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Engineering & Scientific Consulting


# Marylou Verder-Carlos, DVM, MPVM

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## Professional Profile

Dr. Marylou Verder-Carlos is a Senior Managing Scientist and comes to Exponent following over 20 years of distinguished public service with the California Environmental Protection Agency (Cal-EPA). Most recently, Dr. Verder-Carlos served as the Chief Science Advisor and Assistant Director for the Department of Pesticide Regulation (DPR) at Cal-EPA, a position she held for over a decade. As Chief Science Advisor and Assistant Director at DPR, in which she managed a wide array of technical branches totaling several hundred staff, Dr. Verder-Carlos was responsible for the development and execution of clear, consistent, and scientifically sound regulatory policies relating to pesticidal chemicals and products. As part of these responsibilities, she performed a number of functions including (a) leading scientific teams to ensure completion of comprehensive pesticide risk assessments (e.g. chloropicrin, chlorpyrifos, 1,3 dichloropropene and sulfuryl fluoride), (b) reviewing scientific evaluations of data intended for use in pesticide registration, (c) working with regulators, industry and stakeholders in developing practical strategies for pesticide risk mitigation, and (d) coordinating input from all interested parties on interagency actions and regulatory policies to ensure public health and safety from the environmental impacts of pesticides.

In addition to these responsibilities, Dr. Verder-Carlos led a number of specialized, solutions-oriented initiatives intended to address key issues in the area of pesticide science and regulation. For example, Dr. Verder-Carlos initiated a comprehensive review of California's Risk Assessment Process by the National Academy and coordinated completion of that initiative with both Cal-EPA and the United States Environmental Protection Agency (USEPA). She was also a member of US EPA's key Pesticide Programs Dialogue Committee and chaired the Pollinator Protection Sub-Committee. The subcommittee was comprised of members of the various state agencies, US EPA, industry, beekeepers and non-governmental organizations, highlighting Marylou's ability to build consensus between different stakeholders. Early in her career at DPR, Dr. Verder-Carlos worked with a team of scientists to review and analyze epidemiological data on the human health impacts of pesticide exposures in the State, including reporting and making recommendations on the findings. She also initiated and implemented the worker safety outreach programs for DPR starting with a Farmworker Focus Group in Salinas Valley. That effort was the beginning of improved discussions and communication between regulators, industry and non-governmental organizations across all the programs at DPR. In addition to her time at DPR, Dr. Verder-Carlos previously worked at the Office of Environmental Health Hazard Assessment (OEHHA) in their Pesticide Epidemiology Section where she collaborated with numerous state agencies, including those beyond Cal-EPA, and assessed the human health impacts of chemicals, including wide eradication program of public and infrastructure pests [(e.g., Light Brown Apple Moth in California's Santa Cruz and Monterey Counties)]. Dr. Verder-Carlos strives to find solutions to difficult policy issues while ensuring the protection of public health and the environment. She is well-respected by industry and regulatory authorities alike, and has been instrumental in developing, enacting, and maintaining consistent regulatory policies at DPR.

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## Academic Credentials & Professional Honors

M.S., Preventive Veterinary Medicine, University of California, Davis, 1988

D.V.M., Veterinary Medicine, University of the Philippines, 1985

## Prior Experience

Chief Science Advisor and Assistant Director, Department of Pesticide Regulation (DPR) 2008–2019

Senior Toxicologist, Office of Environmental Health Hazard Assessment (OEHHA) 2007–2008

Staff Toxicologist, Department of Pesticide Regulation (DPR) 2006–2007

Associate Toxicologist, Department of Pesticide Regulation (DPR) 1994–2006

Associate Pesticide Review Scientist, Department of Pesticide Regulation (DPR) 1993–1994

Registration Specialist, Department of Pesticide Regulation (DPR) 1992–1993

Veterinary Medical Officer, Department of Food and Agriculture 1991–1992

Assistant Program Director, Western Career College 1988–1991

## Publications

M O'Malley, T Barry, M Oriel, M Verder-Carlos, S Edmiston. Community Exposure Following a Drip Application of Chloropicrin. January 2010 Journal of Agromedicine 15(1):24-37.

M O'Malley, M Verder-Carlos, T Barry, A Rubin. Illnesses Related to the Sprinkler Application of Metam-Sodium in Earlimart, California November 1999. HS-1808. 2001- Also published in the American Journal of Industrial Medicine as: M O'Malley, T Barry, M Verder-Carlos, A Rubin. Modeling of Methyl Isothiocyanate Air Concentrations Associated with Community Illnesses Following a Metam-Sodium Sprinkler Application. AJIM 00:1-15(2004).

M O'Malley, M Verder-Carlos. Illnesses Associated with Exposure to Azinphos-methyl in California 1982-1990. HS- 1680, 1994

M O'Malley, M Verder-Carlos, L Mehler, D Richmond. Risk Factors for Cholinesterase and Non-Cholinesterase Effects of Exposure to Organophosphate Insecticides in California Agricultural Workers, 1982-1990. HS 1688. 1994

J Henderson, M O'Malley, J Sanborn, M Verder-Carlos, B Wilson. Comparison of Acetylcholinesterase Assays Run Under Conditions Specified by the Standard Ellman Method and Conditions Specified by a Commercial Cholinesterase Reagent Kit. HS-1752. 1997

M Verder-Carlos, M O'Malley. A Report on the Illnesses Related to the Application of Rotenone to the Lake Davis. HS-1772. 1998 - also published in "Managing for Healthy Ecosystems" edited by David J. Rapport [et.al], 2003.

S Edmiston, L Mehler, M Verder-Carlos, D Richmon, K Orr, G Boers. Evaluation of Pesticide Episode Investigation Reports, 1999-2001. HS-1823. 2001.

M Verder-Carlos. A Review of Non-Handler Illnesses Associated with Structural Pesticide Applications, 1996-2001. HS-1854. 2006.

**Presentations**

Overview of the DPR Registration Process to Registrants and their representatives, April 2018

Overview of Science at DPR at Annual WPHA Conferences, July 2018

Presentations at PREC regarding Risk Assessments on various pesticides

Presented DPR's Pesticide Illness Surveillance Program at various venues and conferences

Presented at several County Ag Commissioner's conferences on various DPR issues on risk management and risk assessments of various pesticides

Presented at Senate and Assembly Hearings on fumigants, chlorpyrifos, neonicotinoids

## Project Experience

Project coordinator for the cholinesterase testing standardization regulations in California. This project involved working cooperatively with the laboratories that run cholinesterase tests, the University of California laboratory, the Department of Health Services, Office of Environmental Health Hazard Assessment and Department of Pesticide Regulation. Project collaborator for the California-EPA's project on Environmental Protection Indicators for California Conducted a farmworker safety outreach focus group in Watsonville, California from 2001 through 2002. The focus group was comprised of farmworkers, growers, farm bureau, health providers and their staff and government agencies. Participates in the farmworker health initiative focus group in San Diego county to discuss farmworker health issues especially those that pertain to pesticide use and safety.

## Additional Education & Training

Executive Management Training, University of California, Davis

Chairperson on Oral Examination Training