opportunities for faculty/staff professional development. A strong mentoring system that is effective across distance is especially important for those faculty at remote locations.

Fostering Undergraduate & Graduate Teaching Excellence Including DE

Faculty who teach and advise students have a tremendous responsibility and power to shape the attitudes of their students for a life-time. This is a responsibility that I take very seriously. My perception is that HFRR is populated with a very dedicated, talented and highly recognized teaching faculty. I would learn much from them. I also recognize that there are differences in the career objectives in the various degree and certificate programs which require different teaching practices and learning experiences.

Often new faculty partition their scholarly non-pedagogical knowledge generating research efforts from their teaching responsibilities, and never experience the efficiency and rewards of integrating both. However, this is a mistake. This partly results from our

(mis)perceptions of which faculty activities are important, valued and expected of us to ensure successful career advancement and professional recognition. We may hear the statement that "teaching does not count". I have always believed that it is the responsibility of *both* the faculty and administration to create and nurture a positive psychological environment that fosters faculty willingness to *invest* in their teaching, enhance learning and embrace the scholarship of teaching and learning. However, the faculty should be the driving force.

I discovered early in my career that much of the knowledge being generated from my micropropagation research program could be readily applied to reinforce concepts in lectures and develop novel laboratory teaching exercises which, after further refinement (with student feedback), could be shared by publishing in peer-reviewed journals or teaching textbook chapters. As an administrator, I would take every opportunity to promote this strategy and, where appropriate, point out opportunities for faculty to achieve professional success.

I strongly believe that peer teaching assessment is a process that offers opportunities for faculty to document their teaching, share feedback for improving both undergraduate and graduate teaching, and developing a strong community of teachers. I realize that K-State is already very active in this area. I am not sure how well developed this is in the HFRR teaching programs. Are there guidelines for peer assessing DE courses?

Motivated and high quality graduate students are the lifeblood of any sustainable research program in HFRR. Strategies need to be developed to recruit and financially support graduate students. This may include attracting international students who have funding from their own countries. For example, South American countries like Ecuador provide full scholarships for their doctoral students to study abroad. My personal graduate student experiences made me very aware of the critical role that a professor should play in nurturing graduate student curiosity, confidence, developing research, teaching and communication skills, and shaping life-long attitudes. The HFRR should provide opportunities for graduate student professional development that go beyond developing competency in research. This could involve encouraging graduate students to enrich their teaching portfolio and skills beyond that attained by just being teaching assistants. This includes enrollment in education courses, creating and teaching courses or assisting in or developing extension programs. Graduate students could demonstrate their leadership abilities at the national level by convening graduate student professional development and teaching workshops at professional meetings.

Distance learning through use of web-based technology is a critical component of most university teaching and extension programs. It is no longer a question if we <u>should</u> use it but rather <u>how</u> to best effectively use the ever-changing technology to enhance student learning. K-State is a leader in distant education. I am familiar with the K-State Online system and its participation in the AG*IDEA (GPIDEA) consortium.. Having developed and taught an asynchronous online graduate professional development course for three years, I am familiar with the preparation time for developing effective online courses and managing the course management system. I would approach the

application of distance education technology with the objective to provide the best learning experiences possible**.** I have occasionally observed weak online courses which I consider low quality. These types of courses are to be avoided. **I also recognized there are many critical hands-on student experiences which cannot (should not) be substituted using online technology.** Having a HFRR Teaching Committee which periodically shares its online expertise (brown bag lunches?) with other faculty could be beneficial. This would complement professional services offered by the University.

Fostering Excellence in HFRR Research and Extension Programs

The HFRR research programs are very diverse and well established. With this diversity there is tremendous strength. My own research program I have ignored traditional discipline boundaries and when needed, utilized horticultural propagation practices, plant physiology, genetics ecology, field research and applications of conservation biology. The species have ranged from ornamentals, aquatic, wetland, grass and native woody plants. Success in the future will require the HFRR to define what role(s) it will play in fulfilling the goals of K-State 2025 Strategic Plan for Agriculture, Research and Extension.

While environmentally sound and efficient food production and handling research is a critical component of HFRR's research, the Department's footprint extends into the the sciences of stress physiology, plant selection and propagation, installation maintenance to enhance human well-being and the natural environment. One of the driving forces shaping future research will be how to address challenges related to climate change with respect to park planning/management, landscape plant selection, turf grass and riparian reforestation In Kansas. Climate change could be the common thread which utilizes the research strength of the Department. Competitive funding on the national level will require interdisciplinary approaches to problem solving. This will involve forming partnerships with other universities and Federal agencies. The HFRR Head should promote cooperative research between the various HFRR disciplines and formation of these new external partnerships.

The HFRR extension programs appear strong and diverse. However, there are many challenges, including decreased federal and state funding increased accountability, recovery of program costs with increased dependency on external support from contracts and grants. The HFRR Head should work with extension/teaching/research faculty and upper administration to continually look for opportunities for developing unique funding and new program partnerships and ensuring that the extension programs delivered have public value.

CURRICULUM VITAE

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EDUCATION

Ph.D. in Biological Sciences (Aquatic Botany), December 1984
University of Rhode Island, Kingston, RI
Dissertation: *Developmental Morphology and Physiology of Heterophyllous Aquatic Angiosperms*

Masters of Science in Botany, June 1977
University of Rhode Island, Kingston, RI
Thesis*: Environmental and Hormonal Control of Growth and Development in Proserpinaca*

Bachelor of Science in Natural Resource Development (Aquatic Plant Ecology), June 1974
University of Rhode Island, Kingston, RI (Honors).

PROFESSIONAL EXPERIENCE

University of Florida Academy of Distinguished Teacher Scholars, selected member 2012.

Marion & Virginia Roche Professorship for Teaching Excellence 2006 – 2009.

Assistant Chair, Environmental Horticulture Department, University of Florida, 2005 - 2012.

Professor (30% teaching/70% research), Environmental Horticulture Department, University of Florida, 1999 - present.

Associate Professor (tenured; 30% teaching/70% research), Environmental Horticulture Department, University of Florida, 1992 - 1999.

Assistant Professor (30% teaching/70% research), Environmental Horticulture Department, University of Florida, 1987 - 1992.

Postdoctoral Research Associate, Environmental Horticulture Department, University of Florida. Development of micropropagation systems for native Florida woody plants used for upland habitat restoration of phosphate-mined lands, 1985 - 1987.

Aquatic Botanist (part-time), U.S. Environmental Protection Agency, Narragansett, Rhode Island. Toxicological bioassay development using freshwater and marine plants, 1983 - 1985.

Environmental Planner (Water Quality Management), Tampa Bay Regional Planning Council, St. Petersburg, Florida. 1977 - 1979.

RESEARCH PROGRAM

Applications of plant *in vitro* ecology through development of *in vitro* propagation (micropropagation) protocols for genotypic selection and production of aquatic/wetland, coastal plants and native orchids. The primary goal is to develop environmentally sound production procedures for habitat restoration and plant reintroduction. Genotypic effects on *in vitro* physiology and *ex vitro* field growth performance of micropropagated wetland and coastal plants in restored habitats are also examined. Delineation of genetic diversity within and between wetland and coastal plant populations is accomplished using DNA fingerprinting technology. Fundamental investigations of the environmental effects on and hormonal regulation of aquatic plant growth and development using *in vitro* culture techniques are also pursued. Research is conducted as part of the Plant Restoration Conservation and Propagation Biotechnology Program.

ACADEMIC RECOGNITION

2012 University of Florida Academy of Distinguished Teacher Scholars
2010 U.S. Department of Interior Regional Conservation Award
2010 Annual Cooperative Research Award, Florida Cooperative Fish and Wildlife Research Unit
2009 Elected Fellow, Society for In Vitro Biology
2009 IFAS Award of Excellence for Graduate Research: Best Master's Thesis (major advisor)
2009 Florida Blue Key Distinguished Faculty Award
2009 USDA Excellence in College and University Teaching in the Food and Agricultural Sciences National Award
2008 College of Agricultural and Life Sciences Academy of Teaching Excellence
2006 IFAS Award of Excellence for Graduate Research: Best Dissertation (co-major advisor)
2006 Marion & Virginia Roche Professorship for Teaching Excellence
2003 Excellence in Teaching Award, Núr Bahá í School
2003 Distinguished Service Award, Society for In Vitro Biology
1993 Professor of the Year Award, Alpha Zeta Service Fraternity
1992 Silver Medal Award for the Outstanding Research Paper, Florida State Horticultural Society
1992 Coastal, Saline and Freshwater Aquatic Habitat Preservation Award
1992 Faculty Superior Accomplishment Award, University of Florida
1991 Teacher of the Year Award, College of Agriculture, University of Florida
1991 University-Wide Award for Outstanding Undergraduate Teaching, University of Florida
1991 Teaching Award of Merit, National Association of Colleges and Teachers of Agriculture
1991 Gamma Sigma Delta Agricultural Honor Society
1990 University of Florida Outstanding Faculty Achievement and Performance Award
1990 Teaching Honor Roll, College of Agriculture, University of Florida
1988 Silver Medal Award for the Outstanding Research Paper, Florida State Horticultural Society

PROFESSIONAL DEVELOPMENT ACTIVITIES

Preparing for Leadership in the Agricultural Research and Higher Education System. ESCOP/ACOP Leadership Development Program, Class 14 (green group), June 26 to July 1, 2004, Indianapolis, IN. Administrative internship in Dean for Research Office, University of Florida, Florida Experiment Station, August 2004 – July 2005. ESCOP/ACOP Phase II Project: *Strategies for Enhancing Graduate Student Research at the UF/IFAS Research & Education Centers*. Phase III training Washington, DC, February 27 – March 2, 2005.

Writing Winning Grants, Workshop sponsored by the IFAS Dean for Research, University of Florida, December 12, 2005.
Digital Media. University of Florida Center for Instructional Technology & Training, University of Florida, October 2002.

Creating A Course Website. University of Florida Center Instructional Technology & Training, University of Florida, October 2002.

Creating a Digital Presentation. University of Florida Center for Instructional Technology & Training, University of Florida, November 2002.

Graphics for On-Screen Course Materials. University of Florida Center Instructional for Technology & Training, University of Florida, November 2002.

Effective Use of Notebook Computers. University of Florida Center for Instructional Technology & Training, University of Florida, December 2002.

Digital Media. University of Florida Center for Instructional Technology & Training, University of Florida, October 2002.

Teaching Methods in College Agriculture and Natural Resources, University of Florida, April 1992. (12-week distant education course from The Ohio State University).

Plant Cell and Tissue Culture, Alton Jones Cell Science Center, Lake Placid, New York, June 1980. (2-week course)

PROFESSIONAL SOCIETY MEMBERSHIPS AND ACTIVITIES

American Society for Horticultural Science, *member (1985 – 1999); Education Committee member (1985 -1999).*
Aquatic Gardeners Association – member, 2008-present.
Aquatic Plant Management Society – *member, 1977– present*; *Bylaws Committee Chair (1995-1997).*
Alpha Zeta Agricultural Fraternity- *member, 1991 – present; Senior Faculty Advisor (1990 – 1992).*
Botanical Society of America – *member – 2008 – present*.
Florida State Horticultural Society – *member 1987 – 1995. Vice President Ornamentals Section (1991).*
Gamma Sigma Delta Agricultural Honor Society – *member, 1991 - present*.
International Plant Propagators' Society - *member, 1991- 2003*.
International Water Lily & Water Gardening Society – *member, 1987 - present*.
North American Colleges and Teachers of Agriculture (NACTA) – member, 2008-2013.
Phi Kappa Phi Honor Society – *member, 1974 - present*.
Sigma Xi Research Honor Society – *member, 1977 - present*.
Society for Ecological Restoration – *member, 2005 - present*.
Society for In Vitro Biology – *member, 1995 – present*; *Educational Committee, member (1995-present); Program Planning Committee member (1995-present); Student Affairs & Awards Committee (1999); Reviewing Editor (1999-2006); Associate Editor (2006-2009).*
Society of Wetland Scientists – *member,*1995 – present.
Editor-In-Chief, *Scientia Horticulturae* 2009 – 2014.

TEACHING

PLS 4242C/5424C Micropropagation of Horticultural Crops (4 credits), lecture/laboratory course (undergraduate and graduate sections) emphasizing hands-on practical application of plant tissue culture techniques used for the production of horticultural crops.

PLS 3221C/5222C Plant Propagation (3 credits), Co-teach lecture/laboratories covering the major aspects of the micropropagation of horticultural crops.

ALS 5934 Graduate Student Professional Development (2 credits). Presentations and group discussion of topics essential to enhance the awareness personal satisfaction and professional success of graduate students (web-base asynchronous delivery since 2012).

ORH 1030 Plants Gardens & You (2 credits) freshmen survey course covering a wide range of environmental horticulture topics presented by multiple lecturers (1999 – 2001).

ORH 4905 Independent Study in Horticultural Science (variable credits), provide guidance to undergraduates for completion of directed research projects.

STUDENT TEACHING EVALUATION SUMMARY
(2001 – 2013)

	INSTRUCTOR MEANS[1]			COURSE MEANS		
COURSE	KANE	DEPT.	COLLEGE	KANE	DEPT.	COLLEGE
PLS 4242C	4.78	4.58	4.36	4.65	4.48	4.17
PLS 3221C	4.63	4.51	4.39	4.51	4.39	4.22
ALS 5934	4.74	4.40	4.38	4.52	4.27	4.21

[1] Evaluation scale: 1 = lowest; 5 = highest rating

Academic Programs Publication Series

In 1988, with the support of the Dean for Academic Programs, I established the College of Agricultural and Life Sciences' (CALS) Academic Programs Publication Series, which provided a mechanism for publication of faculty non-refereed teaching materials. Publications submitted:

Direct Shoot Organogenesis from Stem Internodes of Parrot-feather (Myriophyllum aquaticum), An Ornamental Aquatic Plant: A Plant Tissue Culture Exercise. 1988. Academic Programs Publication Series No 1. 12pp.

Career and Educational Opportunities in Horticulture and Plant Science. 1989. Academic Programs Publication Series No. 5. 12 pp.

In Vitro Layering and Tuberization of Potato: A Micropropagation Laboratory Exercise. 1989. Academic Program Publication Series No. 6. 13 pp.

Student Trainingships

Nadine Brown, Jamaican Scientific Research Council, August-September 1988.

Nicole Young, 2nd Annual UF Apprenticeship Program for Minorities sponsored through the UF Student Science Training Program, June 19th to August 11, 1989.

Galo Jarrin, Quito, Ecuador, February-March 1990.

Haisam Habaal, Agricultural University, Wageningen, The Netherlands, January-March, 1990.

Karen Wood, Jamaican Scientific Research Council, May 1991.

Jonathan Jasinski, undergraduate directed research project, January – June 2008.

Ryan Dickson, undergraduate directed research project, January – May 2009.
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Javier Ripa, IFAS, undergraduate research Intern, June 2008 – December 2009.

Chris Hill, undergraduate directed research project, January 2010 – May 2011.

Rinnie Rodenius undergraduate research project September 2013 – present.

CURRICULA DEVELOPMENT AND REVIEW

CALS Task Force for Undergraduate Curricula Development, 1991 - 1992. Reviewed and made recommendations to Dean of Academic Programs concerning adequacy of current undergraduate major courses and programs, student recruitment, advisement procedures and recognition and rewarding of teaching quality. Final report:

- *Report of the Task Force for Undergraduate Curricula Development*. Academic Programs Publication Series No. 13. 46 pp.

CALS Task Force on Selected Majors with Enrollment Growth Potential, 2003. Developed recommendations to enhance the number and quality of students in selected CALS under enrolled majors. Comprehensive comparisons were made of curricula and recruiting efforts in similar majors around the United States. Recommendations were outlined in the final report:

- *Selected Majors with Enrollment Growth Potential*, 74 pp. (October 2003)

Curriculum Sub-Committee for development of the Restoration and Conservation Horticulture specialization in Environmental Horticulture (2006 - 2007).

National USDA CSREES review of the undergraduate and graduate programs, Department of Horticulture, University of Minnesota, December 2006, review panel member.

Environmental Horticulture Curriculum Enhancement Committee (2008-2010), chair.

PEER TEACHING ASSESSMENT AND ENHANCEMENT

Chairperson, CALS Academic Development Committee (1994 – 1995). Responsible for organizing and scheduling teaching improvement workshops including:

- *Evaluation of Teaching and Development of the Teaching Portfolio*, Dec. 1992
- *Strategies for Teaching Improvement* May 1993
- *Teaching with Style and Technology*, Dec. 1993
- *Teaching to Various Student Learning Styles*, May 1994

Coordinated development of a faculty-approved college-wide system for evaluating teaching effectiveness and quality for tenure and promotion through the use of teaching portfolio analysis and peer evaluation. Reports generated:

- *IFAS Teaching Criteria for Tenure & Promotion: Recommendations for Revisions* (faculty approved July 1994).

- *Teaching Portfolio Analysis Guidelines for Tenure and Promotion* (faculty approved July 1994).

Served on 46 faculty teaching peer assessment committees (eight as chairperson) since 1995. Responsibilities included evaluation of instructional materials contained in a teaching portfolio and in-class observation for assessment of instructional techniques and enhancement of student learning.

Selected as the first *Marion and Virginia Roche Professor* for Teaching Excellence (2006 – 2009) to provide leadership for revising the teaching peer assessment guidelines in the College of Agricultural and Life Sciences.

- Developed: *2008 – 2009 Teaching Peer Assessment & Observation Guidelines for the College of Agricultural and Life Sciences*, 37pp. Final recommendation report submitted June 2008.

- Team instructor in the *CALS Teachers College*, a semester teaching enhancement course designed to assist faculty seeking to improve their teaching skills and engage as a community of practice around learner-centered teaching.

STUDENT RECRUITMENT AND RETENTION

Faculty Advisor, Environmental Horticulture Department Undergraduate Club 1989 - 1996.

Environmental Horticulture Department Graduate Program Coordinator 1997 – 2003.

Environmental Horticulture Graduate Student Handbook. 76 pp.

Environmental Horticulture Undergraduate Honors Coordinator, 1998 – 2004.

Environmental Horticulture Undergraduate Coordinator, 2005 – 2011.

Faculty Advisor, Environmental Horticulture Graduate Student Association 1999 - 2003.

Alpha Zeta Agricultural Fraternity Senior Faculty Advisor, 1991 - 1994.

Environmental Horticulture Department Student Recruitment Task Force, 1996.

Graduate Student Recruitment Workshop, Las Vegas, NV, Feb. 1999.

Methods to Increase Graduate Enrollment, presentation to CALS Graduate Coordinators, May 1999.

Nursery and Landscape Horticulture Undergraduate Program Coordinator, 2005 – present.

University of Florida Minority Undergraduate Mentoring Program, 2005 – 2008.

Environmental Horticulture Student Recruitment Planning Committee (2007 - 2008), chair.

College of Agricultural and Life Sciences Plant Science Task Force, 2009, member.

SERVICE TO SCHOOLS

Provided guidance to and made laboratory facilities available for Chelsea Morroni, Fort Myers, Florida to complete her self-designed research projects, 1989-1991.

Micropropagation laboratory tour, Gainesville, Florida, Loftin Center, yearly from 1989 - 2003.

Provided guidance to and made laboratory facilities available for Tyler White, Malabar, Florida to complete his self-designed research project, 1990.

Judge for the Student Speaker Competition at the Annual Junior Science, Engineering and Humanities Symposium, University of Florida, yearly from 1990 - 2009.

Judge for the Fort Clarke Middle School Science Fair, Dec.1991.

Provided guidance to and made laboratory facilities available for Ms. Corri Kolesa, Ft Meyers, Florida to complete her self-designed research project, 1993. Student became a national science fair winner.

Plant Tissue Culture, Wiles Elementary School 4th grade, Gainesville, Florida, January 1999.

Provided guidance to Ms. Terry Karstad, Santa Fe High School, with her plant tissue culture science project, Sept. 1999.

Science Fair Judge, Kanapaha Middle School, Dec. 1999.

Provided my micropropagation course PowerPoint lectures and laboratory exercises for use by Dr. Debby Hammer, Biology Department, University of North Carolina-Pembroke, January 2008.

Provided plant tissue cultures so that Dr. David Steen, Biology Department, Andrews University, could conduct a teaching laboratory exercise, January 2008.

Prepared plant tissue culture teaching kit for Jennifer Nobles, teaching intern, Northview High School, Escambia County, FL, March 2009.

Prepared plant tissue culture teaching kit for Amie Taylor, teaching intern, Williston High School, Levy County, FL, April 2009.

Careers Opportunities in the Plant Sciences, Career Day, Lawton Chiles Elementary School, Gainesville, FL, April 2010.

PLANT TISSUE CULTURE WORKSHOPS

Conducted many hands-on plant tissue culture workshops to students, teachers and extension specialists to expose them to new emerging science technologies and opportunities in agriculture. Each three-hour workshop consisted of a presentation followed by performance of an actual plant tissue culture exercise by each participant. Faculty participants were also provided extensive background and instructional materials that would allow introduction of these concepts into their own curricula. Workshops completed include:

Tissue Culture/Biotechnology Workshop. Vocational Agriculture Teachers Technical Updating Conference. University of Florida, Gainesville, Florida, May 1988.

Plant Tissue Culture. 4-H Horticulture Institute, Lake Placid, Florida, June 1988.

Micropropagation Workshop. Hillsborough County Vo-Ag Teachers Workshop, Tampa, Florida, June 1989.

Plant Tissue Culture: Principles and Techniques. Marion County Agricultural Teachers In-Service Education Program, Gainesville, Florida, Jan. 1990.

Plant Micropropagation. College of Agriculture Faculty-To-Faculty Articulation Workshop, University of Florida, Gainesville, Florida, March 1990.

Ornamental Plant Micropropagation. Technical Agricultural Update Workshop, In cooperation with the Department of Agricultural and Extension Education, University of Florida, Gainesville, Florida, April 1990.

Plant Tissue Culture. Alternative to Traditional Agriculture Workshop, Coordinated with the Department of Agricultural and Extension Education, University of Florida, held in Orlando, Florida, April 1990.

Plant Tissue Culture. 4-H Horticulture Institute, Camp Ocala, Ocala, Florida, June 1990.

Plant Tissue Culture. Alternative to Traditional Agriculture Workshop, Department of Agricultural and Extension Education, University of Florida, Gainesville, Florida, June 1990.

Hands-On Tissue Culture. Infusing Science & Technology in the Agricultural Curriculum. In service workshop for teachers of agribusiness and natural resources. Department of Agricultural and Extension Education, Marianna and Pensacola, Florida, February. 1991.

Plant Tissue Culture: A Hands-On Experience. Infusing Science & Technology in the Agricultural Curriculum. In-service workshop for teachers of agribusiness and natural resources. In cooperation with the Department of Agricultural and Extension Education, University of Florida, Boynton Beach, Florida, April 1991.

Plant Tissue Culture: A Hands-On Experience. Infusing Science & Technology in the Agricultural Curriculum. In-service workshop for teachers of agribusiness and natural resources. University of Florida, Largo, Florida, April 1991.

Plant Tissue Culture: Can It Be Done In the Classroom? Second Annual Technical Updating Conference for Agriculture Teachers. University of Florida, Gainesville, Florida, June 1993.

Plant Tissue Culture Technology. Hands-on classroom experience for college freshman. Presented three times yearly since 1997 as part of ORH 1030 Plants Gardens and You.

Plant Tissue Culture In The Classroom Workshop, Society for In Vitro Biology, St. Louis, MO, June 2001.

Water Garden Plant Tissue Culture, Pondapalooza-East 2002, Professional Pond Builders Association Conference, Altoona, PA, July 2002.

Introducing Plant Tissue Culture In The Classroom Workshop, Society for In Vitro Biology, Indianapolis, IN, June 2007.

Aquatic Plant Tissue Culture Workshop. The Aquatic Gardeners Association 2010 Convention, Ft. Lauderdale, FL, November 12, 2010.

National Teachers' Plant Tissue Culture Workshop

Introducing Plant Tissue Culture into the Classroom. A national four-day teaching workshop for high school and college faculty, University of Florida, Gainesville, FL (offered each July since 2003).

SERVICE ON GRADUATE STUDENT COMMITTEES

Committee Type	Chair	Co-Chair	Member	External	Total
Ph.D.	10	2	24	8	44
MSc. -Thesis	15	3	20	-	38
MSc. – Non-thesis	3	1	9	-	13

PUBLICATIONS

Monographs

Dehgan, B., T.J. Sheehan, D.M. Sylvia, and M.E. Kane. 1987. Propagation and mycorrhizal inoculation of indigenous Florida plants for phosphate mine revegetation. Florida Institute of Phosphate Research, Bartow, Florida, Publication No. 03-053-076, 230 pp.

Book Chapters (Research & Teaching)

Kane, M.E. 1992. Tissue Culture Propagation of Ornamental Water Lilies. pp. 557-604. *In*: Volume III. Aquaculture Market Development Aid Program. Department of Agriculture & Consumer Services. Tallahassee, Florida.

Kane, M.E. 1992. Effects of Growth Regulator Applications on Growth of Viviparous Tropical Water Lilies. pp. 605-617. *In*: Volume III. Aquaculture Market Development Aid Program. Florida Department of Agriculture & Consumer Services. Tallahassee, Florida.

Kane, M. 1995. Plant micropropagation: the history and state of the art. *In*: C. B. Burgess (ed.), Wetland Plants from Test tubes, pp. 1-7. Pub. No. UNC-SG-95-08, North Carolina Sea Grant, N.C. State University, Raleigh, NC.

Kane, M.E. 1996. Propagation from Preexisting Meristems. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises, pp. 61-71. CRC Press, Boca Raton.

Kane, M.E. 1996. Micropropagation of *Syngonium* by Shoot Culture. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises, pp. 73-80. CRC Press, Boca Raton.

Kane, M.E. 1996. Micropropagation of Potato by Node Culture and Microtuber Production. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises, pp. 81-86. CRC Press, Boca Raton.

Kane, M.E. 2000. Propagation from Preexisting Meristems. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises (2nd ed), pp. 75-86. CRC Press, Boca Raton.

Kane, M.E. 2000. Micropropagation of *Syngonium* by Shoot Culture. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises (2nd ed), pp. 87-95. CRC Press, Boca Raton.

Kane, M.E. 2000. Micropropagation of Potato by Node Culture and Microtuber Production. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises (2nd ed), pp. 103-109. CRC Press, Boca Raton.

Kane, M.E. 2000. Micropropagation and In Vitro Flowering of Rose. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises (2nd ed), pp. 119-123. CRC Press, Boca Raton.

Kane, M.E. 2000. Culture Indexing for Bacterial and Fungal Contaminants. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture Concepts and Laboratory Exercises (2nd ed), pp. 427-431. CRC Press, Boca Raton.

Kane, M.E. 2005. Shoot Culture Procedures. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Development and Biotechnology, pp. 145- 157. CRC Press, Boca Raton.

Gunawardena, A.H.L.A.N., Navachandrabala, C., Kane, M and Dengler, N.G. 2006. Lace Plant: A Novel System for Studying Developmental Programmed Cell Death, pp. 157-162. *In*: Floriculture, Ornamental and Plant Biotechnology: Advances and Topical Issues Volume 1**.** J. Teixeira da Silva, (ed), Global Science Books, Ltd., Middlesex, UK.

Kane, M.E., P. Kauth and S.L. Stewart. 2008. Plant Micropropagation. *In*: R. Trigiano and C. Beyl (eds.), Plant Propagation Concepts and Laboratory Exercises, Chapter 31, pp. 319-332, CRC Press, Boca Raton.

Kauth, P., D. Dutra, T.R. Johnson, S.L. Stewart, M.E Kane and W. Vendrame. 2008. Techniques and applications of in vitro orchid seed germination. *In*: Floriculture, Ornamental and Plant Biotechnology: Advances and Topical Issues Volume 5**.** Chapter 38, pp. 375-391. Teixeira da Silva, J. (ed.), Global Science Books, Ltd., Middlesex, UK.

Kane, M.E. 2011. Micropropagation by Shoot Culture. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture, Development, and Biotechnology, Chapter 12, pp. 181-192, CRC Press, Boca Raton.

Kane, M.E. 2011. Micropropagation of *Syngonium* by Shoot Culture. *In*: R. N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture, Development, and Biotechnology, Chapter 13, pp. 193-200, CRC Press, Boca Raton.

Kane, M.E., T. Johnson and P. Kauth. 2011. Micropropagation and *In Vitro* Flowering of Rose. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture, Development, and Biotechnology, Chapter 14, pp. 201-206, CRC Press, Boca Raton.

Kane, M.E. 2011. Micropropagation of Potato by Node Culture and Microtuber Production. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture, Development, and Biotechnology, Chapter 15, pp. 207-212, CRC Press, Boca Raton.

Kane, M.E., P. Kauth and T. Johnson. 2011. Culture Indexing for Bacterial and Fungal Contaminants. *In*: R.N. Trigiano and D.J. Gray (eds.), Plant Tissue Culture, Development, and Biotechnology, Chapter 18, pp. 239-244, CRC Press, Boca Raton.

Kane, M.E., P. Kauth and S.L. Stewart. 2014. Plant Micropropagation. *In*: R. Trigiano and C. Beyl (eds.), Plant Propagation Concepts and Laboratory Exercises (2nd ed.), Chapter 30, pp. 357-368. CRC Press, Boca Raton.

<u>Refereed Publications (Research and Teaching)</u>

Kane, M.E. and L.S. Albert. 1982. Environmental and growth regulator effects on heterophylly and growth of *Proserpinaca intermedia*. Aquatic Botany 13: 73-85.

Thursby, G.B., R.L. Steele and M.E. Kane. 1985. Effects of organic chemicals on growth and reproduction in the marine red alga *Champia parvula*. Environmental Toxicology and Chemistry 4: 797-805.

Sheath, R.G., J.M. Burkholder, J.A. Hambrook, A.M. Hogeland, E. Hoy, M.E. Kane, M.O. Morison, A.D. Steinman and K.L. Alstyne. 1986. Characteristics of soft water streams in Rhode Island. III. Distribution of macrophytic vegetation in a small drainage basin. Hydrobiologia 140: 183-191.

Kane, M.E. and L.S. Albert. 1987. Abscisic acid induces aerial leaf morphology and vasculature in submerged *Hippuris vulgaris* L. Aquatic Botany 28: 81-88.

Kane, M.E. and L.S. Albert. 1987. Integrative regulation of leaf morphogenesis by gibberellin and abscisic acids in the aquatic angiosperm *Proserpinaca palustris*. Aquatic Botany 28: 89-96.

Kane, M.E., D.B. McConnell, T.J. Sheehan and B. Dehgan. 1988. A laboratory exercise to demonstrate adventitious shoot formation using stem internodes of Parrot-feather (*Myriophyllum aquaticum*). HortScience 23: 408.

Kane, M.E., T.J. Sheehan and F. Ferwerda. 1988. *In Vitro* growth of American Lotus (*Nelumbo lutea*) embryos. HortScience 23: 611-613.

Kane, M.E. and L.S. Albert. 1989. Comparative shoot and root regeneration from juvenile and adult aerial leaf explants of variable-leaf Milfoil. Journal Aquatic Plant Management 27: 1-10.

Kane, M.E. and L.S. Albert. 1989. Abscisic acid induction of aerial leaf development in *Myriophyllum* and *Proserpinaca* species cultured *in vitro*. Journal Aquatic Plant Management 27: 102-111.

Gilman, E.F. and M.E. Kane. 1990. Growth and transplantability of *Magnolia grandiflora* following root pruning at several growth stages. HortScience 25: 74-77.

Gilman, E.F. and M.E. Kane. 1990. Red maple root growth following planting from containers. HortScience 25: 527-528.

Kane, M.E., E.F. Gilman, M.A. Jenks and T.J. Sheehan. 1990. Aquatic plant micropropagation: *Cryptocoryne lucens*. HortScience 25: 687-689.

Jenks, M., M.E. Kane, F. Marousky, D.B. McConnell, and T.J. Sheehan. 1990. *In vitro* establishment and epiphyllous plantlet regeneration of *Nymphaea* 'Daubeniana'. HortScience 25: 1664.

McConnell, D. B., M.E. Kane and A. Shiralipour. 1991. Influence of shade and fertilizer levels on Pickerelweed growth in composted solid waste and yard trash. Soil and Crop Science Society of Florida Proceedings 50: 145-154.

Kane, M.E. and E.F. Gilman. 1991. *In vitro* propagation and assay systems for evaluating growth regulator effects on *Myriophyllum* species. Journal Aquatic Plant Management 29: 29-32.

Kane, M.E., E.F. Gilman, M.A. Jenks. 1991. Regenerative capacity of *Myriophyllum aquaticum* cultured *in vitro*. Journal Aquatic Plant Management 29: 102-109.

Meerow, A.W., T.K. Broschat, and M.E. Kane 1991. *Hippeastrum* breeding at the University of Florida. Herbertia 47: 4-10.

Gilman, E.F. and M.E. Kane. 1991. Growth dynamics following planting of *Juniperus chinensis* cultivars. Journal American Society Horticultural Science 116: 637-641.

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Kane, M.E., K. Bird and T.M. Lee. 1993. *In vitro* propagation of *Ipomoea pes-caprae* (Railroad vine). Journal of Coastal Research 9: 356-362.

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Merrow, A.W., S.E. Svenson and M.E. Kane. 1994. DCPTA suppresses growth and flowering of *Amaryllis*. HortScience 29: 1149-1150.

Kane, M.E., G.L. Davis and T.D. Hoffner. 1995. Gibberellins promote flowering in two *Cryptocoryne* species. HortScience 30: 380.

Colon-Guasp, T.A. Nell, M.E. Kane and J.E. Barrett. 1996. Effects of abscisic acid on *ex vitro* acclimatization of *Aronia arbutifolia* (L.) Pers. Journal American Society Horticultural Science 121: 101-104.

Kane, M.E. and N.L. Philman. 1997. *In vitro* propagation and selection of superior wetland plants for habitat restoration. Combined Proceeding. International Plant Propagators. Society 47: 556-560.

Vladimirov, S., D.B. McConnell, M.E. Kane and R.W. Henley. 1997. Morphological plasticity of *Dracaena sanderana* 'Ribbon' in response to four light intensities. HortScience 32: 1049-1052.

Wienbrecht, J.S., L.B. McCarty, M.E. Kane, G.L. Miller, and G.R. Best. 1998. St. Augustine grass root growth response following plant growth retardant application. pp. *In*: J.E. Box Jr. (ed), Root Demographics and Their Efficiencies in Sustainable Agriculture, Grasslands and Forest Ecosystems. Proc. 5th Symposium Intern. Soc. Root Res. Kluwer Academic Publishers, Boston.

Stenberg, M. and M. E. Kane. 1998. *In vitro* seed and greenhouse culture of *Encyclia boothiana* (Lindley) Dressler var. *erythronioides* (Samll) Luer, an endangered Florida Orchid. Lindleyana 13: 101-112.

Henny, R.J. and D.J. Norman and M.E. Kane. 1998. Inducing flowering of *Syngonium podophyllum* Schott 'White Butterfly' with gibberellic acid (GA_3). HortScience 34: 676-677.

Kane, M.E., G.L. Davis, D.B. McConnell and J.A. Gargiulo. 1999. *In vitro* propagation of *Cryptocoryne wendtii*. Aquatic Botany 63: 197-202.

Ranamukhaarachchi, D., M.E. Kane, C.L. Guy and Q.B. Li. 2000. Modified AFLP technique for rapid genetic characterization in plants. BioTechniques 29: 858-866.

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Jenks, M.A., M.E. Kane and D.B. McConnell. 2000. Shoot organogenesis from petiole explants in the aquatic plant *Nymphoides indica*. Plant Cell Tissue Organ Culture 63: 1-8.

Pennisi, S.V., D.B. McConnell, L. Gower, M.E. Kane and T.W. Lucansky. 2001. Periplasmic cuticular calcium oxalate deposition in *Dracaena sanderiana*. New Phytologist 149: 209-218.

Pennisi, S.V., D.B. McConnell, L. Gower, M.E. Kane, and T.W. Lucansky. 2001. Intracellular calcium oxalate crystal structure in *Dracaena sanderiana*. New Phytologist 150: 111-120.

Martin, G., M.E. Kane, and T. Yeager. 2001. Micropropagation of Sweet Viburnum (*Viburnum ordoratissimum*) Combined Proceedings International Plant Propagators' Society 51: 614-619.

Skelly, S., J.C. Bradley, T. Kohlleppel, and M.E Kane. 2002. Professional development for graduate students. NACTA Journal 46: 16-18.

Bradley, J.C., D.B. McConnell, M.E. Kane and G. Miller. 2003. Development and implementation of a non-majors survey class. HortTechnology 13: 196-199.

Sylvia, D.M., A.K. Alagely, M.E. Kane, and N. L. Philman. 2003. Compatible host/mycorrhizal fungus combinations for micropropagated sea oats. I. Field Sampling and greenhouse evaluations. Mycorrhiza 13: 177-183

Kane, M.E., N. Philman, and C. Emshousen. 2003. Wetland Plant Micropropagation: Comparative Growth and Reproduction of *Sagittaria latifolia* ecotypes. Combined Proceedings International Plant Propagators' Society. 52: 453-459.

McConnell, D.B, J. Chen, R.J. Henny, S.V. Pennisi, and M.E. Kane. 2003. Growth responses of *Spathiphyllum* cultivars to elevated production temperatures, Acta Horticulturae 620: 273-279.

Valero-Aracama, C. M.E. Kane, N.L. Philman and S.B. Wilson. 2004. Starch utilization during *in vitro* rooting of easy- and difficult-to-acclimatize sea oats (*Uniola paniculata* l.). Proceedings International Plant Propagators' Society 54: 22-27.

Kauth, P., W. Vendrame and M. Kane. 2006. *In vitro* seed culture and seedling development of *Calopogon tuberosus*. Plant Cell Tissue Organ Culture 85: 91-102

Stewart, S.L. and M.E. Kane. 2006. Asymbiotic seed germination and *in vitro* seedling development of *Habenaria macrocertatitis* (Orchidaceae), a rare Florida terrestrial orchid. Plant Cell Tissue Organ Culture 86:147-158.

Stewart, S.L. and M.E. Kane. 2006. Symbiotic seed germination of *Habenaria macrocertatitis* (Orchidaceae), a rare Florida terrestrial orchid. Plant Cell Tissue Organ Culture 86: 159-167.

Kauth, P., M. Kane and W. Vendrame. 2006. Greenhouse irrigation method influences growth and quality of *in vitro* propagated *Cryptocoryne wendtii* plantlets. Plant Cell Tissue Organ Culture 87: 219-222.

Valero Aracama, C., M.E. Kane, S.B. Wilson, J.C. Vu, J. Anderson, and N.L. Philman. 2006. Photosynthetic and carbohydrate status of easy- and difficult-to-acclimatize sea oats (*Uniola paniculata* L.) genotypes during *in vitro* culture and *ex vitro* acclimatization. In Vitro Cellular & Developmental Biology - Plant 42: 572-583.

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Stewart, S.L. and M.E. Kane. 2007. Symbiotic seed germination and evidence for *in vitro* mycobiont specificity in *Spiranthes brevilabris* (Orchidaceae) and its implications for species-level conservation. In Vitro Cellular & Developmental Biology - Plant 43: 178-186.

Stewart S.L. and M.E. Kane. 2007. Orchid conservation in the Americas—lessons learned in Florida. Lankesteriana 7: 382-387.

Shen, X., J. Chen, and M.E. Kane. 2007. Indirect shoot organogenesis from leaves of *Dieffenbachia* cv. Camouflage. Plant Cell Tissue Organ Culture 89: 83-90.

Shen, X., J. Chen, M.E. Kane and J. Henny. 2007. Assessment of somaclonal variation in *Dieffenbachia* plants regenerated from indirect shoot organogenesis. Plant Cell Tissue Organ Culture 91: 21-27.

Johnson, T.R., S.L. Stewart, D. Dutra, M.E. Kane, and L. Richardson. 2007. Asymbiotic and symbiotic germination of *Eulophia alta* (Orchidaceae) – Preliminary evidence for the symbiotic culture advantage. Plant Cell Tissue Organ Culture 90: 313-323.

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Dutra D., T.R. Johnson, P.J. Kauth, S.L. Stewart and M.E. Kane. 2008. Asymbiotic seed germination, in vitro seedling development and greenhouse acclimatization of the threatened terrestrial orchid *Bletia purpurea*. Plant Cell Tissue Organ Culture 94: 11-21.

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Johnson, T, M.E. Kane. 2013. Differential germination and developmental responses of *Bletia purpurea* (Orchidaceae) to mannitol and sorbitol in the presence of sucrose and fructose. Journal of Plant Nutrition 36:702-716.

Reinhardt Adams, C., H.E. Pérez, M.E. Kane, N.L. Philman, N.M. Steigerwalt, and F.C. Almira 2014. Influence of ecotype, and planting season on plagiotrophic growth of *Pontederia cordata* L. Environmental Engineering (submitted).

M.E. Kane, S.L. Stewart, P.J. Kauth and T.R. Johnson. 2014. A novel teaching exercise to demonstrate synthetic seed technology. HortTechnology (submitted)

Lane, C. and M.E. Kane. Micropropagation of wetland plants: *Sagittaria latifolia*. Wetlands Ecology and Management. (in preparation).

Kane, M.E. and N. Philman. Seasonal effects on *ex vitro* corm formation in micropropagated *Sagittaria latifolia* ecotypes. Aquatic Botany. (in preparation).

Nonrefereed Publications

Kane, M.E., T.J. Sheehan and N. Philman. 1987. A micropropagation protocol using Fraser Photinia (*Photinia* x *fraseri*) for mutation induction and new cultivar selection. Proceedings Florida State Horticultural Society 100: 334-337.

Kane, M.E. and T.J. Sheehan. 1988. Aquatic plant tissue culture: Fluffing up the Parrot-feather. Water Garden Journal 4: 19-23.

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Kane, M.E. 2013. Standardized approach to considering genotypic influences during micropropagation protocol development. In Vitro Cellular & Developmental Biology – Plant 49:S24.

Technical Reports

Kane, M.E. 1985. Development of *In Vitro* Exposure Tests Using Rooted Aquatic Vascular Plants for Effluent Testing. Final technical report prepared for the U.S. Environmental Protection Agency. 28 pp.

Kane, M.E. 1989. Karyotypic Analysis of Hydrilla by Flow Cytometry: Development of In Vitro Tissue Culture Techniques for Protoplast Isolation. Center for Aquatic and Invasive Plants, University of Florida 6 pp.

Kane, M.E. and K.T. Bird. 1992. Plant Tissue Culture Technology for Marine Angiosperms Used in Habitat Restoration. Florida Sea Grant College, University of Florida, 61 pp.

Kane, M.E. 1992. Application of Micropropagation Techniques For Production of Ornamental Water Lilies. pp. 317-350. In: Volume III. Aquaculture Market Development Aid Program. Florida Department of Agriculture & Consumer Services. Tallahassee, Florida.

Kane, M.E. 1992. Tissue Culture Propagation of Ornamental Water Lilies. pp. 557-604. In: Volume III. Aquaculture Market Development Aid Program. Department of Agriculture & Consumer Services. Tallahassee, Florida.

Kane, M.E. 1992. Effects of Growth Regulator Applications On Growth Of Viviparous Tropical Water Lilies. pp. 605-617. In: Volume III. Aquaculture Market Development Aid Program. Florida Department of Agriculture & Consumer Services. Tallahassee, Florida.

Kane, M.E. 1994. Micropropagation System Development for Rapid Production of *Uniola paniculata* (Sea Oats). Florida Sea Grant Program, University of Florida, Gainesville, Florida, 26 pp.

Kane, M.E. 1995. *In Vitro* Culture Techniques for Screening Aquatic Plant Growth Potential. Florida Department of Environmental Protection, Tallahassee, Florida, 26 pp.

Shilling, D.G., G.E. MacDonald, M.E. Kane, W.T. Haller and J.N. Thakore. 1995. Physiology of *Hydrilla* Reproduction and Implications for Management, Florida Department of Environmental Protection, Tallahassee, Florida, 76 pp.

Kane, M.E. 1996. *In Vitro* Culture Techniques for Screening Aquatic Plant Growth Potential. Status Report to Florida Department of Environmental Protection, Tallahassee, Florida, 37 pp.

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Kane, M.E. 1997. *In Vitro* Culture Techniques for Screening Aquatic Plant Growth Potential: Co-culture Studies. Final Research Report to Florida Department of Environmental Protection, Tallahassee, Florida, 57 pp.

Kane, M.E. 1997. Plant Production for Habitat Restoration. Technical paper for the Restoration Genetics Workshop, St. Petersburg, FL.

Kane, M.E. and S.L. Stewart. 2006. Status, Pollination Biology, and Genetic Diversity of Endangered Orchidaceae: *Habenaria distans*, *H. macroceratitis*, and *Spiranthes floridana*. Final research report submitted to San Diego Orchid Society, 7 pp.

Stewart, S.L., D. Dutra, P. Kauth, M.E. Kane, T. Johnson, N. Philman, and L. Richardson. 2007. Native Orchid Conservation on the Florida Panther National Wildlife Refuge. Cooperative research funding report to Florida Panther National Wildlife Refuge, USFWS, 71 pp.

Stewart, S.L. and M.E. Kane. 2007. Status, Ecology, Propagation Science, and Recovery Plan of Imperiled Florida Orchidaceae: *Habenaria distans*, *H. macroceratitis* and *Spiranthes floridana*. Final research report to Florida Department of Agriculture and Consumer Services, Division of Forestry, 37 pp.

Kane, M.E. and P. Kauth. 2008. Microponic Plant Tissue Culture: A Cost-Effective Approach. Final SBIR grant report to AgriStarts I, Inc., Apopka, FL, 26 pp.

Kane, M.E. 2008. Rapid Genetic Delineation of Provenance for Florida Sea Oats Used for Beach and Dune Stabilization. Final report to U.S. Fish and Wildlife Service, 29 pp.

Reinhardt Adams, C., K. Villazon, M.E. Kane, and L. Richardson. 2010. Historic Pond Restoration in the Florida Panther National Wildlife Refuge. Final report to Florida Panther National Wildlife Refuge, U.S. Fish and Wildlife Service, 46 pp.

Sadler, J.J. and M.E. Kane 2012. Native Orchid Conservation on the Florida Panther National Wildlife Refuge: A Review of Cooperative Research, Posed Questions and Recommendations. Report to U.S Fish & Wildlife Service. 23 pp.

CREATIVE WORKS
Video Tapes

Meerow, A, J. Norcini and M.E. Kane. 1987. Laboratory Procedures for Tissue Culture: A Beginner's Guide, IFAS Publication VT-234.

Meerow A., J. Norcini and M.E. Kane. 1987. Handling Tissue Cultured Plants in the Nursery, IFAS Publication VT-233.

CD Media

Kane, M.E. 2006. Water Gardening.

PROFESSIONAL RESEARCH PRESENTATIONS

International

Environmental and Growth Regulator Effects on Growth and Development in the Watermilfoil Family (Haloragaceae). International Symposium on Role of Plant Growth Regulators in Aquatic Plants, Toronto, Canada, Feb. 1980.

Aquatic Plant Tissue Culture: 1990. International Water Lily Society Symposium Pre-tour, Gainesville, Florida, August 21, 1990. (invited).

Growth Regulator Effects on *In Vitro* Shoot Regeneration of *Crassula helmsii* L. International Symposium On The Biology and Management of Aquatic Plants, Daytona Beach. Florida, July 1992.

Techniques for Enhanced Propagation of Water Garden Plants. Nineteenth Annual Meeting Southern Region International Plant Propagators' Society, Athens, Georgia, Nov. 1994.

Micropropagation Techniques for Native Wetland and Terrestrial Plant Conservation in the Southeast United States. Congress on In Vitro Biology - 1997 Meeting of the Society for In Vitro Biology, Washington, DC, June 1997 (invited symposium speaker).

Wetland Plant Selection for Habitat Restoration. 47th Annual Meeting Eastern Region International Plant Propagators' Society, Newport, RI, Oct. 1997 (invited speaker).

Seasonal Effects On *Ex Vitro* Growth and Corm Formation in Micropropagated *Sagittaria latifolia* Ecotypes. XXV International Horticultural Congress, Brussels, Belgium, August 7, 1998.

Micropropagation and Ecotypic Selection of Wetland Plants for Habitat Restoration. Royal Botanical Gardens – Kew, Seminar Series, London, England, August 1998 (invited speaker).

Micropropagation of Wetland Plants for Habitat Restoration and Conservation. Singapore Botanic Gardens, Singapore, June 1999 (invited speaker).

Micropropagation of Ornamental Aquatic Plants. 6th International Aquarium Fish & Accessories Exhibition and Conference, World Trade Center, Singapore, June 1999 (invited conference speaker).

Micropropagation of Wetland Plants for Habitat Restoration and Conservation. Kasetsart University, Horticulture Department, Bangkok, Thailand, June 1999 (invited seminar speaker).

Water Gardening. 2001 International Master Gardener Conference & Trade Show, Orlando Florida, May 2001 (invited speaker).

In Vitro Plant Culture for Habitat Revegetation: Issues and Opportunities. 2001 Meeting of the Society for In Vitro Biology, St. Louis, MO June 2001 (symposium organizer/convener).

Influence of Stage II Cytokinin Selection on Rooting and Acclimatization of Native Coastal and Wetland Plants. 2001 Meeting of the Society for In Vitro Biology, St. Louis, MO June 2001 (invited symposium speaker).

Publishing Commercially Viable Micropropagation Protocols. Getting Published Workshop, 2005 Meeting of the Society for In Vitro Biology, Baltimore, MD, June 2005 (invited workshop speaker).

Comparative *In Vitro* Shoot Multiplication, Rooting and *Ex Vitro* Acclimatization of Sea Oats (*Uniola paniculata* L.) Genotypes. 2006 Meeting of the Society for In Vitro Biology, Minneapolis, MN, June 7. 2006.

Global Commercial Micropropagation: Challenges and Opportunities. 2006 Meeting of the Society for In Vitro Biology, Minneapolis, MN, June 5, 2006 (symposium organizer).

Strategies to Enhance Graduate Student Professional Development. Student Professional Development Symposium, 2006 Meeting of the Society for In Vitro Biology, Minneapolis, MN, June 5, 2006. (invited speaker/panelist).

Aquatic Plant Tissue Culture: Successes, Failures and Opportunities. International Water Lily and Water Gardening Society Annual Symposium, Orlando. FL, July 23, 2006 (symposium featured speaker).

Applications of *In Vitro* Ecology for Habitat Restoration. In: Growth Assessment of Micropropagated Wetland Plant Ecotypes. In Vitro Ecology Symposium. 2008 World Congress on In Vitro Biology, Tucson, AZ, June 2008 (symposium co-organizer and convener and speaker).

Synthetic Seed Technology Demonstrated Through a Novel Teaching Exercise. In: Plant In Vitro Culture Plant In Vitro Culture Lab Exercises Workshop, 2009 Meeting Society for In Vitro Biology, Charleston, SC, June 2009 (workshop organizer, convener and speaker).

Factors Influencing Culture of Recalcitrant Species, 12th Congress of the International Association for Plant Biotechnology, St. Louis, MO, June 2010 (symposium organizer and convener).

Novel Plant Growth Regulators for Plant Production. 12th Congress of the International Association for Plant Biotechnology, St. Louis, MO, June 2010 (symposium organizer and convener).

Translating Published Research Into Commercially Viable Micropropagation Protocols. 2011 Meeting Society for In Vitro Biology, Raleigh, NC, June 2011 (symposium organizer and convener).

Optimizing Plant Micropropagation: The Genotype Effect. 2013 Meeting Society for In Vitro Biology, Providence, RI, June 2013 (symposium organizer and co-convener).

Plant genotype: Who's ya daddy and does it really matter when developing micropropagation protocols? 2013 Meeting Society for In Vitro Biology, Providence, RI, June 2013 (symposium speaker).

Standardized approach to considering genotypic influences during micropropagation protocol development. 2013 Meeting Society for In Vitro Biology, Providence, RI, June 2013.

National

Chemical and Environmental Control of Growth and Development in *Proserpinaca*. 18th Annual Meeting Aquatic Plant Management Society, Jacksonville, Florida, June 11, 1978.

Heterophylly in Aquatic Plants, Visiting Lecturer Series, Roger Williams College, Bristol, Rhode Island, March 26, 1980.

Regulation of Organogenesis in Leaf Explants from the Juvenile and Adult Growth Phases of *Myriophyllum heterophyllum* Michx. 77th Annual Meeting Botanical Society of America, Pennsylvania State University, State College, Pennsylvania, August 11, 1982.

Control of Aerial Leaf and Stomatal Development by Abscisic Acid in Selected Species of *Myriophyllum* and *Proserpinaca*. 24th Annual Meeting Aquatic Plant Management Society, Richmond, Virginia, July 17, 1984.

Physiological Basis for Induction of Aerial Leaf Development in *Myriophyllum heterophyllum* Michx. 79th Annual Meeting Botanical Society of America, Colorado State University, Fort Collins, Colorado, August 8, 1984.

Control of Aerial Leaf and Stomatal Development by Abscisic Acid in Selected Species of *Myriophyllum* and *Proserpinaca*. 79th Annual Meeting Botanical Society of America, Colorado State University, Fort Collins, Colorado, August 8, 1984.

Delineation of a Two Hormone System Controlling Leaf Form in *Proserpinaca palustris* L. 79th Annual Meeting Botanical Society of America, Colorado State University, Fort Collins, Colorado, August 8, 1984.

Tissue Culture and Propagation Techniques. 5th Annual Meeting Florida Native Plant Society, Rollins College, Winter Park, Florida, May 4, 1985.

Hormonal Basis for Control of Aerial Leaf Form and Venation in *Hippuris vulgaris*. 80th Annual Meeting Botanical Society of America, University of Florida, Gainesville, Florida, August 14, 1985.

In Vitro Propagation Studies on Ornamental Aquatic Plants: *Cryptocoryne lucens*. 86th Meeting American Society for Horticultural Science, Tulsa, Oklahoma, August 3, 1989.

Regenerative Capacity of *Myriophyllum aquaticum* cultured *In Vitro*. Annual Aquatic Plant Management Society Meeting, Mobile, Alabama, July 18, 1990.

Comparative Studies on the *In Vitro* Regenerative Potential of *Limnophila* Species. 31st Annual Meeting Aquatic Plant Management Society, Dearborn, Michigan, July 17, 1991.

Micropropagation and Post-transplant Growth Performance of Wetland Plants: *Pontederia cordata*. 88th Annual Meeting American Society for Horticultural Sciences, Pennsylvania State University, State College, Pennsylvania, July 22, 1991.

Micropropagation of Wetland Plants: *Pontederia cordata* L. Congress on Cell and Tissue Culture, San Diego, California, June 7, 1993.

In Vitro Shoot Regeneration in *Hygrophila polysperma*. Aquatic Plant Management Society 33rd Annual Meeting, Charleston, South Carolina, July 13, 1993.

Demonstrating Direct and Indirect Shoot Organogenesis Using Internodes of *Myriophyllum aquaticum*. American Society for Horticultural Science 90th Meeting, Nashville, Tennessee, July 27, 1993.

Micropropagation of Wetland Plants: An Overview. Wetland Plant Micropropagation Workshop, North Carolina Sea Grant Program, Wilmington, NC, March 9, 1995. (Invited workshop speaker).

Indexing Explants and Cultures to Maintain Clean Stock. Congress on In Vitro Biology, Society for In Vitro Biology, Denver, Colorado, May 21, 1995 (Invited Symposium speaker).

Micropropagation and Post-transplant Growth Performance of Wetland Plants. Annual Meeting Society of Wetland Scientists, Boston, Massachusetts, June 1, 1995.

Micropropagation and Tissue Culture of Coastal Plants for Use in Stabilizing Dunes Against Erosion. National Sea Grant Marine Biotechnology Briefing, Washington, DC, March 3, 1997 (Invited).

Sea Oats Genetic Diversity Research - Florida. Sixth Annual Nautilus Environmental Services, Inc., Environmental Management Meeting, Parrish, Florida, February 22, 1996 (Invited).

Sea Oats Genetic Diversity Research Update - Florida. Seventh Annual Nautilus Environmental Services, Inc., Environmental Management Meeting, Parrish, Florida, February 27, 1997 (Invited speaker).

Micropropagation of Wetland Plants: *Sagittaria latifolia*. 94th Annual International Conference of the American Society for Horticultural Science Meeting, Salt Lake City, Utah, July 26, 1997.

Plant Production for Habitat Restoration. Restoration Genetics Workshop, St. Petersburg, FL, December 4, 1997 (Speaker/symposium organizer).

Selection of Wetland Plant Ecotypes. 9th Annual EcoGroup International Corp., Environmental Management Meeting, Parrish, Florida, March 10, 1999 (Invited).

Environmental and Physiological Control of Corm Formation in *Sagittaria latifolia*. UF/IFAS Center for Aquatic and Invasive Plants Research and Extension Review: recent Advances in Invasive Plant Ecology, Genetics and Management, University of Florida, Gainesville, Florida, March 7, 2000.

Advances in Selection & Reproduction of Water Garden Plants: Plant Tissue Culture. Pondapalooza-East 2002, Professional Pond Builders Association Conference, Altoona, PA, July 21, 2002 (Invited)

Wetland Plant Micropropagation: Comparative Growth and Reproduction of *Sagittaria latifolia* ecotypes. Meeting International Plant Propagators' Society – Southern Region, Baltimore, MD, October 1, 2002 (Invited).

Stabilizing Dunes with Sea Oats, research impact review presentation to the Florida Sea Grant College Program National Assessment Review Panel, University of Florida, Gainesville, May 19, 2005.

Current Status and Impact of Commercial Plant Tissue Culture. American Society for Horticultural Science Annual Conference, Las Vegas, NV, July 21, 2005 (Invited workshop speaker).

Plant Tissue Culture for the Aquarist. Aquatic Gardeners Association 2008 Convention, November 14, 2008, Atlanta, GA. (invited keynote speaker).

Plant Tissue Culture for the Aquarist. Aquatic Gardeners Association 2008 Convention, November 14, 2010, Ft. Lauderdale, FL. (invited keynote speaker).

Orchid Conservation in Florida: Research/Management Magic: The University of Florida and Florida Panther National Wildlife Refuge. Florida Cooperative Fish & Wildlife Research Unit Coordinating Committee Annual Meeting, Waldo, FL, May 5, 2010.

Regional

Growing-on Tissue Cultured Plants. Tri-State Extension Training: Container Nursery Production, Tallahassee, Florida, October 17, 1989. (Invited)

Micropropagation and Culture of Wetland and Aquatic Plants for Environmental Restoration. 12th Southeastern Phycological Colloquy, The University of North Carolina at Wilmington, Wilmington, North Carolina, October 13, 1990. (Invited featured speaker)

Tissue Culture Propagation and Field Performance of Wetland Plants. 17th Annual Meeting Southern Region International Plant Propagators' Society, Inc., Tyler Texas, October 28, 1992. (Invited)

Micropropagation of Wetland Plants: An Overview. Wetland Plant Micropropagation Workshop, North Carolina Sea Grant Program, Wilmington, North Carolina, March 9 - 10, 1995. (Invited)

The Nuts & Bolts of Waterscaping. Florida-Georgia Green Industry Update for Landscape Professionals, Tallahassee, Florida, October 24, 1995. (Invited)

Application of Plant Tissue Culture Technology for Research on Insect Natural Enemies of Hydrilla, *Hydrilla verticillata* (Hydrocharitaceae). Natural Resources Forum '98: Linkages in Ecosystem Science, Management and Restoration, Gainesville, Florida, June 9, 1998.

Stabilizing Dunes with Sea Oats: A Genetic & Growing Dilemma. Northwest Florida Coastal Public Lands Partnership Program Workshop, U.S Fish & Wildlife Service, Panama City, Florida, October 11, 2005. (Invited)

State

Micropropagation of Native Woody Plants. 7th Annual Meeting Florida Native Plant Society, Florida Southern University, Lakeland, Florida, May 15, 1987.

A Micropropagation Protocol Using Fraser Photinia (*Photinia* x *fraseri)* for Mutation Induction and New Cultivar Selection. Centennial Meeting, Florida State Horticultural Society, Orlando, Florida, November 4, 1987. (Received Silver Medal for Outstanding Research Paper)

Aquatic Plant Tissue Culture Techniques to Evaluate Growth Potential. Florida Aquatic Plant Management Society Meeting, Daytona Beach, October 26, 1988.

In Vitro Propagation and Post-Transplant Performance of Black Tupelo. Florida State Horticultural Society Meeting, Miami, Florida, November 2, 1988.

Ornamental Plant Micropropagation at the University of Florida, Florida Ornamental Growers' Association 1989 Annual Short Course, Altamonte Springs, Florida, May 20, 1989. (Invited).

In Vitro Propagation of Florida Native Plants: *Styrax americana* and *Persea palustris*. Florida State Horticultural Society, Tampa, Florida, November 1, 1989.

Ornamental Plant Micropropagation at the University of Florida. Florida Plant Tissue Culture Working Group Meeting, Tavares, Florida, July 12, 1990.

Micropropagation of Native Florida Wetland Plants: Is It A Viable Option? 2nd Annual Florida Lake Management Society Meeting, Oviedo, Florida, August 28, 1990.

Breeding of New *Hippeastrum* Cultivars Using Diploid Species. 1. The F1 Evaluation. 103rd Annual Meeting Florida State Horticultural Society, Lake Buena Vista, Florida, December 18, 1990.

Evaluation of the Star*Pac *In Vitro* Plant Culture System. 103rd Annual Meeting Florida State Horticultural Society, Lake Buena Vista, Florida, December 18, 1990.

Tissue Culture Propagation and Field Growth Performance of *Pontederia cordata*. Florida Aquatic Plant Research Review Meeting, Gainesville, Florida, March 13, 1991.

In Vitro Propagation of Florida Native Plants: *Aronia arbutifolia*. 104th Annual Meeting Florida State Horticultural Society, Miami, Florida, October 30, 1991.

A Technique for Enhanced Propagation of Viviparous Tropical Water Lilies. 104th Annual Meeting Florida State Horticultural Society, Miami, Florida, October 31, 1991. (Received Silver Medal for Outstanding Research Paper).

Water Gardening: Principles & Practices. 11th Annual Florida Master Gardener Continued Training Conference, University of Florida, Gainesville, Florida, August 23, 1991.

Production and Potential Marketing for Ornamental Aquatic Plants. Business Management, Aquascaping and New Grades & Standards Short Course, Florida Cooperative Extension Service, Sanford, Florida, December 5, 1991.

Tissue Culture Propagation and Field Evaluation of Wetland Plants. Aquatic Weed Control and Aquatic Plant Culture and Revegetation Short Course, Florida Cooperative Extension Service, Fort Lauderdale, Florida, June 4, 1992.

Water Gardening: Principles and Practices. Garden Club Short Course, Gainesville, Florida, June 3, 1992.

Creating a Water Garden. 3rd Annual Statewide Conference Florida Chapter of the American Horticultural Therapy Association, Gainesville, Florida, October 3, 1992.

Effect of Culture Vessel Type On *In Vitro* Multiplication of *Pontederia cordata* L. 105th Annual Meeting Florida State Horticultural Society, Tampa, Florida, November 4, 1991.

Water Gardening: Principles and Practices. Marion County Extension Service, Ocala, Florida, November 24, 1992.

Creating a Water Garden. Clay County Cooperative Extension Service and the Garden Club of Orange Park, Orange Park, Florida , February 26, 1993.

In Vitro Techniques for Screening Aquatic Plant Growth Potential. Annual Florida Aquatic Plant Research Review Meeting. University of Florida, Gainesville, April 27, 1993.

Tissue Culture Propagation and Field Evaluation of Wetland Plants. University of Florida Institute of Food and Agricultural Sciences' Council of Advisors for Research and Extension in Natural Resources, Archbold Biological Station, Lake Placid, Florida, April 28, 1993.

Creating Backyard Water Gardens. Thirteenth Annual Florida Master Gardener Continued Training Conference, University of Florida, Gainesville, October 8, 1993.

Water Gardening. Florida Nurserymen and Growers Association Chapter Meeting, Jacksonville, Florida, May 30, 1995.

Water Features in Your Landscape. Garden Club Short Course, University of Florida, Gainesville, Florida, June 12, 1995.

Micropropagation Techniques for Habitat Restoration. Florida Coastal Management Program Meeting, Gainesville, Florida, April 11, 1994.

Native Wetland Plant Micropropagation. Aquatic Weed and Aquatic Plant Production and Restoration Short Course, Boca Raton, Florida, May 18, 1994.
Aquatic Plant Growth Potential Screening Using *In Vitro* Culture: An Update. Aquatic Plant Management Short Course and Research Review, Gainesville, Florida, June 7, 1994.

Water Gardening in Small Places. Lake County Horticultural Learning Center, Tavares, Florida, November 15, 1994. (Invited)

Water Gardening, Florida Nurserymen and Growers Association Chapter Meeting, Jacksonville, Florida, May 30, 1995. (Invited)

Water Features in Your Landscape. Garden Club Short Course, University of Florida, Gainesville, Florida, June 12, 1995. (Invited)

Micropropagation and field Growth Performance of Native Florida Wetland Plants. Aquatic Weed Control, Aquatic Plant Culture and Revegetation Short Course, Ft. Lauderdale Florida, May 14, 1996. (Invited)

Micropropagation of Wetland Plants for Habitat Restoration: Fact and Fiction. 17th Annual Conference, Florida Native Plant Society, May 16, 1997. (Invited)

Understanding Coastal Plant Genetics: The Economic Implications. 1998 Bio+Florida Annual Meeting and Marine Workshop, Bal Harbour, Florida, September 10, 1998 (Invited)

Micropropagation of Wetland Plants. Aquatic Weed Control, Aquatic Plant Culture and Revegetation Short Course, Florida Cooperative Extension Service, Fort Lauderdale, Florida, May 18, 2000. (Invited).

Water Gardening. 64th Annual Gardening Short Course, Florida Cooperative Extension Service, Gainesville, Florida, June 8, 2000. (Invited)

Water Gardening. 20th Annual Florida Master Gardener Continued Training Conference, Gainesville, Florida, August 8, 2000.

What's New in Plant Tissue Culture. Environmental Horticulture Extension Agents Conference 2001, Gainesville, Florida, October 23, 2001.

Bridging the Gap Between Horticulture and Ecology: Applications of In Vitro Native Plant Propagation for Coastal Dune Stabilization. Eugenia Chapter, Florida Native Plant Society, Vero Beach, Florida, April 27, 2005. (Invited)

Sea Oats Genetics, Northwest Florida Coastal Public Lands Partnership Workshop, U.S. Fish and Wildlife Service, Panama City, Florida, October 11, 2005. (Invited)

Water Gardens. Pasco County Extension Office, Dade City, FL, February 4, 2006.

Genetic Variability in Aquatic Plants – When Does It Matter? Restoration Workshop: Native Plant Community Restoration and Management in Florida and the Southeast. UF/ Florida Institute of Phosphate Research, Lakeland, FL, April 3, 2008.

Novel Approaches for Dune Stabilization through Preservation of Florida's Sea Oats Genetic Resources. U.S. Fish and Wildlife Service, Panama City, FL, July 8, 2008.

Geographical Source and Genetic Variability of Wetland Plants Used for Habitat Restoration: Are These Important? Florida Native Plant Society, May 2009.

Geographical source and genetic variability of coastal dune plants used for habitat restoration: Are these important? Florida Native Plant Society, May 22, 2010.

Locals Only? Recent Research and idea-generating discussion on ecotypes in plant conservation and restoration. Florida Native Plant Society, May 22, 2010.

Reproductive Biology and Asymbiotic Seed Germination of *Cyrtopodium punctatum*, an Endangered Florida Orchid. The Florida Orchid Conservation Conference, Naples, FL, December 2, 2012.

<u>Seminars</u>

Plant Tissue Culture: Concepts and Applications, Camellia Society of Gainesville, Gainesville, Florida, December 17, 1985. (Invited)

Tissue Culture of Aquatic Plants. Tampa Bay Horticulture Agents Meeting, Palmetto, Florida, June 14, 1988. (Invited)

Aquatic Plant Micropropagation: Emerging Technologies, Harbor Branch Oceanographic Institute, Fort Pierce, Florida, June 16, 1988. (Invited)

A New Generation of Woody Plant Material Explored with Tissue Culture, Florida Nurseryman Allied Trade Show, Orlando, Florida, September 17-18, 1988. (Invited)

Educational Opportunities in Ornamental Horticulture, Florida Nurseryman Allied Trade Show, Orlando Florida, September 18, 1988. (Invited)

In Vitro Studies of Aquatic Plant Development, Botany Colloquium, University of Florida, Gainesville, Florida, October 4, 1989. (Invited)

Ornamental Plant Tissue Culture Research at The University of Florida, Gulf Coast Research and Education Center, University of Florida, Bradenton, Florida, May 10, 1990. (Invited)

Ornamental Plant Micropropagation. Haile Plantation Garden Club. Gainesville, Florida, August 8, 1990. (Invited)

Water Gardening: Principles and Practices. Gainesville Gladiolus Circle, Gainesville, Florida, September 19, 1991.

Micropropagation and Field Performance of Florida Native Wetland Plants. Florida Native Plant Society, Gainesville, Florida, September 24, 1992.

Methods to Increase Graduate Enrollment, College of Agricultural and Life Sciences Graduate Coordinators, University of Florida, Gainesville, Florida, May 6, 1999.

Water Gardening, Environmental Horticulture Graduate Student Association Plant Sale Seminar Series, March 18, 2000.

Enhancing Graduate Student Professional Development, 1st Annual CALS Teaching Enhancement Symposium, University of Florida, Gainesville, Florida, August 17, 2000. (Invited)

Applications of *In Vitro* Culture Techniques for Aquatic and Wetland Plant Production. University of Florida, Indian River Research and Education Center, Ft. Pierce, Florida, April 19, 2001 (Invited)

Bridging the Gap Between Horticulture and Ecology: Applications of In Vitro Plant Culture for Habitat Restoration. Department of Horticultural Sciences, Texas A&M University, College State, Texas, February 3, 2005. (Invited)

Strategies to Enhance Graduate Student Professional Development, Department of Agricultural and Biological Engineering Department, University of Florida, November 2005. (Invited)

Habitat Restoration Through Plant Conservation and Reintroduction: Re-connecting Horticulture and Ecology. Plant Biology Seminar Series, University of Rhode Island, Kingston, RI, November 5, 2012 (invited speaker).

POSTER PRESENTATIONS

Kane, M.E., T. J. Sheehan, D.B. McConnell, and B. Dehgan. A Laboratory Exercise to Demonstrate Adventitious Shoot Formation Using Stem Internodes of Parrot-Feather (*Myriophyllum aquaticum*). 84th Annual Meeting, American Society for Horticultural Science, Orlando, Florida, November 10, 1987.

Meerow, A, J. Norcini and M.E. Kane. Two Tissue Culture Training Videos for the Horticulture Industry. 85th Annual Meeting, American Society for Horticultural Science, East Lansing, Michigan, August 1988.

McConnell, D.B and M.E. Kane. Pickerelweed Production for Wetland Revegetation. 1990 Poster and Discussion Session: Environmental Research at the University of Florida, Sponsored by the Department of Environmental Sciences, Gainesville, Florida, October 30, 1990.

Lee, T.M. and M.E. Kane. Tissue Culture Propagation of A Native Wetland Plant: *Orontium aquaticum*. 18th Annual Conference on Wetlands Restoration & Creation, Tampa, Florida, May 16-17, 1991.

Lee, T. M. and M.E. Kane. Tissue Culture Propagation Of A Native Wetland Plant: *Orontium aquaticum*. 3rd Annual Conference Society for Ecological Restoration, Orlando, Florida, May 18-23, 1991.

McConnell, D. B., A. Shrialipour and M.E. Kane. Substrates Affect Growth and Yield of a Container Crop. International Symposium: Physiology and Determination of Crop Yield, University of Florida, Gainesville, Florida, June 10-14, 1991.

Kane, M.E., N. L. Philman and F.J. Marousky. *In vitro* Flowering of Miniature Rose Cultivars. 89th Annual Meeting, American Society for Horticultural Science, Honolulu, Hawaii, August 6, 1992.

Gillis, M. and M.E. Kane. *In vitro* multiplication of *Stewartia malacodendron* L., an Endangered woody species. Annual Meeting American Society for Horticultural Science, Corvallis, Oregon, August 1994.

Philman, N. and M.E. Kane. Micropropagation of *Uniola paniculata* L. (sea oats). Annual Meeting American Society for Horticultural Science, Corvallis, Oregon, August 1994.

Gillis, M. and M. E. Kane. *In vitro* multiplication of *Stewartia malacodendron* L., an endangered woody species. Southern Nurseryman's Association Research Conference, Atlanta, Georgia, August 3, 1995.

Kane, M.E. and C.K. Chandler 1997. A Laboratory Exercise to Demonstrate Meristem-tip Culture of Strawberry. Annual Meeting American Society for Horticultural Science, Salt Lake City, Utah, July 24, 1997.

Ranammukha arachchi, D.G., M.E. Kane, C.L. Guy, N.L. Philman and D.W. Crewz. 1998. Molecular Analysis of Genetic Diversity and Population Structure between Atlantic and Gulf Coast Sea Oats Populations in Florida. Natural Resources Forum '98: Linkages in Ecosystem Science, Management and Restoration, Gainesville, Florida, June 9 – 10, 1998.

M. Kane, C.L. Guy and D. Crewz. 2000. Micropropagation Technology for Sea Oats in Dune Stabilization: Application of Scientific Discovery in Commercial Plant Nurseries. Florida Sea Grant National Program Assessment Review, University of Florida, Gainesville, Florida, April 5, 2000.

Valero-Aracama, C., M. E. Kane, S.B. Wilson and N.L. Philman. 2003. Effect of Stage II Duration on Rooting and Survival of Sea Oats (*Uniola paniculata* L.) Genotypes. 2003 World Congress on In Vitro Biology, Portland, Oregon, June 2, 2003.

N.L. Philman, M.E. Kane, C. Emshousen, C. Valero-Aracama and M. Rau. 2004. Comparative Field Performance of *In Vitro* Propagated *Uniola paniculata* L. Genotypes. 2004 World Congress on In Vitro Biology, San Francisco, CA, May 24, 2004.

N. Philman, M.E. Kane, C. Valero-Aracama, C. Bartruska, S. Stewart, P. Sleszynki and Ruth Davis. 2004. Characterization and Selection of *Uniola paniculata* L. Genotypes. Proceedings First National Conference on Ecosystem Restoration, Orlando, Florida, December 9, 2004.

Kane, M.E., C. Reinhardt-Adams, D.L. Watts, and N.M. Steigerwalt. 2006. Historic Pond Restoration in the Florida Panther National Wildlife Refuge. US Fish and Wildlife Service Cooperative Research Review, Gainesville, FL, February 2006.

Stewart, S., T. Johnson, D. Dutra, M. Kane, and L. Richardson. 2006. Ecology, Propagation and Conservation of *Eulophia alta* L., a threatened Florida Orchid. US Fish and Wildlife Service Cooperative Research Review, Gainesville, FL, February 2006.

Stewart, S.L. and M.E. Kane. 2006. *In vitro* specificity exhibited by fungal mycobionts of *Spiranthes floridana* (Orchidaceae) within the congener *Spiranthes brevilabris*. 2006 Society for In Vitro Biology Meeting, Minneapolis, MN, June 3 – 6, 2006.

Stewart, S.L., T.R. Johnson, D. Dutra, M.E. Kane, and L. Richardson. 2007. Asymbiotic and symbiotic seed germination of *Eulophia alta* (Orchidaceae) – Preliminary evidence for symbiotic culture efficiency. Society for In Vitro Biology Meeting, Minneapolis, MN, June 10 –13, 2007.

Dutra, D., S.L. Stewart, P.J. Kauth, T.R. Johnson, N. Philman, M.E. Kane, and L. Richardson. 2007. Asymbiotic seed germination of the threatened orchid *Bletia purpurea* in Florida. Society for In Vitro Biology Meeting, Minneapolis, MN, June 10 –13, 2007.

Kauth, P.J., M.E. Kane and W.A. Vendrame. 2008. In vitro seed germination and seedling development of *Calopogon tuberosus* var. *tuberosus* from different geographic sources. 19th World Orchid Conference, Miami, Florida, February 2008.

Johnson, TR, P. Kauth, D. Dutra, M.E. Kane, S.L. Stewart and L. Richardson. 2008. The Florida Orchid restoration partnership – Proactive conservation of South Florida's native orchids through collaborative research and management. 19th World Orchid Conference, Miami, Florida, February 2008.

Dutra, D., M.E. Kane, and L. Richardson. 2008 Breeding system determination of *Cyrtopodium punctatum*: Implications for conservation of an endangered Florida native orchid. 19th World Orchid Conference, Miami, FL, February 2008.

Kauth, P.J., T.R. Johnson, S.L. Stewart and M.E. Kane. 2008. A classroom exercise in hand pollination and in vitro asymbiotic orchid seed germination. World Congress on In Vitro Biology, Tucson, AZ, June 2008.

Jasinski, J. M.E. Kane. 2010. Assessment of Alleopathic Potential of the Invasive Aquatic Fern *Salvinia molesta* Using In Vitro Co-Culture Techniques. Annual Meeting Botanical Society of America, Providence, RI, July 2010.

Jasinski, J., M.E. Kane, N. Philman and T. Johnson. 2011. Optimization of micropropagation protocols: the genotype effect. Society for In Vitro Biology Meeting, Raleigh, North Carolina,, June 4 –8, 2011.

Sadler, J.J., M.E. Kane and N.L. Philman. 2011. Comparative initial stabilization and stage II shoot multiplication of sea oats (Uniola paniculata) genotypes established from seedlings. Society for In Vitro Biology Meeting, Raleigh, North Carolina,, June 4 –8, 2011.

Hoang, N.H. and M.E. Kane. 2012. Preliminary in vitro studies of *Victoria* and *Nymphaea* hybrids. Society for In Vitro Biology Meeting, Belleview, WA, June 3 – 6, 2012.

Hoang, N.H. and M.E. Kane. 2013. Micropropagation of *Sagittaria latifolia*, an illustration of a cytokinin carry-over effect following repeated subculture. Society for In Vitro Biology Meeting, Providence, RI, June 15 – 19, 2013.

PROFESSIONAL TEACHING PRESENTATIONS

Kane, M.E. *Methods to Increase Graduate Enrollment*. College of Agricultural and Life Sciences Graduate Coordinators Meeting, University of Florida, Gainesville, Florida, May 1999 (invited).

Kane, M.E. *Professional Development Experiences for Graduate Students*, 1st Annual CALS Teaching Enhancement Symposium, University of Florida, Gainesville, Florida, August 2000 (workshop organizer and facilitator).

Kane, M.E. *Putting It All Together: Documenting Good Teaching, 2nd Annual Teaching Enhancement Symposium*, University of Florida, August 2001 (workshop speaker).

Kane, M.E. *Strategies for Facilitating Graduate Education at the Research Centers Workshop*, 3rd Annual CALS Teaching Enhancement Symposium, University of Florida, August 2002 (workshop panel organizer and speaker).

Kane, M.E. *Enhancing Graduate Student Professional Development: It's More than Just Science Training.* 6th Annual CALS Teaching Enhancement Symposium, University of Florida, August 2005 (workshop panel organizer and speaker).

Kane, M.E. *Strategies to Enhance Graduate Student Professional Development*. Department of Agricultural and Biological Engineering Department, University of Florida, November 2005. (invited).

Kane, M.E. *Strategies to Enhance Graduate Student Professional Development.* Student Professional Development Symposium, 2006 Meeting of the Society for In Vitro Biology, Minneapolis, MN, June 2006. (panel organizer & speaker).

Kane, M.E. and Rathinasabapathi, B. *Mesmerizing Students with Science: Student Engagement Techniques that Work*. 11th Annual CALS Teaching Enhancement Symposium, University of Florida, August 2010 (symposium co-organizer and speaker).

TEACHING GRANTS

Multimedia Enhancement for Teaching Plant Tissue Culture. 2002 College of Agricultural & Life Sciences Teaching Minigrant Program, $3,000 (PI).

Streaming Video: Overcoming Barriers in Teaching and Learning by Providing Asynchronous Access to Classroom Lectures. 2006 .College of Agricultural & Life Sciences Teaching Minigrant Program, $3,000 (Co-PI).

Online Delivery of ALS 5934 Graduate Professional Development 2011. College of Agricultural & Life Sciences Teaching Minigrant Program, $5,000 (PI).

RESEARCH GRANTS AND CONTRACTS

An *In Vitro* Method of Rose Flower Culture and Its Implication on Vascular Occlusion and Floral Longevity, 1988, Gloeckner Foundation, $5,000 (PI)

Plant Tissue Culture Technical Training, 1988, Jamaican Research Council, $3,000 (PI)

Molecular Mechanisms Controlling Responses to Environmental Stresses, 1988, UF Research Improvement Program, $20,700 (co-PI)

Plant Tissue Culture Technology for Marine Angiosperms Used in Habitat Restoration, 1989-1992, U.S. Department of Commerce, $70,700 (co-PI)

Application of Micropropagation for Production of Hardy Water Lilies, Florida Aquaculture Marketing Development Program, 1989, $14,490 (PI)

Breeding of New *Hippeastrum* Cultivars Using Diploid Species, 1989, American Floral Endowment, $10,000 (co-PI).

Plant Tissue Culture Technical Training, 1990, U.S. AID, $1,780 (PI)

In Vitro Culture Techniques for Screening Aquatic Plant Growth Potential, 1991-1994, Florida Department of Environmental Protection, $67,821 (PI)

Micropropagation Product Evaluation, 1991, Hoffman LA Roche, Inc., $2,500 (PI)

Micropropagation of Dunstan Chestnut Hybrids, Chestnut Hill Nurseries, 1991, $1,550, (PI)

Application of Micropropagation Technology for Wetland Plant Production And Wetland Mitigation, Azurea, Inc., 1992, $18,000, (PI)

Use of Plant Growth Regulators to Enhance Water Lily Production, 1992, Perennial Plant Association, $1,900 (PI)

Wetland Plant Micropropagation Research Program Support, 1992, Pelican Bay Homeowners' Association, $450 (PI)

Effect of Donor Site Specificity on Field Establishment and Growth Performance of Micropropagated *Pontederia cordata* and *Sagittaria latifolia*, 1993-1994, Walt Disney Imagineering, $50,625 (PI)

Micropropagation Research Program Support, 1993, Woody Ornamentals Advisory Committee, $500 (PI)

Physiology of *Hydrilla* Reproduction and Implications for Management, 1993-1995, Florida Department of Environmental Protection, $92,610 (co-PI)

Wetland Plant Micropropagation Research Program Support, 1993, Horticultural Systems, Inc., $1250 (PI)

Micropropagation System Development for Rapid Production of *Uniola Paniculata*, 1993, Florida Sea Grant Program, $3,700 (PI)

In Vitro Culture Techniques for Screening Aquatic Plant Growth Potential, 1994, Florida Department of Environmental Protection, $30,030 (PI)

Establishment and Growth Performance of Micropropagated *Pontederia cordata* and *Sagittaria lati*folia 1994, Walt Disney Imagineering, $16,852 (PI)

Genetic Characterization of Atlantic and Gulf Coast *Uniola Paniculata* (Sea Oats) Populations: Implications for Varietal Selection Using Micropropagation Technology, 1996 – 1999, U.S. Department of Commerce, $112,517 (co-PI)

In Vitro Culture Techniques for Screening Aquatic Plant Growth Potential, 1995, Florida Department of Environmental Protection, $33,364 (PI)

In Vitro Culture Techniques For Screening Aquatic Plant Growth Potential: Co-Culture Studies, 1996, Florida Department of Environmental Protection, $25,200 (PI)

Doctoral Graduate Student Support, 1999, Florida Sea Grant Program, $5,515 (PI)

Micropropagation of Specific Pathogen Eradicated Geranium, 1999-2001, Green Leaf Industries, $42,100 (PI)

Compatible Plant/Mycorrhizal Fungus Ecotype Combinations for Micropropagated Sea-oats on Florida Beaches, 2000-2002, U.S. Department of Commerce, $91,468 (co-PI)

Wetland Plant Ecotypes: Comparative Growth and Reproduction of *Sagittaria latifolia* Genotypes, 2000, UF Center for Natural Resources, $3,200 (PI)

Assessment of Reproductive Mode in the Invasive Aquatic Fern *Salvinia molesta*, 2000, Invasive Plant Working Group, $9,241 (PI)

Efficient *In Vitro* Propagation of Tropical Water Lilies by Non-zygotic Embryogenesis, 2001, USDA Tropical Aquaculture Program, $30,000 (PI)

Enhanced Commercial Selection and Micropropagation of Sea Oats Genotypes for Dune Stabilization, 2001-2004, U.S. Department of Commerce, $145,135 (co-PI)

Application of Micropropagation Technology for Storage and Production of Florida Native Wildflower Ecotypes Used for Seed Stock Production, 2004, Florida Wildflower Advisory Council, $10,130 (PI)

Status, Pollination, Ecology and Genetic Diversity of Endangered Orchidaceae: *Habenaria distans*, *H. macroceratitiis* and *Spiranthes floridana*. 2005, San Diego County Orchids Society, $2,400 (co-PI)

Conservation, Ecology and Propagation of Florida Orchidaceae – *Eulophia alta*, and *Cyrtopodium punctatum*. 2005, U.S. Department of the Interior, U.S Fish & Wildlife Service Cooperative Research Agreement, $23,603 (PI)

Rapid Genetic Delineation of Provenance for Florida Sea oats Used for Beach & Dune Restoration. 2005. U.S. Fish & Wildlife Service Cooperative Agreement, $29,000 (PI)

Status, Ecology, Propagation Science, and Recovery Plan of Imperiled Florida Orchidaceae: *Habenaria distans*, *H. macroceratitis*, and *Spiranthes floridana*. 2006. Florida Division of Forestry, $20,422 (co-PI)

Historic Pond Restoration in the Florida Panther National Wildlife Refuge. 2006. US Fish and Wildlife Service, $29,000 (co-PI)

Restoration of Three Native Orchid Species on the Florida Panther National Wildlife Refuge. 2006. U.S. Fish & Wildlife Service, $26,300 (co-PI).

Status, Ecology, Propagation Science, and Recovery Plan of Imperiled Florida Orchidaceae: *Habenaria distans*, *H. macroceratitis*, and *Spiranthes floridana*. 2006. Florida Division of Forestry, $18,480 (co-PI)

Status, Ecology, and Conservation of Rare and endangered Florida Orchidaceae *Bletia purpurea*. 2006. U.S. Fish & Wildlife Service, $24,484 (PI).

Microponic Plant Tissue Culture: A Cost Effective Approach. 2007. USDA-SBIR Phase I Grant through Agri-Starts, Inc. $13,231 (PI).

Seed Ecology, Habitat Characterization and Reintroduction Methods of Rare and Endangered Florida Orchidaceae – *Bletia purpurea* and *Eulophia alta*. 2007. U.S. Fish & Wildlife Service, $21,775 (co-PI).

Conservation of South Florida Orchids – Developing Reintroduction Methods for Eight Species Including the State Endangered Ghost Orchid (*Dendrophylax lindenii*). 2007. U.S. Fish & Wildlife Service, $29,843 (co-PI).

Techniques for Field Establishment and Reintroduction of *Calopogon tuberosus* var. *tuberosus*. 2007. U.S. Fish & Wildlife Service, $8,406 (co-PI).

Determination of Population Diversity in the Florida Endangered Orchid *Cyrtopodium punctatium*. 2008 U.S. Fish & Wildlife service, $39,619 (co-PI).

Population Genetic Analysis and Assessment of Hybridization Between *Calopogon tuberosus* var. *tuberosus* and var. *simpsonii* 2009. U.S. Fish & Wildlife Service, $33,436 (PI).

Cryopreservation of Florida Sea Oats Germplasm: A Technology to Ensure Long-term Commercial Availability of Site-Specific Genotypes for Dune Restoration. 2010. U.S. Department of Commerce, $140,651 (co-PI)

Establishment and Restoration of Rare Orchids in SW Florida. 2010. U.S. Fish & Wildlife Service, $10,775 (PI).

Long-term Storage, Propagation and Restoration of Native Orchids in South Florida. 2010. U.S. Fish & Wildlife Service, $29,785 (PI).

Trainingship Grant. Vietnam Ministry of Education. 2010. $54,000 (PI).

Florida Native Orchid Conservation and Educational Outreach. 2013 U.S. Fish & Wildlife Service $45,120 (PI).

Micropropagation Protocol Development for Pistachio Rootstock Production 2013. California Pistachio Growers, $21,000 (PI).

Planting Sea Oats in the Era of Climate Change: Workshop to Develop Strategies for Dune Stability and Providing Teacher Curriculum for Next Generation Standards. 2014. Florida Sea Grant Program, $9,905 (co-PI).

Selection of Florida coastal dune plant material for efficient dune building, ecological sustainability and hazard resistance in light of a changing climate. 2014 $178,387 (co-PI not funded).

Coastal Long-term Ecological Restoration and Resilience Consortia, 2014. Gulf Coast Research Initiative, $9,611,772 ($375,000 co-PI subaccount) (pending).

RESEARCH PROGRAM RECOGNITION

Tissue Culture of Aquarium and Water Garden Plants. Video interview with Charles Crawford, Cable News Network (CNN), for Science & Technology Week. International broadcast March 12, 1987.

Aquarium Plant Tissue Culture. Video interview for IFAS "Florida File" television series. Regional broadcast October 14, 1987.

Growth and Development of Aquatic Plants. Video interview for IFAS "Florida File" television series. Regional broadcast October 16, 1987.

Tissue Culture Technologies. Video interview for Technology and Agriculture. Regional broadcast February 25, 1988.

1988 Silver Medal Award for the Outstanding Research Paper, Florida State Horticultural Society.

In Vitro Flowering of Miniature Roses. Video interview for IFAS "Florida File" series. Regional broadcast December 12, 1988.

New Plant Micropropagation Class. Video interview for IFAS "Florida File" series. Regional broadcast November 5, 1989.

Florida's Aquatic Plant Industry. Video interview for IFAS "Florida File" series, September 15, 1990.

Florida Native Wetland Plant Micropropagation. Video interview for IFAS "Florida File" series. Regional broadcast September 22, 1990.

1992 Silver Medal Award for the Outstanding Research Paper, Florida State Horticultural Society.

1992 Coastal, Saline and Freshwater Habitat Preservation Award from Horticultural Systems, Inc., Parrish Florida.

Research Project: *Genetic Characterization of Atlantic and Gulf Coast Uniola paniculata (Sea oats) Populations: Implications for Varietal Selection using Micropropagation Technology* was one of eleven projects selected nationally to be presented as part of the Sea Grant National Issues Forum on Marine Biotechnology, Washington, DC, March 3, 1997.

Stabilizing Dunes with Sea Oats, research impact review for Florida Sea Grant College Program National Assessment Review Panel, University of Florida, Gainesville, May 19, 2005.

Doctoral student, Carmen Valero Aracama, was the recipient of the 2006 IFAS Award of Excellence for Graduate Research for her dissertation: *Physiological and Anatomical Basis for Differences in Growth Performance During In Vitro and Ex Vitro Culture of Sea oats (Uniola paniculata L.) Genotypes*. (Co-advisor).

Masters student, Daniela Dutra, was the recipient of the 2008 IFAS Award of Excellence for Graduate Research for her thesis: *Reproductive Biology and Asymbiotic Seed Germination of Cyrtopodium punctatum, an Endangered Florida Orchid*. (Major advisor).

U.S. Department of Interior 2010 Regional Director's Conservation Award.

2010 University of Florida Cooperative Research Award, Florida Cooperative Fish and Wildlife Research Unit.

UNIVERSITY SERVICE

University Service/Committees

International Programs Training Center Committee, 1987-1988.

Elected University Senate, 1988-1990.

Environmental Horticulture Facilities Committee, 1988-present.

Environmental Horticulture Club Faculty Advisor, 1989-1996.

Environmental Horticulture Research Review and Open House Committee, 1989.

Sunbelt Expo Planning Committee, 1989.

University Commencement Marshal, 1989-1994.

Biotechnology Institute Facilities Advisory Committee, 1991-1992.

Student Competition Judging Committee, Annual Junior Science, Engineering & Humanities Symposium, 1990-present.

Biotechnology Faculty Advisory Committee, 1991 - 1993.

Search and Screen Committee member, Environmental Horticulture Chairperson, 1991.

Search and Screen Committee member, College of Agriculture Assistant Dean for Academic Programs, 1991.

Alpha Zeta Agricultural Fraternity Senior Faculty Advisor, 1991-1993.

College of Agriculture Undergraduate Curricula Development Task Force, 1991-1992.

College of Agricultural and Life Sciences Academic Development Committee, (chairperson) 1992-1994.

Search and Screen Committee member, Environmental Horticulture Assistant Professorship in Landscape Maintenance, 1992-93.

Teacher and Advisor of the Year Award Selection Process Review Committee Chairperson (ad hoc committee), 1993.

College of Agricultural and Life Sciences Horticulture Teaching Laboratory Space, Equipment and Outdoor Laboratory Needs Assessment Committee, 1993.

Department of Environmental Horticulture Curriculum Committee, 1993 - present.

Horticultural Sciences Undergraduate Curriculum Review Committee, 1994 - 1995.

Institute of Food & Agricultural Sciences' Graduate Research Awards Selection Committee, Chairperson, 1994.

Search and Screen Committee, Environmental Horticulture Assistant Professorship in Turf Science, 1994.

Environmental Horticulture Chairman's Advisory Committee, member, 1994 - 1996.

Search and Screen Committee, Environmental Horticulture Assistant Professorship in Landscape Maintenance, member, 1996.

Steering Committee, UF/IFAS Statewide Faculty Meeting, member, 1996.

1995 IFAS Superior Accomplishment Award Selection Committee, Chairperson, 1995.

Undergraduate Task Force for Plant Molecular and Cellular Biology, member, 1996.

Environmental Horticulture Student Recruitment Task Force, member, 1996.

College of Agricultural and Life Sciences Task Force on Professional Masters Degrees, member, 1996 - 1997.

Environmental Horticulture Curriculum Revision Task Force, member, 1996 - 1997.

Horticultural Sciences Undergraduate Course Options Review Committee, Chairperson, 1997.

College of Agricultural and Life Sciences Honors Curriculum Implementation Committee, member, 1997 - 2002.

Graduate Coordinator, Environmental Horticulture Department, 1997 - 2003.

UF/IFAS Florida First Aquaculture Strategic Planning Committee, member, 1998.

Faculty Advisor, Environmental Horticulture Graduate Student Association, August 1999-2003.

College of Agricultural and Life Sciences Teaching Improvement Award Selection Process Evaluation Task Force, member, 1999-2000.

College of Agricultural and Life Sciences Graduate Student Research Forum Planning Committee, member, 2000-2001.

Faculty Search and Screen Committee Chair, Environmental Horticulture Assistant Professorship in Landscape Maintenance, Hillsborough Community College Campus 2002.

College of Agricultural and Life Sciences Enrollment Growth Task Force, 2002 – 2003.

Faculty Search and Screen Committee Chair, Environmental Horticulture Assistant Professorship in Landscape Ecology Management and Restoration 2004 - 2005.

College of Agricultural and Life Sciences Dean for Academic Programs Search & Screen Committee, member, 2005.

Institute of Food & Agricultural Sciences, Tenure, Permanent Status & Promotion Committee, member, 2005 - 2006.

Faculty Search and Screen Committee Chair, Environmental Horticulture Assistant Professorship in Environmental Plant Propagation & Identification, 2005 – 2006.

College of Agricultural and Life Sciences Associate Dean for Undergraduates and Associate Dean for Graduate Students (2 positions), Search & Screen Committee, member, 2005-2006.

Environmental Horticulture Department Graduate Admissions Committee 2004 – present.

Environmental Horticulture Department Chairman's Advisory Committee, member, 2005 - 2012.

Environmental Horticulture Department Seminar Committee, chair, 2005 – 2006.

Environmental Horticulture Department Statewide Curriculum Committee, Chairperson, 2005 - 2006.

Faculty Search and Screen Committee Chair, Environmental Horticulture Associate Professorship & Director of Sustainable Landscape Conservation, 2006 – 2007.

Faculty Search and Screen Committee, Landscape Ecology Assistant Professorship, member, 2006 – 2007.

Faculty Search and Screen Committee member, Environmental Horticulture Assistant Professorship Turfgrass Science, 2006 – 2007.

IFAS Faculty Advisory Council to Senior Vice President for Agriculture and Natural Resources, faculty-elected member 2006 - 2008.

IFAS 2006 Excellence in Graduate Dissertation Research Award Committee, member, 2007.

University of Florida Outstanding Doctoral Mentoring Award Selection Committee, member, 2008.

Institute of Food & Agricultural Sciences York Distinguished Lecturer Selection Committee, member, 2008 – 2011.

Institute of Food & Agricultural Sciences Salary Pay Plan for Senior Faculty Committee, member 2009.

College of Agricultural & Life Sciences Plant Sciences Curriculum Review Task Force, member 2009.

Environmental Horticulture Faculty Shared Governance Bylaws Committee, member 2009-2010.

Institute of Food & Agricultural Sciences Faculty Assembly, member, 2011 – 2014.

Institute of Food & Agricultural Sciences Faculty Assembly, Chair, 2013 – 2014.

IFAS International Programs Advisory Team, member, 2011 – 2014.

Staff Search and Screen Committee Chair, Environmental Horticulture Department Academic Coordinator, 2011.

Environmental Horticulture Chair Search & Screen Committee, member, 2011 – 2013.

State Committees

Florida Grades and Standards Rewrite Subcommittee for Aquatic and Wetland Plants, Florida Department of Agriculture and Consumer Services, 1990-present.

Vice President Ornamental Section, Florida State Horticultural Society, 1991.

Reclamation Technical Advisory Committee, Florida Institute of Phosphate Research, 1990-1991.

Florida Plant Tissue Culture Working Group, 1986-1990.

Nominations Committee, Florida State Horticultural Society, 1992.

Plant and Habitat Management Committee, 1992-1996.

Steering Committee for Sea Grant Symposium: Restoration of Native Habitats: Preserving Genetic Variation, member, 1996.

Florida Sea Grant Marine Biotechnology Advisory Panel, member, 1996 - 2002.

Department of Education/University of Florida Agribusiness and Natural Resources Education Curriculum Review Committee May 1997.

Florida Wildflower Council, alternate representative, 2004 – 2007.

National Committees

Aquatic Plant Management Society Bylaws & Resolution Committee Chairman, 1990-1993.

Aquatic Plant Management Society Student Affairs Committee, member, 1991-1994.

American Society of Horticultural Science Propagation Working Group co-Chair, 1991-1992.

American Society of Horticultural Science Propagation Working Group Chair, 1992-1994.

American Society of Horticultural Science Collegiate Activities Committee, member, 1992 -1996.

Society for In Vitro Biology, Student Affairs & Awards Committee, member, 1997 - 2003.

Society for In Vitro Biology, Core Education Committee, member, 1997 to present.

Society for In Vitro Biology, Program Committee, member, 2000 to present.

Society for In Vitro Biology, Nomination Committee, member, 2009 to present.

National Review Panels

National USDA CSREES Program Review Team (member), University of Minnesota, Department of Horticulture, December 2006.

REVIEWER OF SCHOLARY RESEARCH PAPERS

American Journal of Botany
Aquatic Botany
Canadian Journal of Plant Science
Environmental Engineering
HortScience
HortTechnology
In Vitro Cellular & Developmental Biology – Plant
Journal American Society for Horticultural Science
Journal of Aquatic Plant Management
Journal of Coastal Research
Lindleyana
Native Plants Journal
Plant Cell Reports
Plant Cell Tissue Organ Culture
Plant Growth Regulation
Scientia Horticulturae

SCIENTIFIC JOURNAL EDITORIAL BOARDS

Editorial Advisory Board, *Aquatic Botany*, 1996 - 2002.
Associate Editor, Ornamental Section, Florida State Horticultural Society, 1992-1993.

Reviewing Editor, *Plant Cell, Tissue and Organ Culture*, 1996 - 2006.
Associate Editor, *Plant Cell, Tissue and Organ Culture*, 2006 – 2009.
Reviewing Editor, *In Vitro Cellular & Developmental Biology - Plant*, 1999-2006.
Associate Editor, *In Vitro Cellular & Developmental Biology - Plant*, 2006 – 2009.
Editor-in-Chief, *Scientia Horticulturae* 2009-2014.

REVIEWER OF RESEARCH GRANT PROPOSALS

Cooperative Institute for Coastal and Estuarine Environmental Technology
Florida Institute of Phosphate Research
National Science Foundation
National Strategic Initiative Biotechnology Program
USDA Competitive Grants Program
USDA Small Business Innovative Research (SBIR) Program
U.S. Department of Commerce Sea Grant Program

RESEARCH GRANT PANEL MEMBER

Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) May 2006.

PROFESSIONAL CONSULTATIONS

Provided laboratory design, equipment needs assessments for the establishment of commercial micropropagation laboratories in Florida, Pennsylvania and Canada.

Board of Directors, PhytoTechnology Laboratories, Inc, Shawnee Mission, KS, January 2002 – 2006. This company is a major producer of plant biotechnology supplies. My role was to provide feedback on new product development.

COMMUNITY SERVICE

Elected to the Board of Directors, Haile Plantation Homeowners' Association, Inc., Gainesville Florida, October 1990 to October 1991. Elected President twice, October 1991 to January 1993.

Elected to the Board of Directors, Haile Plantation Homeowners' Association, Inc., Gainesville Florida, May 2006 to August 2007.

Haile Plantation Homeowners' Association Inc., Landscape Maintenance Committee, member, May 2001 to May 2008.