#### KIRK VINCENT CAMMARATA, Ph.D.

# **Associate Professor of Molecular and Plant Biology**

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#### **Education:**

1987-92, Post-Doc., Plant Mol Biol, University of Georgia, Athens, GA 1987, Ph.D., Plant Physiology, University of Kentucky, Lexington, KY 1979, B.A., Biochemistry, University of Maryland-Baltimore Country, Catonsville, MD

#### **Positions Held:**

- 2008-present, Associate Professor of Biology (PhD Program), Texas A&M University-Corpus Christi, Corpus Christi, TX
- 2004-present, Associate Professor of Biology, Texas A&M University-Corpus Christi, Corpus Christi, TX
- 2000-2004, Assistant Professor of Biology, Texas A&M University-Corpus Christi, Corpus Christi, TX
- 1992-2000, Assistant Professor of Molecular Biology, Salem-Teikyo University, Salem, WV
- 1987-1992, Post-doctoral Fellow (G.W. Schmidt), University of Georgia, Athens, GA
- 1981-1986, Graduate R.A. (G.M. Cheniae), University of Kentucky, Lexington, KY
- 1978-1981 Associate R&D Specialist (BioSciences,. J.H. Golbeck & R. Radmer) Martin-Marietta Laboratories, Baltimore, MD

## **Peer-Reviewed Publications:**

- Schmid, V., Cammarata, K.V., Bruns, B.U., and Schmidt, G.W. (1997) *In vitro Reconstitution of the PSI light-harvesting complex LHCI-730: Heterodimerization is required for antenna pigment organization.* **Proc. Natl. Acad. Sci. USA** 94:7667-7672.
- Cammarata, K.V., Plumley, F.G. and Schmidt, G.W. (1992) Pigment and Protein Composition of Reconstituted Light-Harvesting Complexes and Effects of Some Protein Modifications.

  Photosynthesis Research, 33:235-250.
- Cammarata, K.V. and Schmidt, G.W. (1992) In Vitro Reconstitution of a light-harvesting Gene Product: Deletion Mutagenesis and Analyses of Pigment Binding. **Biochemistry**, 31: 2779-2789.
- Cammarata, K.V. Plumley, F.G. and Schmidt, G.W. (1990) Reconstitution of Light Harvesting Complexes: A Single Apoprotein Binds Chl a, Chl b, and Xanthophylls. Current Research in Photosynthesis, Vol.II, 341-4.
- Cammarata, K.V. and Cheniae, G.M. (1987) Studies on 17,24 kD Depleted Photosystem 2

  Membranes: I. Evidences For High And Low Affinity Calcium Sites. Plant Physiol.
  84:587-595.
- Cammarata, K.V. and Cheniae, G.M. (1987) PS2 Ca Abundance and Interaction of the 17,24 kD Proteins With The Cl/Ca Essential For Oxygen Evolution. in J. Biggins, ed., Advances in

- Photosynthesis Research, Proceedings of the 7th International Congress on Photosynthesis, vol. I, pp. 617-620.
- Radmer, R., Cammarata, K.V., Tamura, N., Ollinger, O., and Cheniae, G.M. (1986) Depletion of Photosystem 2 Extrinsic Proteins: I. Effects on O<sub>2</sub> and N<sub>2</sub> Flash Yields and Steady State O<sub>2</sub> Evolution. Biochem. Biophys. Acta, 850:21-32.
- Tamura, N., Radmer, R., Lantz, S., Cammarata, K.V., and Cheniae, G.M. (1986) Depletion of Photosystem 2 Extrinsic Proteins: II. Analysis of the PS2/Water Oxidizing Complex by Measurements of TMPD Oxidation Following an Actinic Flash. Biochem. Biophys. Acta, 850:369-379.
- Cammarata, K.V., Tamura, N., Sayre, R. and Cheniae, G.M. (1984) *Identification of Polypeptides Essential for Oxygen Evolution by Extraction and Mutational Analyses. in C. Sybesma*, ed., **Advances in Photosynthesis Research, Proceedings of the 6th International Congress on Photosynthesis**, vol. 1, pp. 311-320.
- Golbeck, J.H. and Cammarata, K.V. (1981) *Spinach Thylakoid Polyphenol Oxidase: Isolation, Activation, and Properties of the Native Chloroplast Enzyme.* **Plant Physiol.** 67:977-984.

## **Other Scholarly Activity:**

- DNA Sequence Database Submissions (1-22-08):
  GenBank Acc. FD509781, Differentially-expressed genes in *Typha l.*GenBank Acc. FD509782, Differentially-expressed genes in *Typha l.*
- Billiot, E., Billiot, F., Larkin, P., Tissot, P., and Cammarata, K. (2007) <u>Final Report:</u>
  Acquisition of an AA Graphite Furnace and Microwave Digestor for the Enhancement of Research/Teaching at TAMU-CC NSF-MRI Award 0421239
- Cammarata, K. Website developed to disseminate genomics curricula for "Genomics-Based Curriculum Development and Integration for South Texas HSIs" (USDA-HSI) [See www.sci.tamucc.edu/genomed]
- Cammarata, K., Chopin, S.; Larkin, P., and Lehman (2006) <u>Final Report</u>: "Genomics-Based <u>Curriculum Development and Integration for South Texas HSIs"</u> **USDA-HSI**
- Cammarata, K., Buck, G., Larkin, P., Lehman, R., Mott, J. and Wldbeser, L. (2005)

  <u>Final Report</u>: "Acquisition of a Digital Imaging System to Support Research and Research Training in Applications of Molecular Biology" **NSF-MRI**
- Cammarata, K., Miller, R.L., Fortney, R.H., Edinger, B., and Jones, T. (1999) <u>1998 Annual</u> Report for Corridor H Stream Monitoring Study. Submitted to **West Virginia Division of Highways**, State Project No. x142-H-38-.99 05, 183 pp.

## **Selected Presentations (\*Invited, Since 2006):**

- \* Cammarata, K., "Seagrasses Under Stress: Linkages With Epiphytic Biofilms and Eutrophication?" Del Mar College Friday Seminar Series, April 24, 2009.
- Cammarata, K., J. Sweatman, E. Helander, V. Chilton, S. Dovalina and V. Graham. *Seagrasses Under Stress: Linkages With Epiphytic Biofilms and Eutrophication*? Coastal and Estuarine Research Federation (CERF) 2009, Portland, OR. Nov. 2009
- Cammarata, K., J. Sweatman, E. Helander, V. Chilton, S. Dovalina and V. Graham. *Seagrasses Under Stress: Linkages With Epiphytic Biofilms and Eutrophication*? Plant Biology 2009, Honolulu, HI, July 18-23, 2009
- Cammarata, K., Improved Spatiotemporal Resolution of Accumulation Patterns of Seagrass Photosynthetic Epiphytes: A New Fluorescence Imaging Method with Application

- to Monitoring, Modeling and Data Archiving. Benthic Ecology 2009, Corpus Christi, TX, March 2009.
- Chilton, V., E. Helander, V. Graham, and K. Cammarata. *Bacterial Epiphytes on Seagrass Blades as Indicators of Environmental Conditions* Benthic Ecology 2009, Corpus Christi, TX. March 2009.
- Dovalina, S., and K. Cammarata *Development of Molecular Stress Response Markers in Halodule wrightii*. Southern Section-American Society of Plant Biologists 2009, Austin, TX, March 2009.
- \* Cammarata, K., "Genomes, Sequences & Molecular Identification" at Biotechnology Summit: Biotechnology for High School Teachers, NSF- and USDA-Funded Workshop, Del Mar College & TAMU-CC, Sept 18-19, 2008
- \* Cammarata, K., "Imaging, Quantification and Comparison of Seagrass Epiphytes", Seagrass Working Group Quarterly Meeting, Corpus Christi, TX, April 2, 2008
- \* Cammarata, K., "Imaging, Quantification and Comparison of Seagrass Epiphytes", Exploration of Estuarine Linkages Symposium Presentation, Texas Academy of Science, Corpus Christi, TX, March 6-8, 2008
- Cammarata, K., F. Ufkes, I. Blandon, E. Helander & J. Medlock. *Methods for Characterization of Seagrass Epiphyte Organisms and Coverage*. Benthic Ecology 2008, Providence, R.I., April 2008
- \* Cammarata, K., "Induced Tolerance: An Alternative Strategy for Phytoremediation? Experiences With Arsenic and Sunflowers", Symposium Presentation, Environmental Sustainability: U.S-Mexico Border Issues, Monterrey, Mexico, Nov. 10-12, 2006

#### **Selected External Grants:**

- "Seagrass Response to Wastewater Inputs: Implementation of a Seagrass Monitoring Program in Two Texas Estuaries" **TGLO-CMP Program** (10/01/09-03/31/11) \$226,662., P. Radloff P.I., W. Pulich, K. Dunton, K. Jackson, and K. Cammarata Contractors
- "South Texas Undergraduate Curriculum Consortium for Environmental and Biological Science Students (SUCCESS)" **NSF-ATE** (05/15/07-05/31/10), \$831,532., J. Hatherill, P.I., J. Halcomb and K. Cammarata Co-PI's
- "South Texas Educational Liaison of Laboratories for Agricultural Research (STELLAR)" **USDA-HSI** (06/01/07-05/31/10), \$233,215., J. Halcomb, PI., J. Hatherill and K. Cammarata Co-PI's.
- "DNA Sequencer Technology in Education" **Beckman Genomics Education/Research**Matching Funds Program (09/01/05-08/31/08) \$104,000., K. Cammarata P.I., G. Buck,
  J. Fox, R. Overath and K. Strychar Co-PI's
- "Acquisition of an AA Graphite Furnace and Microwave Digestor for the Enhancement of Research/Teaching at TAMU-CC" **NSF-MRI** (07/01/04-06/31/07) \$98,643., J. Fox P.I., E. Billiot and K. Cammarata Co-PI's
- "Acquisition of a Digital Imaging System to Support Research and Research Training in Applications of Molecular Biology" **NSF-MRI** (09/01/02-08/31/05) \$130,000., K. Cammarata, P.I., G. Buck, P. Larkin, L. Waldbeser Co-PI's
- "Genomics-Based Curriculum Development and Integration for South Texas HSIs" **USDA-HSI** (09/01/01-08/31/04) \$150,000 K. Cammarata P.I., S. Chopin, R. Lehman, K. Price-Blount Co-PI's