

Manju Varma, Biologist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

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Area of Expertise: My diverse research background encompasses various aspects of analytical, natural products, medicinal, synthetic organic chemistry (peptide & DNA) and the application of the experience in the chemical and bio-medical areas including development of environmental-friendly synthetic manipulations using microwave technology. Presently, my research involves working on rapid detection methods for recreational waters (lakes, fresh as well as marine waters) using real time PCR, DNA cloning and novel techniques in detecting live/dead fecal indicators in waste water, evaluating panel of newer assays to detect micro-organisms potentially originating from human fecal sources and to characterize the fecal pollution and associated human health risks based on index of relative indicator abundances thereby establishing a correlation between recreational water quality and swimming associated illness rates among the beach goers.

Select Publications:

Lunetta, R., B. Schaeffer, R. Stumpf, D. Keith, S. Jacobs, AND M. Murphy. Evaluation of cyanobacteria cell count detection derived from MERIS imagery across the eastern USA. REMOTE SENSING OF ENVIRONMENT. Elsevier Science Ltd, New York, NY, 157(0):24-34, (2015).

Lunetta, R., D. Davis, AND M. Stege. Validation Of DEM Data Dvied From World View 3 Stereo Imagery For Low Elevation Majuro Atoll, Marchall Islands. Presented at ASPRS Annual Conference, Tampa, FL, May 04 - 08, 2015.

Lunetta, R., D. Davis, AND M. Stege. Validation of DEM Data Derived from World View 3 Stereo Imagery for Low Elevation Majuro Atoll, Marshall Islands. Presented at ASPRS Annual Conference, Tampa, FL, May 04 - 08, 2015.

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Education:

- Ph.D. Natural Product Chemistry, 1979, Delhi University, India
- M.S. Organic Chemistry, 1975, Delhi University, India
- B.S. Chemistry (Honors)1973, Delhi University, India

Professional Experience:

- March, 2002 – present Microbiologist, U.S. EPA, NERL.

- 2000 – 2002 ORISE Research Fellow, U.S. EPA, NERL.
- 1996 – 2000 Senior Peptide Chemist, Sigma-Genosys Biotechnology, Inc.
- 1988 – 1994 Research Assistant Professor, Center for Biotechnology, Baylor College of Medicine.
- 1985 – 1986 Research Associate, University of Tennessee.
- 1981 – 1982 Visiting Scientist, The Robert Robinson Laboratory, Liverpool, U.K.
- 1979 – 1981 Research Officer, University College of North Wales, Bangor, U.K.
- 1978 – 1979 NORAD Fellow, Norwegian Institute of Technology, Norway.
- 1975 – 1977 Research Fellow, Delhi University