

MARY SAMUEL, M.S.

EDUCATION:

1999. M Phil., Botany, Madras Christian College (Affiliated to the University of Madras), India.

1997. M.S., Botany, Madras Christian College (Affiliated to the University of Madras), India.

1995. B.S., Botany, Women's Christian College (Affiliated to the University of Madras), India.

SPECIALTY / TECHNICAL COURSES:

1998. Diploma in End User Computing, First Computers, Madras, India.

PROFESSIONAL EXPERIENCE:

2005-Present. Staff Scientist, Cambridge Environmental Inc., Frederick, Maryland.

2000-2005. Junior Staff Scientist, Dynamac Corporation, Germantown, Maryland.

2000. Biology Instructor, Prince George's Community College, Largo, Maryland. Taught General Biology and General Biology Laboratory. Prepared and presented lectures on topics covered in the curriculum. Prepared and evaluated exams, quizzes and homework assignments. Assisted students in understanding the course materials.

1998-1999. Editor of Science Journals, TnQ B&J, Madras, India. Served as Junior editor. Edited various science journals encompassing various disciplines of science. Increased overall editing productivity of journals at TnQ B&J. Trained and supervised new associates.

1995-1998. Madras Christian College, Madras, India. Taught Cell Biology and Genetics to post graduates and undergraduates at Madras Christian College. Interacted with various Botanical research firms to learn about new advances in Botany, such as Biotechnology, Genetic Engineering and Gene Cloning. Actively participated in field trips involving the collection of endemic specimen and preparation of herbarium. Written a thesis on "An In Vivo Evaluation on the Mitostatic Effects of Endosulfan and the Modulating Effects of Becosules and Phyllanthus Leaf Extract on the Root Meristem of Allium cepa L". Also written a thesis on "In Vivo Evaluation on the Mitostatic Effects of Chlorpyrifos in the Root Meristem of Allium cepa L. Presented a paper on "Gene Regulation in Eukaryotes" during an annual meeting of the Botany Society.

SELECTED CONSULTING PROJECT EXPERIENCE:

U.S. EPA, OPP, Environmental Fate of Pesticides, Staff Scientist

Edit all environmental fate studies and make sure that the data generated by the primary reviewer comply with EPA guidelines. Extracts technical data from studies on the environmental fate of pesticides into a searchable database. Evaluated and summarized chemical and biological data pertaining to the fate and transport of pesticides in terrestrial and aquatic ecosystems, and on the impact of pesticide use on ground and surface water. Conducted primary reviews and evaluation of more than 80 studies on the environmental fate of more than 31 pesticides. Reviewed data include laboratory hydrolysis; laboratory photodegradation in water, soil, and air; laboratory biological degradation under aerobic and anaerobic conditions. Conducted database searches and literature analyses on the fate, transport and ecotoxicity of selected pesticides. Created chemical structures of various pesticides and their transformation products using the ISIS program.

U.S. EPA, OPPTS, Ecological Risk of Pesticides, Staff Scientist

Determined adequacy of study design with respect to compliance with EPA guidelines and policies. Conducted primary reviews and evaluation of more than 82 studies on the environmental ecotoxicity of more than 21 pesticides. Reviewed data include LC50 determinations for aquatic invertebrates, oysters, fish, and beneficial insects; seedling emergence and vegetative vigor of terrestrial plants; toxicity testing of aquatic plants; LC50 and reproduction success of avian species; and soil microbial community toxicity tests.

ORIGINAL REPORTS:

Principal author of over 80 reviews of studies on the environmental fate of pesticides that were submitted under Subdivision N Guidelines.

Principal author of over 82 reviews of studies on the ecological risk of pesticides that were submitted under Subdivision E, and J Guidelines.