

## Curriculum vitae

# Gonzalo Martín Estavillo

University of Florida, Department of Botany  
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## EDUCATION

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- 1999 **Ph.D. Candidate, Department of Botany, University of Florida**, Gainesville, FL; GPA 4.0/4.0, Dissertation Title: "Characterization of the NADP-ME gene in a unique inducible C<sub>4</sub> system", Photosynthesis Research Laboratory; Mentor: Dr. G. Bowes.
- 1996 **Licentiate in Biotechnology, National University of Rosario**, Argentina, Grade 7,34/10. Undergraduate Thesis Title: "Study of the expression regulation of the two isoforms of the NADP-Malic enzyme in maize mesophyll and bundle sheath cells", Center for Biochemical and Photosynthetic Studies; Mentor: Dr. C. S. Andreo.

**Languages:** bilingual in Spanish

**Computer Skills:** DOS, WINDOWS and related MS Office software; reference manager, design and web authoring programs; molecular biology software.

## PUBLICATIONS

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1. **Gonzalo M. Estavillo**, Srinath K. Rao, Julia B. Reiskind, George Bowes, "Differential regulation of the NADP-ME decarboxylase gene family in a single-cell, C<sub>4</sub> angiosperm", in preparation for *Plant Physiology*.
2. Nathan Bazinet, Srinath K. Rao, Julia Reiskind, **Gonzalo M. Estavillo** and George Bowes (2003) Differential Expression Studies in *Hydrilla verticillata*. *Journal of Undergraduate Research* (Oct.) College of Liberal Arts and Sciences, University of Florida, URL: <http://www.clas.ufl.edu/CLAS/jur/1003/bazinetpaper.html>.
3. Bowes G, Rao SK, **Estavillo GM**, Reiskind JB (2002) C<sub>4</sub> mechanisms in aquatic angiosperms: comparisons with terrestrial C<sub>4</sub> systems. *Functional Plant Biology* **29**, 379-392.
4. **Estavillo GM**, Rao SK, Reiskind JB, Bowes G (2000) Molecular studies of an inducible C<sub>4</sub>-type photosynthetic system: NADP-ME isoforms. *Plant Molecular Biology Reporter* **18**, S21-23.

## GENBANK SUBMISSIONS

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The following full-length cDNAs were submitted to GeneBank:

1. AY594687: *Hydrilla verticillata*, cDNA encoding NADP-ME isoform 1 (leaf, *hvme1*).
2. AY594688: *Hydrilla verticillata*, cDNA encoding NADP-ME isoform 2 (leaf, *hvme2*).
3. AY594689: *Hydrilla verticillata*, cDNA encoding NADP-ME isoform 3 (leaf, *hvme3*).

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## TECHNICAL SKILLS

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**Molecular Biology:** nucleic acids isolation and cloning; RT-PCR based techniques; DNA sequencing using nested deleted or transposon tagged clones; Southern and northern blots with isotope or DIG-labeled probes.

**Protein Biochemistry:** protein isolation and enzymatic assays; immunoprecipitation; recombinant protein production; two-dimensional IEF gels; blue native PAGE; western blots; affinity and size exclusion chromatography.

**Other:** measurement of plant water potential (pressure chamber); bioassays; isolation of different plant cell types; protoplast transformation; plant cell fractionation; histochemical techniques; microbiology.

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## ABSTRACTS AND POSTERS SUBMITTED TO SCIENTIFIC MEETINGS

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1. **"Up-regulation of an NADP-ME isoform in a C<sub>4</sub> monocot lacking Kranz anatomy"** Estavillo GM, Bowes G. Department of Botany, University of Florida, Gainesville FL 32611 USA. (Poster) "CO<sub>2</sub> Fixation Assimilation in Plants: Genome to Biome", 2005 Gordon Research Conference, The Centre Paul Langevin, Aussois, France, 9/11-16.
2. **"Single-cell C<sub>4</sub> photosynthesis in *Hydrilla*: unraveling key components for a transgenic C<sub>4</sub> rice plant"** G. Bowes, S. K. Rao, J. B. Reiskind, G. M. Estavillo; University of Florida, Gainesville FL 32611 USA. (Abstract) XVII International Botanical Congress, Vienna, Austria Center, 7/17-23, 2005.
3. **"Activity, expression and localization of NADP-ME isoforms in a C<sub>4</sub> system that lacks Kranz anatomy"** GM Estavillo, SK Rao, G Bowes, Department of Botany, University of Florida, Gainesville FL 32611 USA. (Poster) "Plant Biology 2004", Annual ASPB Meeting, Lake Buena Vista, FL, USA, 7/24-28.
4. **"Characterization of NADP-ME in a C<sub>4</sub> system that lacks Kranz anatomy"** Gonzalo M. Estavillo, Srinath K. Rao, George Bowes, Department of Botany, University of Florida, Gainesville FL 32611 USA. Poster presented at the "Plant Biology 2003", Annual ASPB Meeting, Honolulu, HI, USA , 7/25-30.
5. **"Could *Hydrilla*'s same-cell C<sub>4</sub> system enhance rice photosynthesis as global climate changes?"** Rao SK, Estavillo GM, Reiskind JB, Bowes G. Department of Botany, University of Florida, Gainesville FL 32611 USA. (Poster) "CO<sub>2</sub> Fixation & Metabolism in Green Plants", 2002 Gordon Research Conference, Mount Holyoke College, S. Hadley, MA, USA , 8/11-16.
6. **"Molecular studies of an inducible C<sub>4</sub>-like photosynthetic system: NADP-ME isoforms."** Gonzalo M. Estavillo, Srinath K. Rao, Julia B. Reiskind, George Bowes Department of Botany, University of Florida, Gainesville FL 32611 USA. (Poster) 6<sup>th</sup> International Congress of Plant Molecular Biology 2000, Quebec, Canada, 06/00.
7. **"Effect of the nitrogen supply in the expression of the NADP-ME isozymes in maize plants."** Verónica G. Maurino, María F. Drincovich, Gonzalo M. Estavillo and Carlos S. Andreo. CEFODI. (Abstract) VIII Panamerican Association for Biochemistry and Molecular Biology Congress , Pucón, Chile, 10/96.

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## PRESENTATIONS

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1. **"Differential regulation of NADP-ME decarboxylases in a single-cell, C<sub>4</sub> angiosperm"**, ASPB Southern Section Meeting, 02/25-27/06, Daytona, FL.
2. **"Isolation of photosynthetic genes and analysis of their expression using PCR and blot techniques"** Invited speaker, Biotechnology Techniques and Applications Course, ICBR, 6/20/05, University of Florida.
3. **"Characterization of the NADP-ME genes in a facultative C<sub>4</sub> system without Kranz anatomy"** Botany Department Seminar, 4/15/05, University of Florida.
4. **"NADP-ME Isoform 1 (*hvme1*) is Up Regulated in the C<sub>4</sub>, Kranz-less Monocot *Hydrilla verticillata*"** Graduate Student Council Forum, 4/1/05, University of Florida.

## FELLOWSHIPS AND SPECIAL TRAINING

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- 2005 **NSF Genome Funded Proteomics Workshop and Symposium**, Donald Danforth Plant Science Center, Saint Louis, USA.
- 1998 **Basis in Biotechnology**, Graduate level molecular biology course, National University of San Martín, Buenos Aires, Argentina.
- Molecular diagnosis essays to detect early Cytomegalovirus infection in leukemic patients**, Private Laboratory of Hematology, Center of Hematology, Rosario, Argentina.
- 1997 **Molecular biology of the nitrogen fixation in *Rhizobium tropici***, Intercampus Program: granted by the Spanish Agency of International Cooperation (AECI), College of Pharmacy, University of Seville, Seville, Spain.
- Training in transient expression of wheat genes: Wheat protoplast transformation; gene cloning**, Research assistantship granted by Helios Foundation, Center for Biochemical and Photosynthetic Studies (CEFOBI), National University of Rosario, Rosario, Argentina.
- 1993 **Traininig in Molecular Biology Techniques**, Assistantship in molecular biology techniques, Center for Biochemical and Photosynthetic Studies (CEFOBI), National University of Rosario, Rosario, Argentina.

## ACADEMIC AWARDS

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- 2006 **Best Graduate Student Presentation (\$200)**, ASPB Southern Section Meeting, 02/25-27/06, Daytona, FL.
- 2005 **Outstanding Academic Achievement at the University of Florida**, CLAS, University of Florida, USA.
- 2000-03 **Outstanding Academic Achievement by International Student**, International Center, University of Florida, USA.
- 2002 **Threadgill Dissertation Fellowship (\$3,500)**, College of Liberal Arts and Sciences, University of Florida, USA.
- 2001 **Graduate Student Teaching Award 2000-2001 (\$800)**, Graduate School, University of Florida, USA.
- 2000 **Graduate Student of the Year 2000 for the Department of Botany**, University of Florida, USA.

## RESEARCH GRANTS AND TRAVEL AWARDS

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- 2006 **MOP Research Grant (\$300)**, Graduate Student Council, UF.
- 2005 **International Society of Photosynthesis Research (\$600)**, Photosynthesis Gordon Research Conference.
- 2003/04 **Plant Biology 2003 and 2004 (\$300)**, Annual Meeting of the American Society of Plant Physiologists.
- 2000/02/05 **College of Liberal Arts and Sciences (CLAS) (\$250)**, University of Florida.
- 2002 **Photosynthesis Gordon Research Conference (\$500)**.

## TEACHING EXPERIENCE

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- 2005 **Undergraduate mentoring:** Nathan Bazinet, Nicole Davison, Gabriela Bhlom.
- 2004 **Developer and reviewer** for a web-based curriculum on biotechnology, University Center for Excellence in Teaching, University of Florida.
- 2001/02 **English-Spanish translator** of Science@ NASA web page.
- 1999/01 **Teaching Assistant** "Introductory Plant Physiology and Molecular Biology Laboratory", Botany Department, University of Florida. Developed curriculum, taught, graded and prepared teaching materials and experiments.
- 1992/94 **Teaching Assistant**, Biological Sciences Department, National University of Rosario. Participated in the development and teaching of biology class for biochemistry and biotechnology students.

## OTHER COURSES AND WORKSHOPS

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- 11/4/04 "Biotechnology Symposium", Florida Community College, Jacksonville, FL.
- 03/06/04 "Motivating students in college classroom", Workshop, UCET, University of Florida.
- 08/02 "Web page Basics", Course, University of Florida.
- 08-12/00 "Graduate Teaching Assistant Development Program", Workshop, University of Florida.
- 06/99 "Basic Radiation Safety", Course, University of Florida.
- 04-06/98 "Applied Molecular Genetics", Graduate Course, National University of Rosario.
- 04-06/ 96 "Histological Techniques in Vegetal Tissues", Graduate Course, National University of Rosario.
- 4-6/94 "Scuba Diving", Three month Scuba diving course. Rosario and Brasil.
- 04/94 "Achievements of Biotechnology", Workshop, University of Buenos Aires .
- 04/92 "Personal Computers", Workshop, National University of Rosario.
- 03-07/92 "Reflections on teaching at the initial leves", Workshop, National University of Rosario.
- 09/90 "Infective-contagious diseases course", Workshop, National University of Rosario.

## PROFESSIONAL MEMBERSHIPS AND SERVICES

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- Since 2005 VP/Treasurer, PMCB Graduate Student Association, UF.
- Since 2004 Graduate Student Council Botany Representative, UF.
- Since 2003 The American Society of Plant Biologists.
- 2002 Cell Biologist Search Committee, Botany Department, UF.
- 2001 Gator Citrus Club, IFAS, UF.
- 2001 Member Curriculum Committee, Botany Department, UF.
- 2000 Graduate Student Liaison, Botany Department, UF.