

## VITAE

Craig S. Tepper

### EDUCATION & PROFESSIONAL EXPERIENCE

#### Education:

1974-1977 B.A. (6/77) Aquatic Biology  
University of California, Santa Barbara

1977-1979 M.S. (12/79) Biology (Zoology)  
San Diego State University

1984-1987 Ph.D. (12/87) Biology (Plant Pathology/Molecular Biology)  
Utah State University

Ph.D. Dissertation: The identification and characterization of extracellular components of *Colletotrichum lindemuthianum* which display differential elicitor activity in bean.

#### Professional Employment:

1979-1982 Research Assistant: Studies on gene regulation in *Drosophila melanogaster*. Indiana University

1982-1987 Research Technician: Molecular interactions between plants and microbes.  
Utah State University

1987-1989 Postdoctoral Fellow: Plant-microbe interactions. Utah State University

1989-1995 Assistant Professor of Biology: Cornell College

1995-1996 Visiting Research Scientist: National Cancer Institute  
Bethesda, MD (sabbatical)

1996-2002 Associate Professor of Biology: Cornell College (Chair – 1996-2000)

2002-Present Professor of Biology: Cornell College (Chair - 2007-2010)

2007--2010 Ringer Distinguished Professor of Biology

## **COLLEGE ACTIVITIES**

### **Teaching:**

Topics (BIO 108) - Biotechnology  
Foundations: Cell Biology (BIO 141)  
Cell & Molecular Biology (BIO 205)  
Advanced Molecular Biology (BIO 305)  
Developmental Biology (BIO 313)  
Genetics (BIO 315)  
Biological Problems (BIO/BMB 485)

### **Current Program Advising:**

Biochemistry and Molecular Biology Program  
Pre-Medical Advisor  
Dental Early Admission Program (University of Iowa)  
Goldwater Scholarship - Faculty Representative  
Judicial Consultant 2008- present

### **College Committee Service:**

- Computer Committee (1990-1992)  
    Budget Subcommittee
- Academic Affairs (1992-1994)  
    Academic Standing Subcommittee
- Learning Skills Advisory Committee (1991-1994)
- Committee on Committees (1994-1995)
- Academic Affairs (1996-1999)  
    Academic Programs (Chair 1997-1999)
- Quality of Student Life Ad Hoc Committee (1996-1997)
- Teaching and Learning Ad Hoc Committee (6-block teaching load, 1997-1998)
- English Writing Ad Hoc Committee (changing the ENG 111 requirement, 1998-1999)
- Administration Committee (2000-03)  
    Reappointment, Tenure, and Promotion Subcommittee
- Faculty Development Advisory Committee (2004-2007)
- Chair, Appeals Board (2004-2006)
- Ad Hoc Committee on Curricular Enhancement (2005-2006)
- HHMI Ad Hoc Committee (2005-present)
- Administration Committee (2006-2009)  
    Reappointment, Tenure and Promotion Subcommittee
- Dimensions Steering Committee (2007-2011)
- Health Professional Committee (2005-present)
- International and Off Campus Studies Oversight Committee (2010-present)

- Academic Affairs (2011-present)
  - Academic Regulations Subcommittee (Interim Chair 2011-12)

### **Student Club Advising:**

- Rho Zeta Omicron(1999-present)
- Colleges Against Cancer Living & Learning Community (2006)

### **Search Committees:**

- Learning Skills Director Search (1991)
- Music Faculty Search (1994)
- Biology Faculty Search (1995)
- Biology Faculty Search (1996)
- Media Director Search (1997)
- Chair - Biology Faculty Search (1998)
- Chair - Biology Sabbatical Search (2000)
- English Faculty Search (2001)
- English Faculty Search (2002)
- Economics and Business Search (2004)
- Biology Sabbatical Search (2006)
- Co-Chair BMB Faculty Search (2007-08)
- Anthropology Faculty Search (2008)
- Dean Search Committee (2009-2010)
- Dimensions' Coordinator Search Committee (2009)
- Chair Biology Faculty Search (2009-10)
- President Search Committee (2010)
- Director of Facilities Services (2011)
- Coordinator for International & Off-Campus Studies (2012)

### **Additional College Service:**

- Cornell Commencement Speaker – 1993 & 2013
- Department of Biology – Chair 1996-2000 & 2007-2010
- Admissions - Numerous Preview Days and Panels
- New Student Orientation
- 50<sup>th</sup> Alumni Weekend Faculty Lecture (The Search for Immortality) 1997
- Speaker at the opening faculty conference (Illinois College) – Peer Review – 2001
- Homecoming Alumni Talk – 2004 & 2005
- Block Buster Lecture 2006, 2007, 2008, 2010
- Conversations about Teaching Series 11/06
- Global Vistas 3/07 “Marine Biology at Cornell? In February?”
- HHMI Grant 1995, 1999 & 2007
- Goldwater Scholarship Faculty Representative 2006-present

## **PROFESSIONAL ACTIVITIES**

### **Ongoing Research Projects:**

- Phenotypic Plasticity in the Fire Coral *Millepora*
- Tracking parentage and genetic diversity in the threaten queen conch.

### **Abstracts and Presentations with Cornell Undergraduates (Tepper Research Lab):**

(\* Indicates Cornell student author)

- Buman\*, D., Moyer\*, M, Anderson, A.J. and Tepper, C.S. 1991. Molecular basis of plant defense strategies. Fifth Annual Life Sciences Symposium, Iowa State University.
- Ostovar\*, H. and Tepper, C.1992. Phylogenetic analysis of several species of sunflower (*Helianthus*) using restriction fragment length polymorphisms. ACM Minority Students and Academic Careers Workshop.
- Meyers\*, J., Sullivan, P., Anderson, A. and Tepper, C. 1993. Intercellular signaling and plant defense gene activation. Iowa Academy of Science.
- Rashid\*, M. and Tepper, C. 1993. Isolation of RNA from Incubated Red Kidney Bean Tissue for Cloning of the Catalase Gene. ACM Minority Students and Academic Careers Workshop.
- Nulsen\*, C. and Tepper, C. 1993. Hydrolytic Enzyme Response in *Phaseolus vulgaris*. ACM Minority Students and Academic Careers Workshop.
- Couch\*, S., McClary\*, K., Nulsen\*, C. and Tepper, C. 1994. The Role of H<sub>2</sub>O<sub>2</sub> in Plant Defense Gene Activation. Iowa Academy of Science.
- Huynh\*, B. and Tepper, C. 1994. Effects of Activated Oxygen Species on Plant Defense Mechanisms. ACM Minority Students and Academic Careers Workshop.
- Freeman\*, L. and Tepper, C. 1995. The Search for the Catalase Gene. ACM Minority Students and Academic Careers Workshop.
- Brannan\*, J., Craici\*, A. Freeman\*, L. Johnson\*, B. Messer\*, J. Stec\*, M., Renaud\*, S. and Tepper, C. 1997. Controlling the Radicals: The Search for the Plant Enzyme Catalase. Cornell College Student Symposium.
- Freeman\*, L. and Tepper, C. 1997 Controlling the Radicals: The Search for the Plant Enzyme Catalase. ACM Minority Students and Academic Careers Workshop.
- Brannan\*, J., Christensen\*, K., Freeman\*, L., Lenarz\*, C. and Tepper, C. 1998 The Search for Catalase. Cornell College Student Symposium
- Brannan\*, J., Craici\*, A., Christensen\*, K., Lenarz\*, C. and Tepper, C. 1998 The Role of Catalase in Plant Defense. Annual Life Sciences Symposium on Enzymology, Iowa State University
- Brannan\*, J. and Tepper, C. 1998. The Role of Catalase in Plant Defense. R.J. McElroy Student/Faculty Research Symposium.
- Christensen\*, K. and Tepper, C. 1998 Hydrogen Peroxide, Catalase, and Plant Defense. Argonne Symposium for Undergraduates in Science, Engineering and Mathematics.
- Christensen\*, K. and Tepper, C. 1999 Cloning at Cornell. Cornell College Student Symposium
- Rippel\*, N. and Tepper, C. 1999 Plants Have Mitochondria?!?! Cornell College Student Symposium.

- Christensen\*, K. and Tepper, C. 1999 Hydrogen Peroxide, Catalase, and Plant Defense. R.J. McElroy Student/Faculty Research Symposium.
- Farley\*, J. and Tepper, C. 1999 Using Plant Transformation to Understand Plant Defense. ACM Minority Students and Academic Careers Workshop.
- She\*, K. and Tepper, C. 1999 The Search for Catalase. ACM Minority Students and Academic Careers Workshop.
- Farley\*, J., She\*, K., Strovas\*, T., Tompkins\*, V. and Tepper, C. 2000 Insertion of a putative Catalase cDNA into the Binary Vector pAS 2023. Cornell College Student Symposium.
- Phe\*, S. and Tepper, C. 2000. Using Agrobacterium and GUS to Understand Plant Defense. ACM Minority Students and Academic Careers Workshop.
- Farley\*, J. and Tepper, C. 2000. Insertion of a Catalase cDNA into Binary Vector pAS 2023. R.J. McElroy Student/Faculty Research Symposium.
- Bertelsen\*, M., Bunde\*, J., Lindbloom\*, J., Lindgren\*, J., Reisdorff\*, R., Reiter\*, J., Schneider\*, S., and Tepper, C. 2001. DNA Fingerprint Analysis of Fire Coral in San Salvador, Bahamas. Cornell College Student Symposium.
- Gerber\*, A., Phe\*, S. and Tepper, C. 2001 The Role of Catalase in Plant Defense. Cornell College Student Symposium.
- Cauley\*, M. and Tepper, C. 2001. DNA Fingerprinting of Fire Coral. ACM Minority Students and Academic Careers Workshop.
- Phe\*, S., Gerber\*, A. and Tepper, C. 2001. Determining the Role of Catalase in Plant Defense. R.J. McElroy Student/Faculty Research Symposium.
- Bertelsen\*, M. and Tepper, C. 2001. DNA Fingerprint Analysis of *Millepora* Species. St. Mary's University Undergraduate Research Symposium in Biology.
- Leonard\*, J., Cauley\*, M., Greenstein, B. and Tepper, C. 2002. Morphometry and Genetics of *Millepora* Collected at San Salvador Island, Bahamas. The Geological Society of America Meetings.
- Bain\*, A and Tepper, C. 2002. Understanding Plant Defense. Cornell College Student Symposium.
- Burnight\*, E. Cardon, J. and Tepper, C. 2002. Analysis of Cytochrome Oxidase: A New Cell and Molecular Biology Lab. Cornell College Student Symposium.
- Cauley\*, M. and Tepper, C. 2002. DNA Fingerprint Analysis of Fire Coral. Cornell College Student Symposium.
- Kuehner\*, J., McCollum, S.A., and Tepper, C. 2002. Isolation and Identification of Plasticity Genes in Amphibians. Cornell College Student Symposium.
- Cauley\*, M. and Tepper, C. 2002 RAPD DNA Fingerprinting Analysis of Fire Coral. R.J. McElroy Student/Faculty Research Symposium.
- Kuehner\*, J. McCollum, S.A. and Tepper, C. 2002. Isolation and Identification of Plasticity Genes in Amphibians. TriBeta District Convention at Bethel College.
- Lathrop\*, M., McCollum, A. and Tepper, C. 2003. Is there a Genetic Component to Phenotypic Plasticity? Cornell College Student Symposium
- Sjogren\*, C., Artemakis\*, C. and Tepper, C. 2003. Genetic Analysis of the Nerite Snail Complex using Random Amplified Polymorphic DNA (RAPD). Cornell College Student Symposium
- Waldrop\*, M and Tepper, C. 2003. Taxonomic Classification of Fire Coral by AFLP Analysis. Cornell College Student Symposium.

- Sjogren\*, C., Artemakis\*, C. and Tepper, C. 2003. DNA Fingerprinting of the Nerite Snail Complex of San Salvador, Bahamas using Random Amplified Polymorphic DNA (RAPD) Analysis. *Journal of the Minnesota Academy of Science*. 67:48
- Lathrop\*, M., Kuehner\*, J., McCollum, A. and Tepper, C. 2003. Is there a Genetic Component to Phenotypic Plasticity? R.J. McElroy Student/Faculty Research Symposium.
- Lynch\*, E. and Tepper, C. 2004. DNA Fingerprinting of the *Oreaster* Species Complex of San Salvador, Bahamas Using Amplified Fragment Length Polymorphism (AFLP) Analysis. Cornell College Student Symposium
- Waldrop\*, M. and Tepper, C. 2004. Genetic Analysis of Fire Coral. Cornell College Student Symposium
- Lynch\*, E. and Tepper, C. 2004. A Morphological Analysis of Various Color Morphologies of the Sea Star, *Oreaster reticulatus*. *Journal of the Minnesota Academy of Science*. 68:30.
- Waldrop\*, M. and Tepper, C. 2004. Reef Distribution and Genetic Analysis of Fire Coral. R.J. McElroy Student/Faculty Research Symposium.
- Fettkether\*, L. Ruter\*, B. and Tepper, C. 2005. Isolation of Genes Responsible for Phenotypic Plasticity in the Gray Tree Frog, *Hyla versicolor*. 117<sup>th</sup> Annual Meeting of the Iowa Academy of Science. p24
- Ruter\*, B. Fettkether\*, L. and Tepper, C. 2005. Isolation of Genes Responsible for Phenotypic Plasticity in the Gray Tree Frog, *Hyla versicolor*. Cornell College Student Symposium.
- Fettkether\*, L. Ruter\*, B. and Tepper, C. 2005. Isolation of Genes Responsible for Phenotypic Plasticity in the Gray Tree Frog, *Hyla versicolor*. R.J. McElroy Student/Faculty Research Symposium.
- Bowen\*, D. and Tepper, C. 2006. *Millepora*: Speciation or Phenotypic Plasticity? Cornell College Student Symposium
- Ruter\*, B., Kaperick\*, H. and Tepper, C. 2006. In Search of Genes responsible for Phenotypic Plasticity in Tadpoles. Cornell College Student Symposium
- Bowen\*, D. and Tepper, C. 2006. *Millepora*: Speciation or Phenotypic Plasticity? R.J. McElroy Student/Faculty Research Symposium.
- Elledge\*, H, Black, R. and Tepper, C. 2007. Decoding the Mystery of Fire Corals of the Bahamas. Cornell College Student Symposium.
- McCulley\*, A., Roth\*, M. and Tepper, C. 2007. Mine's Bigger than Yours: Exploring Phenotypic Plasticity in *Hyla versicolor* tadpole tails due to predation. Cornell College Student Symposium..
- Roth\*, M., McCulley\*, A. and Tepper, C. 2007. Mine's Bigger than Yours: Exploring Phenotypic Plasticity in *Hyla versicolor* tadpole tails due to predation. R.J. McElroy Student/Faculty Research Symposium.
- Lehr\*, P. Friend\*, D. Brachova\*, P., Greenstein, B. Black, B. and Tepper, C. 2007. Speciation in the Millepore Complex: What Constitutes a Species? University of Iowa Molecular and Cellular Biology Retreat.
- Squires, L. Lehr\*, P., Brachova\*, P., Black, B., Tepper, C., Greenstein, B. and Friend\*, D 2008. Speciation in the Millepore Complex: What Constitutes a Species? 111<sup>th</sup> Annual Meeting of the Texas Academy of Science. 117:63-64.
- Lehr\*, P. Brachova\*, P. Friend\*, D. Greenstein, B. Black, B. and Tepper, C. 2008. Speciation in the Millepore Complex: What Constitutes a Species? Cornell College Student Symposium.

- Hay\*, C. Reichel\*, A. Greenstein, B. Black, B. and Tepper, C. 2009. Speciation in Fire Corals: What constitutes a Species? Cornell College Student Symposium.
- Handke\*, C and Tepper, C. 2009 Searching for Genes that Control Phenotypic Plasticity in Amphibians. Cornell College Student Symposium.
- Reichel\*, A. Hay\*, C. and Tepper, C. 2009. Speciation of *Millepora alcicornis* and *Millepora complanata* R.J. McElroy Student/Faculty Research Symposium.
- Tepper, C. Brachova\*, P. Hay\*, C. Greenstein, B. and Black, B. 2009 Speciation in the Millepore Complex: What Constitutes a Species? 13<sup>th</sup> Symposium on the Natural History of the Bahamas. p19.
- Hay\*, C. Leopold\*, M. Mon\*, A. and Tepper, C. 2010. Are Symbionts Better Taxonomists than Scientists? Cornell College Student Symposium.
- Leopold\*, M. and Tepper, C. 2010. Are Symbionts Better Taxonomists than Scientists? R.J. McElroy Student/Faculty Research Symposium.
- Gaynor\*, S. Mead\*, E. and Tepper, C. 2011 Can Symbionts Be Used To Understand Coral Evolution? Cornell College Student Symposium
- Gaynor\*, S. Mead\*, E. and Tepper, C. 2011 Can Symbionts Be Used To Understand Coral Evolution? 14<sup>th</sup> Symposium on the Natural History of the Bahamas. p9-10.
- Tepper, C. Gaynor\*, S. and Chang, J. 2011. Cryptic Speciation or Intragenomic Variation: Implications for the Millepores (Fire Coral). 14<sup>th</sup> Symposium on the Natural History of the Bahamas. p20.
- Gaynor\*, S. Alleva\*, B. and Tepper, C. 2012 Intragenomic Variation in the Millepores. Cornell College Student Symposium.
- Alleva\*, B. Gaynor\*, S. and Tepper, C. 2012. Cryptic Species or Intragenomic Variation? R.J. McElroy Student/Faculty Research Symposium.
- Fischer\*, D. Croffitt\*, N. and Tepper, C. 2013. Amplification parameters of three microsatellite loci in Queen Conch (*S. gigas*). Cornell College Student Symposium.
- Tepper, C. and Gaynor\*, S. 2013. Concerted Evolution or rDNA Genes in the Millepores. 15<sup>th</sup> Symposium on the Natural History of the Bahamas. p16.
- Fischer\*, D. Croffitt\*, N. and Tepper, C. 2013. Characterization of Microsatellite Markers for the Queen Conch (*Strombus gigas*). R.J. McElroy Student/Faculty Research Symposium.

**Cornell College Symposium Abstracts – Sponsoring Faculty Member:**

- Kirkpatrick\*, B. 2002. A Comprehensive Study on Juvenile and Adult Yellow-eyed Penguins at Papanui Beach in New Zealand. Cornell College Student Symposium.
- Weber\*, C. and King, G. 2004. Observations on Microbial CO-Oxidation in Marine Systems: Dynamics of CO Oxidizers. Cornell College Student Symposium.
- Mason\*, A. 2005. Dissecting the Replication Protein A-DNA Interface. Cornell College Student Symposium.
- Bilderback\*, P. 2006. The Role of the Ubiquitin-Proteasome System in Cell Senescence Cornell College Student Symposium.
- Bowen\*, D. 2007. Genetics and Statistics: My Internship at TGen. Cornell College Student Symposium.
- Welder\*, J. 2007. Determination of N-acetylcysteine in Hemodialysis Patients using High Performance Liquid Chromatography. Cornell College Student Symposium.

- Walker\*, B. 2007. Improving Cancer Detection. Cornell College Student Symposium.
- Kollman\*, R. 2007. Endophytic Fungi: PCR Identification of Two Fungal Insecticides Grown within Plants. Cornell College Student Symposium.
- Ward\*, K. 2008. Serum Opacity Factor (SOF) Forms Cardioprotective Products from HDL via Rate-Limiting Apo A-I Desorption. Cornell College Student Symposium.
- Pontarelli\*, K. 2009 Evaluation of the contribution of a genetic abnormality to Autism. Cornell College Student Symposium.
- Batson\*, T. 2009 Mitochondrial DNA Extraction for Formalin-Fixed Human Post-Mortem Liver Tissue. Cornell College Student Symposium.
- Gierach\*, K. 2010 Control Mechanisms of ELF4 Expression in CD8<sup>+</sup> T-cells. Cornell College Student Symposium.
- So\*, S-Y 2010 Lighting up the cell: A new way to measure cell membrane potential. Cornell College Student Symposium.
- Witek\*, E. 2010. Targeting Oncolytic Adenovirus. Cornell College Student Symposium.
- Lee\*, Y. 2011. Does p21<sup>WAF/Cip1</sup> itself have an Ability Cure Cancer?. Cornell College Student Symposium.
- Klauer\*, N. 2011 Spreading Depression, a Model of Migraine, May Trigger Demyelination via TNF- alpha ROS Production. Cornell College Student Symposium.
- Schultz\*, A. 2011. Methods of Obtaining Prosthetic Length and Alignment and their Effectiveness. Cornell College Student Symposium.
- Johnson\*, A. et al. 2012. Phosphorylation of the  $\alpha 7$  Subunit of the Ubiquitin Proteasome System: A Possible Mechanism for Decreased Proteasome Activity in Human Heart Failure. Cornell College Student Symposium
- Davis\*, M. et al. 2012. A Mouse Diversity Panel Approach Improves Understanding of Clinical DB289-Related Renal Toxicity. Cornell College Student Symposium.
- Zabner\*, D. et al. 2012. The Role of PLZF and Cullin-3 in NKT cells. Cornell College Student Symposium.
- Alieva\*, A. 2012 Mission for Vision in Uzbekistan. Cornell College Student Symposium.
- Smebak\*, L. Thomas, V. Ryan, K. Shuldiner, A and Maitland, M. 2013. Development of Angiopoietin2 as a Biomarker for Pulmonary Hypertension. Cornell College Student Symposium.

**Publications:**

(\* Indicates Cornell student author)

- Tepper, C.S., Richmond, R.C., Terry, A. and Senior, A. 1982. Studies of esterase 6 in *Drosophila melanogaster*. XI. Modification of esterase 6 activity by unlinked genes. *Genetical Research* 40:109-125.
- Mane, S.D., Tepper, C.S. and Richmond, R.C. 1983. Purification and characterization of esterase 6, a polymorphic carboxylesterase of *Drosophila melanogaster*. *Biochemical Genetics* 21:1019-1040.
- Richmond, R.C. and Tepper, C.S. 1983. Genetic and hormonal regulation of esterase 6 in male *Drosophila melanogaster*. *Current Topics in Biological and Medical Research*. 9:91-106.
- Tepper, C.S., Terry, A.L., Holmes, J.E. and Richmond, R.C. 1984. Studies of esterase 6 in *Drosophila melanogaster*. XIV. Variation of esterase 6 levels controlled by unlinked



- genes in natural populations. *Genetical Research* 43:181-190.
- Stein, S.P., Tepper, C.S., Able, N.D. and Richmond, R.C. 1984. Studies of esterase 6 in *Drosophila melanogaster*. XVII. Synthesis occurs in the male reproductive tract (anterior ejaculatory duct) and is modulated by juvenile hormone. *Insect Biochemistry* 14:527-532.
- Tepper, C.S. and Anderson, A.J. 1984. The genetic basis of plant-pathogen interaction. *Phytopathology*. 74:1143-1145.
- Tepper, C.S. and Anderson, A.J. 1986. Two cultivars of bean display a differential response to extracellular components from *Colletotrichum lindemuthianum*. *Physiological and Molecular Plant Pathology* 29:411-420.
- Anderson, A.J., Habibzadedah-Tari, P. and Tepper, C.S. 1988. Molecular studies on the role of a root surface agglutinin in adherence and colonization by *Pseudomonas putida*. *Applied and Environmental Microbiology* 54:375-380.
- Tepper, C.S., Albert, F.G. and Anderson, A.J. 1989. Differential mRNA production in three cultivars of bean in response to elicitors from *Colletotrichum lindemuthianum*. *Physiological and Molecular Plant Pathology*. 34:85-98.
- Tepper, C.S. and Anderson, A.J. 1990. Interactions between pectic fragments and extracellular components from the fungal pathogen *Colletotrichum lindemuthianum*. *Physiological and Molecular Plant Pathology*. 36:147-158.
- Anderson, A.J., Rogers, K., Tepper, C.S., Blee, K. and Cardon, J. 1991. Timing of molecular events following elicitor treatment of plant cells. *Physiological and Molecular Plant Pathology*. 38:1-13.
- Squiers\*, L., Hay\*, C., Gorbach\*, D., Friend\*, D. Black, B., Greenstein, B., Strychar, K. and Tepper, C. 2011. Cryptic speciation: A mismatch between genetics and morphology in *Millepora*. *Proceedings of the 13<sup>th</sup> Symposium on the Natural History of the Bahamas*. 8-19.
- Tepper, C., Squiers\*, L. Hay\*, C. Gorbach\*, D., Friend\*, D. Black, B., Greenstein, B., Strychar, K. 2012. Cryptic Species: A Mismatch between Genetics and Morphology in *Millepora*. *Marine Sciences*. 2(5):57-65.
- Gaynor\*, S., Hay\*, C. and Tepper, C. 2013. Cryptic Species or Intragenomic Variation: Implications for the Millepores. *Proceedings of the 14<sup>th</sup> Symposium on the Natural History of the Bahamas*. 14: 13-25.

### **Edited Proceedings Volume**

Proceedings of the 14<sup>th</sup> Symposium on the Natural History of the Bahamas. 2013. Edited by R. Shaklee and C. Tepper Gerace Research Centre, San Salvador, Bahamas.

### **Grant Funding for my Cornell Research Program:**

(\* Indicates Cornell student author)

- Tepper, C.S. (1990-1991). Molecular events in plant stress responses. Cornell College Faculty Development Grant (Student/Faculty Research).
- Tepper, C.S. and Christiansen, P. (1991-1992). Phylogenetic analysis of several species of sunflower (*Helianthus*) using RFLPs. Cornell College Faculty Development Grant (Student/Faculty Research).
- Tepper, C.S. (1992-1993). In-situ hybridization utilizing non-radioactive tags. Cornell College

- Faculty Development Grant (Student/Faculty Research).
- Ostovar\*, H. and Tepper, C. (1992). Phylogenetic analysis of several prairie species of sunflower (*Helianthus*) using RFLP. ACM Minority Fellowship Program. (Student/Faculty Research)
  - Tepper, C.S. (1992-1993). Molecular basis of plant defense strategies. Iowa Science Foundation.
  - Tepper, C.S. (1992-1995). Molecular basis of plant defense strategies. NRI Competitive Grants/United States Department of Agriculture.
  - Nulsen\*, C. and Tepper, C. (1993). Hydrolytic enzyme response in *Phaseolus vulgaris*. ACM Minority Fellowship Program. (Student/Faculty Research).
  - Rashid\*, M. and Tepper, C. (1993). Cloning of DNA sequences encoding superoxide dismutase in *Phaseolus vulgaris*. ACM Minority Fellowship Program. (Student/Faculty Research).
  - Tepper, C.S. (1993-1994). A Genetic Characterization of Race-Cultivar Specificity. Cornell College Faculty Development Grant (Student/Faculty Research).
  - Tepper, C.S. (1994-1995). Is Hydrogen Peroxide the Answer to a Plant's Problems? Cornell College Faculty Development Grant (Student/Faculty Research).
  - Huynh\*, B. and Tepper, C. (1994). The Effects of Hydrogen Peroxide on *Phaseolus vulgaris* and Initiation of Defense. ACM Minority Fellowship Program. (Student/Faculty Research).
  - McDermott, R. and Tepper, C.S. (1994) Giving Students the Tools: Active Learning in High School Science. The Greater Cedar Rapids Foundation.
  - Christiansen, P.A. and Tepper, C.S. (1994-1995). A Molecular Analysis of Native Iowa Prairie Plants. Iowa Department of Transportation- Living Roadway Trust Fund.
  - Freeman\*, L. and Tepper, C.S. (1995). The Role of Catalase in Plant Defense ACM Minority Fellowship Program. (Student/ Faculty Research).
  - Tepper, C.S. and Christiansen, P. (1995-1996). Utilizing Classical Plant Taxonomy and Molecular Biology to Rebuild Iowa's Prairies. Cornell College Faculty Development Grant (Student/Faculty Research)
  - Freeman,\* L. and Tepper, C.S. (1997). The Role of H<sub>2</sub>O<sub>2</sub> in Plant Defense. ACM Minority Fellowship Program. (Student/Faculty Research).
  - Brannan\*, J. and Tepper, C. (1997-98). The Role of Catalase in Plant Defense. Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.
  - Tepper, C. (1997-1998) Controlling the Radicals: The Search for Catalase. Cornell College Faculty Development Grant (Student/Faculty Research).
  - She\*, K. and Tepper, C. (1998). Can Catalase Modulate Plant Defense? ACM Minority Fellowship Program. (Student/Faculty Research).
  - Christensen\*, K. and Tepper, C. (1998-99). Hydrogen Peroxide, Catalase, and Plant Defense. Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.
  - Tepper, C. (1998-1999) Is Catalase the Modulator for Plant Defense? Cornell College Faculty Development Grant (Student/Faculty Research).
  - Farley\*, J. and Tepper, C. (1999-2000) Using Plant Transformation to Understand Plant Defense. Iowa College Foundation/R.J. McElroy Student/Faculty Research Program
  - Farley\*, J. and Tepper, C. (1999) Developing a Plant Transformation System to Understand the Role of Catalase in Defense. ACM Minority Fellowship Program. (Student/Faculty Research)
  - Tepper, C. (1999-2000) The Development of a Plant Transformation System in Order to

- Understand Plant Defense. Cornell College Faculty Development Grant (Student/Faculty Research)
- Gerber\*, A., Phe\*, S. and Tepper, C. (2000-2001). Detection of Catalase Expression in Bean Tissue Using Non-Radioactive in situ Hybridization. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
  - Phe\* S. and Tepper, C. (2000). Using Agrobacterium to Understand Plant Defense. ACM Minority Fellowship Program. (Student/Faculty Research)
  - Tepper, C. (2000-2001) Detection of Catalase Expression in Bean Tissue using Non-Radioactive in situ Hybridization. Cornell College Faculty Development Grant (Student/Faculty Research)
  - Tepper, C. and Greenstein, B. (2000-2001) Discrimination between Species of the Hydrozoan *Millepora* using Morphologic and Genetic Analyses. Cornell College Faculty Development Grant.
  - Cauley\*, M., Bain\*, A. and Tepper, C. (2001-2002) DNA Fingerprint Analysis of Fire Coral. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
  - Cauley\*, M. and Tepper, C. (2001) DNA Fingerprinting of the *Millepora* genus of Fire Coral. ACM Minority Fellowship Program. (Student/Faculty Research)
  - Bertelsen\*, M. and Tepper, C. (2001) Hydrozoan *Millepora* Species Discrimination Comparing Somatic Cell Fingerprint Analysis with on-site Gamete RAPD and AFLP Analysis. Beta Beta Beta Research Foundation.
  - Tepper, C. (2001-02). Determining the Copy Number of the Cytochrome Oxidase Gene in the Mitochondria of Plants: A New Cell and Molecular Biology Lab. Cornell College Faculty Development Grant (Student/Faculty Research).
  - Kuehner\*, J. McCollum, A., and Tepper, C. (2001-02) Isolation and Identification of Plasticity Genes in Amphibians. Beta Beta Beta Research Foundation..
  - Tepper, C. (2002-2003) Campbell R. McConnell Fellowship (sabbatical leave).
  - Tepper, C. (2002-2003) Taxonomic Classification of Fire Coral by RAPD Analysis. Cornell College Faculty Development Grant (Student/Faculty Research)
  - Lathrop\*, M. and Tepper, C. (2002-2003) The Genetics of Phenotype Plasticity in Amphibians. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
  - Sjogren\*, C. and Tepper, C. (2002-03) DNA Fingerprinting of Nerite Snails in the Bahamas. Beta Beta Beta Research Foundation.
  - Tepper, C. (2003-2004) Is there a Genetic Component to Phenotypic Plasticity? Cornell College Faculty Development Grant (Student/Faculty Research)
  - Waldrop\*, M. and Tepper, C. (2003-04) Hybridization in Fire Coral. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
  - Lynch\*, E. and Tepper, C. (2003-04) AFLP Analysis of the *Oreaster* species complex of San Salvador, Bahamas. Beta Beta Beta Research Foundation.
  - Tepper, C. (2004-2005) A Genetic Analysis of Fire Coral Using DNA Fingerprints. Cornell College Faculty Development Grant (Student/Faculty Research)
  - Fettkether\*, L. and Tepper, C. (2004-05) Isolation and Characterization of Plasticity Genes in Amphibians. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
  - Tepper, C. 2004 LI-COR Biosciences Genomics Match Fund Program-4300S Sequencer.
  - Tepper, C (2005-2006) DNA Sequence Analysis of Genes that Control Phenotypic Plasticity in the Gray Tree Frog, *Hyla versicolor*. Cornell College Faculty Development Grant (Student/Faculty Research)

- Tepper, C. (2005-06) *Millepora complanata* and *Millepora alcicornis*: Speciation or Phenotypic Plasticity? Cornell College Faculty Development Grant.
- Bowen\*, D and Tepper, C. (2005-06) *Millepora*: Speciation or Phenotypic Plasticity? Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
- Tepper, C. (2006) *Millepora complanata* and *Millepora alcicornis*: Speciation or Phenotypic Plasticity? Cornell College Faculty Development Grant (Student/Faculty Research)
- Roth\*, M. and Tepper, C. (2006-07) Isolation of Genes Responsible for Phenotypic plasticity in Amphibians. Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
- Tepper, C. (2006) The Nature-Nurture Controversy: The Role Environment Plays in the Expression of Genotype and Phenotype. Cornell College Student/Faculty Dimensions Grant.
- Tepper, C. (2007) Speciation in the Millepore Complex: Exactly What Constitutes a Species? Cornell College Faculty Development Grant (Student/Faculty Research).
- Tepper, C. (2008) What does it mean to be a species? An examination of genetic, morphological and environmental factors in the speciation of the hydrozoan coral, *Millepora*. Cornell College Faculty Development Grant (Student/Faculty Research)
- Reichel\*, A. and Tepper, C. (2008-09) What Constitutes a Species? Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.
- Brachova\*, P. and Tepper, C. (2009) Genetic Analysis of the *Millepora-Symbiodinium* Symbiosis. Gerace Research Centre Student Grants Program.
- Tepper, C. (2009) Are Endosymbionts Better Taxonomists than Scientists? Cornell College Faculty Development Grant (Student/Faculty Research)
- Leopold\*, M and Tepper, C. (2009-10) Are Endosymbionts Better Taxonomists than Scientists? Iowa College Foundation/R.J. McElroy student/Faculty Research Program.
- Tepper, C. (2010) Searching for Symbiont Specificity in Fire Coral. Cornell College Faculty Development Grant (Student/Faculty Research).
- Gaynor\*, S. and Tepper, C. (2011) Determining the Reliability of using ITS Regions to Understand the Phylogenetic Relationship of the Hydrozoan *Millepora*.. Gerace Research Centre Student Grants Program.
- Tepper, C. (2011) Exploring Concerted Evolution in the Millepore Corals. Cornell College Faculty Development Grant (Student/Faculty Research).
- Alleva\*, B. and Tepper, C. (2011-12) Concerted Evolution: Fact or Fiction. Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.
- Tepper, C. (2012) Determination of Queen Conch Parentage Using Microsatellites. Cornell College Faculty Development Grant (Student/Faculty Research).
- Fischer\*, D. and Tepper, C. (2012-13) Parentage Assignment in Queen Conch. Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.
- Tepper, C. (2013) Are Cryptic Millepore Species Prevalent in the Caribbean? Cornell College Faculty Development Grant (Student/Faculty Research).
- Tepper, C. and Brown\*, A. (2013-14). Are Cryptic Millepore Species Ubiquitous in the Caribbean? Iowa College Foundation/R.J. McElroy Student/Faculty Research Program.

### **Cornell College Honor Thesis**

- Senior Honors Thesis in Biochemistry & Molecular Biology 2004. Carolyn Weber – Observations on Marine Microbial CO-Oxidation: CO Dynamics and Enrichment of CO-Oxidizers associated with Macroalgae. Chair of Honors Committee
- Senior Honors Thesis in Biochemistry & Molecular Biology 2005 Aaron Mason. Replication Protein A-DNA Interactions: Dissecting the DNA-Protein Interface. Chair of Honors Committee
- Senior Honors Thesis in Biochemistry & Molecular Biology 2012 Megan Dibbern Spreading Depression Preferentially Increases Oxidative Stress in Microglia and Astrocytes: Implications for Chronification of Migraine.

### **Selected Professional Activities:**

- Presenter, five SIG lectures (1990, 1992, 1993, 1998, 2003 and 2008)
- Invited Speaker - “Strategies for Student Research” Associated Colleges of the Midwest Curriculum Workshops for Minority Concerns. Macalester College (1993)
- Moderator and Faculty Facilitator, Minority Students and Academic Careers Workshop. (1993-2001)
- Conference Organizer Minority Students and Academic Careers Workshop at Cornell College (1994 and 1999)
- Invited Speaker – Assessing Variability in Prairie Species using RFLPs. Ecotype Mini Conference. 1995
- Invited Seminar – Strategies in Plant Defense. National Cancer Institute. (1995)
- Invited Seminar – Stimulation of Transcription by Ultrabithorax. National Cancer Institute (1996)
- Invited Seminar – Teaching Biology at a Liberal Arts College. Iowa State University (1998)
- Invited Seminar – Teaching Biology at a Liberal Arts College. The University of Iowa (2000)
- Invited Seminar - Teaching Science at a Liberal Arts College. Molecular & Cellular Biology Program, University of Iowa. (2007)
- Conference Organizer - Molecular & Cellular Biology Program, University of Iowa and Cornell College Joint Retreat. (2007)
- Adjunct Professor - The Graduate Biology Program, Department of Physical and Life Sciences, Texas A & M University-Corpus Christi. – 2007-2011
- Attended the 11<sup>th</sup> International Coral Reef Symposium – Fort Lauderdale, FL July 2008.
- Presented a research talk at the 13<sup>th</sup> Symposium on the Natural History of the Bahamas – San Salvador, Bahamas June 2009
- Conference Co-Chair 14<sup>th</sup> Symposium on the Natural History of the Bahamas – San Salvador, Bahamas June 2011
- Editor of the Proceedings of the 14<sup>th</sup> Symposium on the Natural History of the Bahamas 2011-2012.
- Presented a research talk at the 14<sup>th</sup> Symposium on the Natural History of the Bahamas – San Salvador, Bahamas June 2011

- Research Review Committee – Gerace Research Centre, San Salvador, Bahamas. 2011-present.

### **SELECTED COMMUNITY SERVICE**

- Judge, Eastern Iowa Science and Engineering Fair. Cedar Rapids, IA (1990- present)
- High School Science Outreach – Using DNA for Forensic Analysis. (1993-present)
- Duke University Talent Identification Program Keynote Speaker – Heroes in Biology (1997 & 2001)
- College for Kids – DNA: It’s in your Genes. (2000-2001)
- Board of Directors – Planned Parenthood East Central Iowa (1999-2005)