

Raghavan Charudattan
Curriculum Vitae

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Web page: <http://plantpath.ifas.ufl.edu/plpPeople/Faculty/Charudattan/BioControl/index.htm>.

Education:

University of Madras, India Ph. D. 1968.

University of Madras, India M. Sc. 1963.

University of Madras, India B. Sc. 1961.

Professional Experience:

Postdoctoral:

Department of Plant Pathology, University of Florida, 1970-1971.

Department of Plant Pathology, University of California, Davis, CA 1968-1970.

Professional:

Professor & Chair, Plant Pathology Dept., Univ. Florida, Feb 2007--.

Professor & Interim Chair, Plant Pathology Dept., Univ. Florida, June 2006-Jan 2007.

Professor, Plant Pathology Dept., Univ. of Florida, 1983-.

Associate Professor, Plant Pathology Dept., Univ. of Florida, 1978-1983.

Assistant Professor, Plant Pathology Dept., Univ. of Florida, 1973-1978.

Research Associate, Plant Pathology Dept., Univ. Florida, 1971-1973.

Entrepreneurial:

President & CEO, BioProdex, Inc., A Gainesville-based biotech company that aims to license and commercialize technologies developed at UF/IFAS, 2003-.

Editorship:

A founder and the Coordinating Editor (1991-2006) of *BIOLOGICAL CONTROL, Theory and Application in Pest Management*, a multidisciplinary international research journal published by Elsevier, San Diego, CA.

Member, Editorial Board, Biological Control, 2007--.

Member, International Advisory Board, Acta Scientiarum – Agronomy, 2003-..

Associate Editor, Plant Disease, 1979-1982.

Membership in Professional Societies:

American Association for the Advancement of Science.

American Phytopathological Society.

Aquatic Plant Management Society.

Florida Phytopathological Society.

Florida Weed Science Society.

International Organization of Biological Control, Nearctic Region.

International Weed Science Society.

Weed Science Society of America.

Awards and Honors:

- Outstanding Weed Scientist**, Florida Weed Science Society, 2006.
- Guest Professorship**, Shanghai Jiao Tong University, China, 2006-2009.
- Fellow**, American Phytopathological Society, 2005.
- USDA Superior Service Award (Agriculture Secretary's Honors Award)**, 2001.
- Certificate of Appreciation** for outstanding contributions to the USDA-CSREES, 2001.
- UF Research Foundation (UFRF) Research Professorship**, 2001-2003.
- Fellow**, Weed Science Society of America, 2000.
- Professorial Excellence Program (PEP) Award**, University of Florida, 1998.
- Certificate of Appreciation** for outstanding contributions to the USDA-APHIS-PPQ-National Biological Control Institute, 1998.
- Salary Performance Plan** (9% raise) for Full Professors, University of Florida, 2001
- Merit Bonus**, University of Florida, 1998
- The Fyson Prize**, Presidency College, University of Madras, for the best botanical herbarium prepared and deposited at the regional herbarium by an undergraduate student, 1963.

Research:

Area of Expertise:

Biological control of weeds by using plant pathogens

Major Accomplishment and Professional Impact:

I have built a pioneering program of study and utilization of plant pathogens as biological control agents of weeds. My research and writings span etiology, epidemiology, and host-parasite relationships of diseases of weeds and descriptions of new pathogens. I am a founder and the coordinating editor (1991-2006) of the multidisciplinary scientific journal *Biological Control: Theory and Application in Pest Management*. As an editor of this international journal, I have been a leading proponent for the science and application of biological control. I direct a unique and well-funded program of research, teaching, and scientific collaboration that blends plant pathology, weed science, microbial technology, and integrated control. I have developed and taught a graduate and undergraduate course on microbiological control of plant diseases and weeds. Several of my graduate students and postdoctoral associates hold prestigious positions with the USDA-ARS, USDA-APHIS, state and private universities in the U.S. and abroad, a non-governmental research foundation, and private companies. My program has attracted international collaboration; I have or have had collaborative programs in Australia, Brazil, Canada, China, India, Italy, and the former Yugoslavia, and several international undergraduate and graduate students and professionals have visited my laboratory to learn research principles and techniques or to engage in sabbatical studies. I have given short courses in Brazil, Nicaragua, and Mexico and I have been sought out by U.S. and foreign governmental and non-governmental agencies to consult on biological control of weeds, management of aquatic weeds, and biopesticide regulations. I have received numerous invitations to give keynote addresses, lectures and seminars, convene and moderate paper sessions, review programs, and serve on expert panels. Just during the last 10 years, I have received about 70 invitations; I accept those that add to my

scientific and professional standing and decline all others. A list is included below. Finally, to leave a legacy, I have formed a Gainesville-based, UF-affiliated biotech company to license and commercialize technologies derived from my research at UF/IFAS.

Publications:

Books:

- Charudattan, R., Labrada, R., Center, T.D., and Kelly-Begazo, C. eds. 1996. Strategies for Water Hyacinth Control. Report of a Panel of Experts Meeting, September 11-14, 1995, Ft. Lauderdale, FL, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611, 217 pp.
- Hardy, R.W.F., Beachy, R.N., Browning, W.H., Caulder, J.D., Charudattan, R., Faulkner, P., Gould, F.L., Hinkle, M.K., Jaffee, B.A., Knudson, M.K., Lewis, W.J., Loper, J.E., Mahr, D.L., and Van Alfen, N.K. 1996. Ecologically Based Pest Management: New Solutions for a New Century. National Research Council, National Acad. Press, Washington, DC. 144 p.
- Charudattan, R. and Browning, H.W. eds. 1992. Regulations and Guidelines: Critical Issues in Biological Control. Proceedings of a USDA/CSRS National Workshop, June 10-12, 1991, Vienna, VA, IFAS, University of Florida, Gainesville, FL 32611, 205 p.
- Charudattan, R. and H.L. Walker, eds. 1982. Biological Control of Weeds with Plant Pathogens, John Wiley, New York, 293 pp.

Booklet/Manual:

- Charudattan, R. and Pitelli, R.A. 1993. Controle Biológico de Plantas Daninhas Através de Fitopatógenos. UNESP, Jaboticabal, Brazil. 34 p. (a booklet prepared for the short-course on biological control of weeds).

Book Chapters (24, including):

- Charudattan, R., Wyss, G.S., and Chandramohan, S. 2002. Biological Control. Pages 25-58. In: W.B. Wheeler, Ed., Pesticides in Agriculture and the Environment. Marcel Dekker, NY.
- Cuda, J.P. Gandolfo, D., Medal, J.C., Charudattan, R., and Mullahey, J.J. 2002. Tropical soda apple, wetland nightshade, and turkey berry. Pages 293-309. In: R. Van Driesche, B. Blossey, M. Hoddle, S. Lyon, and R. Reardon, (eds.), Biological Control of Invasive Plants in the Eastern United States. Forest Health Technology Enterprise Team, Technology Transfer-Biological Control, FHTET-2002-4, U.S. Dept. Agric., Forest Service, Morgantown, WV.
- Charudattan, R. 2001. Biological control of water hyacinth by using pathogens: Opportunities, challenges, and recent developments. Pages 21-28 in: Biological and Integrated Control of Water Hyacinth, *Eichhornia crassipes*. Proceedings of the Second Meeting of the Global Working Group for the Biological and Integrated Control of Water Hyacinth, Beijing, China, 9-12 Oct., 2000. ACIAR Proceedings No. 102. Australian Centre for International Agricultural Research, Canberra.
- Charudattan, R. 2000. Current Status of Biological Control of Weeds. Pages 269-288. In: G.G. Kennedy and T.B. Sutton, eds. Emerging Technologies for Integrated Pest Management: Concepts, Research, and Implementation. Proceeding of a Conference, March 8-10, 1999, Raleigh, NC. APS Press, St. Paul, MN.

- Roskopf, E.N., Charudattan, R., and Kadir, J.B. 1999. Use of Plant Pathogens in Weed Control. Pages 891-918 *In*: T.W. Fisher, T.S. Bellows, L.E. Caltagirone, D.L. Dahlsten, C. Huffaker, G. Gordh, eds. Handbook of Biological Control. Academic Press, San Diego.
- Charudattan, R. 1991. The mycoherbicide approach with plant pathogens. Pages 24-57 in: D.O. TeBeest ed., Microbial Control of Weeds. Chapman and Hall, New York.
- Charudattan, R. 1990. Release of fungi: Large-scale use of fungi as biological weed control agents. Pages 70-83 in: J.J. Marois and G. Bruening, eds., Risk Assessment in Agricultural Biotechnology: Proceedings of the International Conference. Publ. No. 1928, Publ. Div. Agric. and Natural Resources, Univ. Calif., Oakland, CA.
- Charudattan, R. 1990. Release of fungi: Large-scale use of fungi as biological weed control agents. Pages 70-83 in: J.J. Marois and G. Bruening, eds., Risk Assessment in Agricultural Biotechnology: Proceedings of the International Conference. Publ. No. 1928, Publ. Div. Agric. and Natural Resources, Univ. Calif., Oakland, CA.
- Charudattan, R. 1988. Inundative control of weeds with indigenous fungal pathogens. Pages 86-110 in: M.N. Burge, ed., Fungi in Biological Control Systems, Manchester University Press, Manchester, England, 269 pp.
- Charudattan, R. 1985. The use of natural and genetically altered strains of pathogens for weed control. Pages 347-372 in: M.A. Hoy and D.C. Herzog, eds., Biological Control in Agricultural IPM Systems. Acad. Press, Orlando, FL. 589 pp.

Papers in Refereed Journals (84; the following is a partial list of publications, 2007-2003):
2007:

- Charudattan, R; Elliott, M; Hiebert, E; and Horrell, J. 2007. A look at host range, host specificity and non-target safety from the perspective of a plant virus as a weed-biocontrol agent. Proceedings of the XII International Symposium on Biological Control of Weeds, Montpellier, France, April, 2007. Abstract.
- Charudattan, R., Hiebert, E., DeValerio, J., Elliott, M., Horrell, J., Maia, G. 2007. Scale-up and commercial production of a plant virus for use as a bioherbicide. Abstracts, International Bioherbicide Group Meeting, Montpellier, France, April 22, 2007.
- Shabana, Y., Charudattan, R., Klassen, W., Roskopf, E., and Morales-Payan J.P. 2007. Use of plant hay for solid substrate production and application of *Dactylaria higginsii*, a mycoherbicide for the control of purple and yellow nutsedges. Abstracts, International Bioherbicide Group Meeting, Montpellier, France, April 22, 2007.
- Pomella, A.W.V., Barreto, R.W., and Charudattan, R. 2007. *Nimbya alternantherae*, a potential bicontrol agent for Alligatorweed, *Alternanthera philoxeroides*. BioControl 52:271-288.
- Charudattan, R. and Hiebert, E. 2007. A plant virus as a bioherbicide for tropical soda apple, *Solanum viarum*. Outlooks on Pest Management (June 2007).

2006:

- Evidente, A., Andolfi, A., Cimmino, A., Vurro, M., Fracchiolla, M., Charudattan, R., 2006. Herbicidal potential of ophiobolins produced by *Drechslera gigantea*. J. Agric. Food Chem., 54: 1779-1783.
- Yandoc, C.B., Roskopf, E.N., Pitelli, R.L.C.M., Charudattan, R., 2006. Effects of selected pesticides on conidial germination and mycelial growth of *Dactylaria higginsii*, a

- potential bioherbicide for purple nutsedge. *Weed Technol.* 20: 255-260.
- Evidente, A., Andolfi, A., Cimmino, A., Vurro, M., Fracchiolla, Charudattan, R., and Motta, A. 2006. Ophiobolin E and 8-*epi*-ophiobolin J, phytotoxins produced by *Drechslera gigantean*, a potential mycoherbicides of weedy grasses. *Phytochemistry* 67: 2281–2287.
- Yandoc-Ables, C.B., Roskopf, E.N. and Charudattan, R. 2006. Plant pathogens at work: Progress and possibilities for weed biocontrol. Part 1: Classical vs. bioherbicultural approach. *APSnet Feature Story* Aug. 2006. <http://www.apsnet.org/online/feature/weed1/>.
- Yandoc-Ables, C.B., Roskopf, E.N. and Charudattan, R. 2006. Plant pathogens at work: Progress and possibilities for weed biocontrol. Part 2: Improving weed control efficacy. *APSnet Feature Story* Aug. 2006. <http://www.apsnet.org/online/feature/weed2/>.
- 2005:**
- Charudattan, R., 2005. Ecological, practical, and political inputs into selection of weed targets: What makes a good biological control target? *Biol. Control*, 35: 183-196.
- Roskopf, E.N., Yandoc, C.B., Charudattan, R., 2005. Genus-specific host range of *Phomopsis amaranthicola* (Sphaeropsidales), a bioherbicide agent for *Amaranthus* spp. *Biocontrol Sci. Technol.* 16: 27-35.
- Roskopf, E.N., Yandoc, C.B., Charudattan, R., DeValerio, J.T., 2005. Influence of epidemiological factors on the bioherbicultural efficacy of *Phomopsis amaranthicola* on *Amaranthus* spp. *Plant Dis.* 89:1295-1300.
- Yandoc, C.B., Charudattan, R., Shilling, D.G., 2005. Evaluation of fungal pathogens as biological control agents for cogongrass (*Imperata cylindrica*). *Weed Technol.* 19:19-26.
- 2004:**
- Wyss, G.S., Charudattan, R., Roskopf, E.N., and Littell, R.C. 2004. Effects of selected pesticides and adjuvants on germination and vegetative growth of *Phomopsis amaranthicola*, a biocontrol agent for *Amaranthus* spp. *Weed Res.* 44: 469-482.
- Chandramohan, S., Shine Jr., J.M., Duchrow, M.J., Roskopf, E.N., Charudattan, R., 2004. A bioherbicide system to manage guineagrass (*Panicum maximum* Jacq.) In sugarcane in Florida. *Sugar Cane Int.* 22(2): 28-30.
- Yandoc, C.B., Charudattan, R., Shilling, D.G., 2004. Suppression of cogongrass (*Imperata cylindrica*) by a bioherbicultural fungus and plant competition. *Weed Sci.* 52:649-653.
- Chandramohan, S. and Charudattan, R. 2003. A multiple-pathogen strategy for bioherbicultural control of several weeds. *Biocontrol Sci. Technol.* 13: 199-205.
- 2003:**
- Morales-Payan, J.P., Stall, W.M., Shilling, D.G., Charudattan, R., Dusky, J.A., and Bewick, T.A. 2003. Above- and belowground interference of purple and yellow nutsedge (*Cyperus* spp.) with tomato. *Weed Sci.* 51:181-185.
- Shabana, Y.M., Cuda, J.P., and Charudattan, R. 2003. Combining plant pathogenic fungi and the leaf-mining fly, *Hydrellia pakistanae*, increases damage to hydrilla. *J. Aquat. Plant Manage.* 41:76-81.
- Papers in Nonrefereed, Popular Journals, Abstracts, Technical Reports, and Miscellaneous Publications (253)**

- Charudattan, R., Hiebert, E., Elliott, M., DeValerio, J., Horrell, J., 2005. A highly effective biological herbicide for tropical soda apple. *Florida Cattleman Livestock J.* 69(7): 24-25.
- Chandramohan, S., Stiles, C.M., and Charudattan, R. 2002. A multiple-pathogen bioherbicide system with potential to manage signalgrass in turf and sod in Florida. *Florida Turf Digest.* Nov/Dec 2002: 15-19.
- Chandramohan, S., Charudattan, R., Megh Singh, Sonoda, R.M. 2000. Biological herbicide to control grasses in citrus. *Citrus and Vegetable Magazine.* 64(7): 6-8.
- Mullahey, J., Charudattan, R., Medal, J., and Pitelli, R. 1994. Tropical soda apple in Brazil. *Florida Cattleman Livestock J.* 59 (1): 34.
- Charudattan, R. 1986. *Cercospora rodmanii*: a biological control agent for waterhyacinth. *Aquatics* 8(2): 21-24.
- Patents** (11): Technologies derived from my research have led to the issuance of some seminal U.S. patents in the field of bioherbicides, including:
- Charudattan, R., Pettersen, M.S., and Hiebert, E. 2004. Use of *Tobacco mild green mosaic virus* (TMGMV)-mediated lethal hypersensitive response (HR) as a novel method of weed control. U.S. Patent No. 6,689,718 B2. February 10, 2004.
- Chandramohan, S., Charudattan, R. 2001. Enhanced bioherbicidal control of weeds using multiple pathogens. U.S. Patent No. 6,265,347 B1. July 24, 2001.
- Kadir, J. and Charudattan, R. 1999. Control of *Cyperus* spp. with a fungal pathogen. U.S. Patent No. 5,945,378. August 31, 1999.
- Kadir, J. and Charudattan, R. 1997. Control of *Cyperus* spp. with a fungal pathogen. U.S. Patent No. 5,698,491. December 16, 1997.
- Charudattan, R., Y.M. Shabana, J.T. DeValerio, and E.N. Roskopf. 1996. *Phomopsis* species fungus useful as a broad-spectrum bioherbicide to control several species of pigweeds. U.S. Patent No. 5,510,316. April 23, 1996.
- Charudattan, R., Y.M. Shabana, J.T. DeValerio, and E.N. Roskopf. 1995. Broad-spectrum bioherbicide to control several species of pigweeds and methods of use. U.S. Patent No. 5,393,728. February 28, 1995.
- Charudattan, R. 1981. Method and composition for controlling hydrilla. U.S. Patent No. 4,263,036. April 21, 1981, 6 pp.
- Charudattan, R. 1979. Composition and process for controlling milkweed vine. U.S. Patent No. 4,162,912. July 31, 1979.

Major International Activities:

I have traveled to about 30 countries to participate in international conferences, teach in short-courses, and/or engage in cooperative research that typically involved field surveys and lab work to collect and evaluate biological materials for my research. The following are some significant activities:

2007: Gave a keynote address at the 45th Congress of the Southern African Society for Plant Pathology, Johannesburg, South Africa.

2006: Visited Shanghai Jiao Tong University (SJTU) as an invitee to review a research project, provide guidance, and visit a few regional biopesticide enterprises. Awarded a Guest Professor status at SJTU for three years.

- 2004: Visited the Institute of Microbial Technology, Chandigarh, India (with Dr. Andy Ogram, Soil and Water Sci., UF/IFAS) to sign a memorandum of agreement for scientific cooperation.
- 2003-2007: Developed a cooperative research project on biological control of cogongrass with the International Institute of Tropical Agriculture (IITA), Benin. The project, funded by USAID-IITA, supports a South African national, Alana den Breeyen, in her Ph.D. program.
- 2003-: Established cooperative research agreements with University of Bari and University of Napoli, Italy. Hosted short-term visits by two Italian Ph.D. students to my lab and visited Bari in 2005 for a conference and discussions. Two refereed publications have resulted from this collaboration.
- 1998: Served as a consultant to a national workshop of the IBAMA, the Brazilian environmental organization, to develop strategies for aquatic weed control.
- 1996-1998: Initiated a cooperative research project (funded by USDA-FAS) with South African Plant Protection Research Institute, Stellenbosch, to evaluate *Uredo eichhorniae* as a classical biocontrol agent for waterhyacinth.
- 1995: As a consultant to FAO, assembled an Expert Panel to develop strategies for control of waterhyacinth. A meeting was held in Ft. Lauderdale, FL and the conference proceedings were published in a book (listed above).
- 1994: Visited Mexico as a consultant of WHO/PanAmerican Health Organization and the Mexican Institute for Water Research (IMTA). Conducted the first major survey of that country to catalog diseases of waterhyacinth. A technical report, a refereed publication and follow-on work at IMTA resulted from this visit.
- 1992: Spent 5 months on a faculty development leave (sabbatical) at EMBRAPA-CENARGEN, Brasilia, to review and guide their bioherbicide program. Also gathered fungal cultures for my research in Gainesville, which served as the research material for Dr. Dauri Tessmann, a Brazilian student.
- 1990: Visited (along with Prof. Dale Habeck, ENT-NEM, UF/IFAS) the Republic of Ireland under the sponsorship of USDA-OICD to initiate cooperative research on biological weed control.
- 1989-2003: Have had continuous grant support for cooperative research in Brazil through NSF, USDA-OICD, CNPq, IICA, EMBRAPA, FAPESP, FUNAP, and USDA-ARS. These grants facilitated cooperative research on pathogens of weeds and provided for educational training and scientific exchanges. Four Brazilian undergraduate interns, two professionals on sabbatical leave, and a postdoc have worked in my lab to conduct research.
- 1988-1990: Initiated educational cooperation between Mansoura University, Egypt and UF/IFAS under the U.S.-Egypt Educational Exchange Program (Camp David Agreement). Participated and trained a Ph.D. student, Dr. Yasser Shabana, through a “sandwich program”.

1986-1990: Served as the principal U.S. investigator of a USDA-OICD U.S.-Yugoslavia Cooperative Program on biocontrol of aquatic weeds. Visited Yugoslavia twice and hosted two Yugoslav scientists in my lab.

1978: Visiting Scientist to the Advanced Research Center, Botany Department, University of Madras, India; gave two talks on biological weed control.

1973-1976: Undertook surveys in Venezuela and Dominican Republic and surveys and collaborative research in Argentina and Uruguay to collect and test pathogens of waterhyacinth, milkweed vine, and other weeds.

1971-1973: Undertook surveys in India for pathogens of hydrilla and waterhyacinth.

Teaching/Advisement:

Courses Taught:

PLP 5155 Microbiological Control of Plant Diseases and Weeds

PLP 3151 Biocontrol of Plant Diseases and Weeds

Chairman of Ph.D. graduate committees (7): Erin Roskopf, Jugah Kadir, Dauri Tessmann, S. Chandramohan, Camilla Yandoc, Jennifer Cook, and Alana den Breeyen.

Co-chairman of Ph.D. graduate committees (2): Yasser Shabana, University of Mansoura, Egypt, and Alan Pomella, Federal University of Viçosa, Brazil.

Chairman of Master's graduate committees (5): Angela Vincent, Matt Pettersen, Jonathan Horrell, Karen Hepting, and Darryl McKinney.

Since 1983, the year I became a Full Professor, I have served on the graduate advisory committees of 34 students (25 Ph.D., 7 M.S., 1 M.Ag., and 1 non-degree) in 6 majors (6 IFAS units and 3 foreign universities) including those mentioned above. (Total since 1973: 33 Ph.D., 13 M.S., 1 M.Ag., and 2 DPM).

External Examiner: I have served as an external examiner for:

2003, Ph.D. dissertation, University of Stellenbosch, South Africa.

1992, Ph.D. dissertation, Bharathidasan University, Madras, India.

1992, Ph.D. dissertation, University of Western Australia, Perth.

1991, Ph.D. dissertation, Indian Institute of Chemical Technology, Hyderabad, India.

Visiting Professors and professional scientists who have spent their sabbatical years in my laboratory:

2000, Prof. Amos Dinoor, The Hebrew Univ. of Jerusalem, Rehovot, Israel, his second visit.

1996-1995, Dr. Wellington Pereira, EMBRAPA-CNPh, Brasilia, Brazil.

1995, Dr. Maricela Martinez-Jimenez, Mexican Water Technol. Inst. (IMTA), Morelos.

1995, Prof. Amos Dinoor, The Hebrew Univ. of Jerusalem, Rehovot, Israel.

1993-1992, Prof. Robinson A. Pitelli, Univ. State of Sao Paulo, Jaboticabal, Brazil.

Visiting Ph.D. and undergraduate students who have conducted research in my laboratory under my direction:

2005, Paola Donnarumma, Ph.D., University of Napoli, Italy.

2005, Thais Clemente, UG, Univ. State of Sao Paulo, Jaboticabal, Brazil.

2003, Mariano Fracchiolla, Ph.D., University of Bari, Italy.

2002, Cinthia Andriazzi, UG, Univ. State of Sao Paulo, Jaboticabal, Brazil.

2002, Gabriella Maia, UG, Univ. State of Sao Paulo, Jaboticabal, Brazil.

2000, Longa Chibesakunda, M.S., Fachhochschule Mannheim, Germany (a native of Tanzania, Africa).

1998, Robinson L.C.M. Pitelli, UG, Univ. State of Sao Paulo, Jaboticabal, Brazil.

1991, Johannes Mather, UG, University of Stuttgart, Germany.

1884, Marjan Kluepfel, UG, University of Wageningen, The Netherlands.

Postdoctoral associates (postdoc years and current affiliation):

S. Chandramohan, 1999-2004, TEAMS Research Associate, Belle Glade REC, UF/IFFAS.

Jose Pablo Morales-Payan, 2000-2003, Associate Professor, University of Puerto Rico, Mayaguez.

Gabriela Wyss, 1999-2000, Division Head, Food Quality, Research Institute of Organic Agriculture-Switzerland (FiBL), Frick.

Lisias Coelho, 1998-99, Associate Professor, State University, Uberlandia, Brazil.

Margaret Smither-Kopperl, 1995-98, USDA-APHIS, Seattle, WA.

Yasser Shabana, 1995-96, Prof. and Chair, Plant Pathology Department, Mansoura Univ., Egypt (currently on sabbatical leave; Program Manager, Biological Control of Weeds with Fungal Pathogens program, UF/IFAS).

Kirti Patel, 1985-88, Teacher in a public school system in North Carolina.

Daniel Walther, 1985-88, an R&D Scientist, Chemtura Crop Protection, CT.

Membership on Advisory Boards, Panels, and Consultancies (the following is a partial list of prestigious and noteworthy appointments I have had):

2005-1999, Member, Advisory Council, **Florida A&M Univ., Biological Control Institute.**

2002-1999, Member, **CSREES-ESCAP-Pest Management Strategies Subcommittee, Biological Control.**

1998, Member, **program review panel**, USDA-ARS, Southern Weed Science Laboratory, Stoneville, MS.

1997, Consultant, **World Bank**, to develop management strategies for the waterhyacinth problem in Africa.

1996, Chairman, **program review panel**, USDA-ARS, Foreign Disease and Weed Science Research Unit, Ft. Detrick, MD.

1996-1991, Member, **National Academy of Sciences**, Board on Agriculture, Committee on Pest and Pathogen Control through Management of Biological Control Agents and Enhanced Cycles and Natural Processes.

1998-1995, Member, Customer Advisory Group, USDA-APHIS-**National Biological Control Institute.**

1995-1990, Member, **Scientific Advisory Board**, EcoScience Corporation, Massachusetts.

1995, Expert Consultant, **Food and Agricultural Organization of the United Nations (FAO).**

1994, Panelist, **USDA-CSREES-NRICGP Grants Panel**, Biological Control Program.

1991-1990, Consultant, **U.S. Congress, Office of Technology Assessment (OTA).**

1994, Consultant, **PanAmerican Health Organization.**