

BIODATA

1. **NAME: SUSAN MAY FERROLINO- CALUMPANG**

2. **DATE AND PLACE OF BIRTH:**

September 15, 1953
Dumaguete City, Negros Oriental



3. **EDUCATIONAL BACKGROUND:**

- a) Ph.D. Agricultural Chemistry
Tokyo University of Agriculture, 1997
(Through JSPS Ronpaku Scholarship)
Dissertation: Chemical Basis for the Population Reduction of *Ostrinia furnacalis* Guenée in Corn Fields with *Ipomoea triloba* L.
Adviser: Prof. Hiroshi Honda
- b) M.S. Agricultural Chemistry
University of the Philippines Los Baños, 1983
Thesis: Insecticidal Activity Screening and Identification of the Major Crystalline Fraction of *Artemisia vulgaris* Linn. (Compositae)
Adviser: Dr. William G. Padolina
- c) B.S. Chemistry, **cum laude**
Silliman University, Dumaguete City 1974
Adviser: Dr. Nona Calo

4. **EMPLOYMENT RECORD:**

Assistant to the Vice Chancellor for Research and Extension
University of the Philippines Los Baños, 2014 to present

Scientist 1, Civil Service Commission- DOST, 2014 to present

Director	National Crop Protection Center College of Agriculture University of the Philippines Los Baños College, Laguna, 2003-2006
University Researcher V	NCPC, UPLB, 2000-present
University Researcher III	NCPC, UPLB, 1984-2000
University Research Associate	NCPC, UPLB, 1982-1983
University Research Assistant	NCPC, UPLB, 1978-1981

Instructor	Silliman University, Chemistry Department, Dumaguete City, 1975-1978
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5. **CIVIL SERVICE ELIGIBILITY:**

Licensed Chemist - 6th Place Government Licensure Exam, Professional
Regulatory Commission, Nov. 1974

6. PUBLICATIONS

a.1. Technical Publications:

Chemical ecology: Pioneering work on chemical ecology or insect-plant interaction, related to cultural control, in particular intercropping and companion planting, led to the identification of appropriate companion plants and chemicals from plants that repel / attract major insect pests such as Asian corn borer, the mango pulp weevil, eggplant fruit shoot borer and cut worm thereby reducing pesticide use, improving farmers' income and providing pest management options for organic or low-input production of intercropped vegetables or companion planting strategies. This elucidation of the chemical bases for insect behaviour explores other ecological approaches for insect pest management, such as cultural control, based on basic science information generated by research.

1. **Calumpang, S.M.F.**, J.R. Medina, S. Kato, K. Ohsawa and H. Honda. 1995. Influence of three-lobed morning glory, *Ipomoea triloba* L. extracts on the parasitization and arrestment behavior of the parasitoid, *Trichogramma evanescens* Westwood (Hymenoptera:Trichogrammatidae). Phil. Agr. 78 (3&4) 323-330.
2. **Calumpang, S.M.F.**, J.R. Medina, S. Kato, K. Ohsawa and H. Honda. 1997. Oviposition behavior of *Ostrinia furnacalis* Guenee in the presence of three-lobed morning glory, *Ipomoea triloba* L. J. Agric. Sci. 42(1)1-11.

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3. **Calumpang, S.M.F.** , J.R. Medina, K. Ohsawa, T. Mitsui and H. Honda. 2000. Chemical basis for the population reduction of the Asian corn borer on corn entwined with *Ipomoea triloba* L. J. International Society for Southeast Asian Agricultural Sciences (ISSAAS). 6:28-42.
4. L. R. A. de Jesus, **S. M. F. Calumpang**, J. R. Medina, and K. Ohsawa. 2003. Component Fatty Acids from Green Mango Fruit Surface Stimulate Oviposition of the Mango Pulp Weevil, *Sternochetus frigidus* (Fabr.). Phil. Agric. Scientist vol. 86 No. 1, 38-45.
5. L.R.A. De Jesus, J. R. Medina, **S.M.F Calumpang** and K. Ohsawa. 2003. Feeding and Reproductive Behavior of the Mango Pulp Weevil *Sternochetus frigidus* (Fabr.) at Different Phenological Stages of Mango, *Mangifera indica* L. The Phil. Agricultural Scientist, Vol. 86 No. 3, 282-289.
6. L.R.A. De Jesus, J. R. Medina, **S.M.F Calumpang** and K. Ohsawa. 2004. Floral Volatiles of *Mangifera indica* L. (cv. Carabao) attractive to *Sternochetus frigidus* (Fabr.) (Coleoptera:Curculionidae), L. The Phil. Agricultural Scientist, Vol. 87 No. 1, 23-35.
7. **Susan May Calumpang**, Gil L. Magsino, Melvin Ebuenga, Rolando G. Bayot, Daniel G. Vargas, Flor V. Bariuan and Ernesto B. Cayaban Jr 2012. Incidence of arthropod pests and natural enemies in rice-tagbak (*Alpinia elegans* (Presl.) Schum.) and vegetable cropping systems without insecticide application. Silliman Journal. 53(1)19-51

8. **SMF Calumpang** and MV Navasero. 2013. Behavioral response of Asian corn borer, *Ostrinia furnacalis* Guenee (Lepidoptera: Pyralidae) and earwig [*Euborelia annulipes* Lucas (Dermaptera: Anisolabiidae)] to selected crops and weeds associated with sweet corn. The Philippine Agricultural Scientist. Vol. 96, No.1, 84-90. March 2013
9. Mario V. Navasero and **Susan May F. Calumpang**. 2013. Influence of intercropping vegetable crops on the population of some arthropods associated with eggplant (*Solanum melongena* L.) and damage potential of eggplant fruit and shoot borer (*Leucinodes orbonalis* Guenee) in the presence of radish (*Raphanus sativus* L.). Philippine Agricultural Scientist. Vol. 96, No.3: 148-156. September 2013
10. **Susan May F. Calumpang**, RG Bayot, DG Vargas, MD Ebuenga and PG Gonzales. 2013. Impact of intercropping lemon grass on infestation of eggplant fruit and shoot borer (*Leucinodes orbonalis* Guenee) in eggplant (*Solanum melongena* L.). Silliman Journal, 54(1)114-130.
11. **Susan May F. Calumpang**. 2013. Behavioral response of *Spodoptera litura* (F) (Lepidoptera: Noctuidae) to selected herbs and eggplant. J ISSAAS 19(2)95-103.
12. Mario V. Navasero, Marcela M. Navasero, Maureen Ceres dL. de Roxas and **Susan May F. Calumpang**. 2013. Occurrence of the Moraceae-feeding Bombycid, *Trilocho varians* (Walker) (Bombacidae, Lepidoptera) as pest of jackfruit and some ornamental species of *Ficus* in the Philippines. J ISSAAS 19(2): 41-48.
13. **Susan May F. Calumpang**, Gideon Burgonio, Marcela M. Navasero, Mario V. Navasero. 2013. Behavioral and olfactory responses of rice green leaf hopper, *Nephotettix virescens* (Distant) to volatile cues from tagbak (*Alpinia elegans* (C. Presl) K. Schum). Phil J Sci. 142(2)
14. **Susan May F. Calumpang**, Gideon Burgonio, Marcela M. Navasero, Mario V. Navasero. 2014. Repellency of Kakawate, *Glyricidia sepium* (Jacq.) Walp., to Rice Green Leafhopper, *Nephotettix virescens* (Distant) (Hemiptera:Cicadellidae). Philippine Agricultural Scientist. 97(2) 148-154.

Pesticide management: Good agricultural practices for many crops include the use of pesticides. While these chemicals are used for pest management, these must be used properly. There is therefore a need to assess risk for consumers (dietary risk) as well as for pesticide applicators (applicator exposure) and provide risk managers (Fertilizer and Pesticide Authority, pesticide industry) with tools for risk communication. Research output from projects on impact of pesticide use in agriculture were used to produce the manual on Good Agricultural Practices and Philippine National Standards for mango by DA BAFPS and leaflets, as well as for my training materials for LGU technicians, pesticide company representatives and various stakeholders. This manual was used in a nationwide training of trainers by DA BAFPS, to improve the quality of our mango exports and prevent rejection due to non-compliance to Maximum Residue Limits (MRLs). This development demonstrates how the information generated in my research has been translated to training outputs and policy decisions in risk assessment, risk management and risk communication in various levels of government and private agencies.

1. Magallona, E.D., A.W. Tejada, E.B. Lakan Ilaw, J.A. Alcantara and **S.M. Ferrolino**. 1981. A modified approach to insecticide residue data generation. *Philipp. Ent.* 5(1): 91-104.
2. **Ferrolino-Calumpang, S.M.** and W.G. Padolina. 1985. Insecticidal activity screening and isolation of the major crystalline fraction of *Artemisia vulgaris* L. *Phil. Agr.* 68(2): 249-261.
3. **Calumpang, S.M.F.**, A.W. Tejada and E.D. Magallona. 1985. Photo decomposition of nine organophosphorus insecticide formulations using a sunlamp. *Philipp. Ent.* 6(2):191-204.
4. Magallona, E.D., A.W. Tejada, **S.M.F. Calumpang** and M.J.V. Barredo. 1988. Radio tracer studies of pesticide residues in plants at the NCPC, UPLB, Laguna. *Phil. Agr.* 71(1): 65-75.
5. **Calumpang, S.M.F.**, M.J.V. Barredo and E.D. Magallona. 1988. Radio tracer studies on ¹⁴C-zineb in cabbage and soil. *Phil. Agr.* 71(2): 139-147.
6. **Calumpang, S.M.F.**, M.J.V. Barredo and E.D. Magallona. 1988. Ethylenebisdithiocarbamate fungicide residues in processed cabbage and cucumber fruit. *Phil. Agr.* 71(4): 397-401.
7. **Calumpang, S.M.F.**, M.J.V. Barredo, N.P. Roxas and E.D. Magallona. 1989. Mancozeb and ethylene thiourea residues in cucumber, soil and a stored commercial formulation. *Phil. Agr.* 72(3):381-390.
8. Tejada, A.W., **S.M.F. Calumpang**, M.J.V. Barredo and E.D. Magallona. 1989. Insecticide residues in field sprayed string beans (*Vigna sesquipedalis* Fruw.) I. Monocrotophos, fenvalerate, cypermethrin, BPMC + chlorpyrifos. *Phil. Agr.* 72(3):391-400.
9. **Calumpang, S.M.F.**, M.J.B. Barredo, N.P. Roxas and E.D. Magallona. 1990. Residues of mancozeb and ethylene thiourea in cucumber treated with ¹⁴C-mancozeb under field conditions. IAEA-TECDOC-554, Vienna, Austria, 61-72.
10. **Calumpang, S.M.F.**, M.J.V. Barredo, N.P. Roxas and E.D. Magallona. 1990. Studies of ¹⁴C-mancozeb fungicide and ¹⁴C-ethylene thiourea in silty clay loam soil (Summary). IAEA-TECDOC-554, Vienna, Austria, 105-106.
11. Tejada, A.W., **S.M.F. Calumpang** and E.D. Magallona. 1990. The fate of carbofuran in rice, fish and livestock farming. *J. Tropical Pest Management* 36:237-243.
12. Tejada, A.W., **S.M.F. Calumpang** and N.B. Gambalan. 1991. Effect of processing on residues of chlorpyrifos in stored rice and corn. *Phil. Agr.* 73(3-4) 375-386
13. Medina, J.R., **S.M.F. Calumpang** and M.J.B. Medina. 1991. Insecticide residues in selected well waters in Calauan and Calamba, Laguna. *Phil. Agr.* 74(2) 195-205.

14. Medina, M.J.B., **S.M.F. Calumpang**, A.W. Tejada, J.R. Medina and E.D. Magallona. 1992. Fate of endosulfan in a rice-fish ecosystem. IAEA - TECDOC 695, Vienna, Austria, pp. 33 - 45.
15. Medina, M.J.B., **S.M.F. Calumpang**, A.W. Tejada, J.R. Medina and E.D. Magallona. 1992. Fate of chlorpyrifos in a model rice-fish ecosystem. IAEA- TECDOC 695, Vienna, Austria, pp. 83 - 93.
16. **Calumpang, S.M.F.**, M.J.B. Medina, N.P. Roxas and E.D. Magallona. 1993. Movement and degradation of mancozeb fungicide and its metabolites, ethylene thiourea and ethyleneurea in silty clay loam soil. *J. Tropical Pest Management*. 39(2) 161-166.
17. Paningbatan, E.P., J.R. Medina, **S.M.F. Calumpang** and M.J.B. Medina. 1993. Movement of monocrotophos and endosulfan in saturated soil. *Phil. Agr.* 76(3)259-268.
18. **Calumpang, S.M.F.**, J.R. Medina, S. Kato, K. Ohsawa, I. Yamamoto, and H. Honda. 1994. Effect of *Ipomoea triloba* L. (Convolvulaceae) on feeding, growth and oviposition of *Ostrinia furnacalis* Guenee (Lepidoptera). *J. Agric. Sci.* 39(3):159-169.
19. Tejada, A.W., **S.M.F. Calumpang** and B.B. Quintana. 1994. Residues of ¹⁴C-chlorpyrifos in coconut using radiotracer techniques. *Phil. Agr.* 77(2)161-167.
20. **Calumpang, S.M.F.** 1994. Fate of niclosamide in various components of a fish and prawn pond ecosystem. *Phil. Agr.* 77(4)393-401.
21. **Calumpang, S.M.F.**, M.J.B Medina and A.W. Tejada. 1994. Cattle dipping practices in the Philippines and the degradation of coumaphos in a simulated cattle dip. *Phil. Agr.* 77(4)455-462.
22. Tejada, A.W., L.M. Varca and **S.M.F. Calumpang**. 1994. Development of a rapid field method for the detection of organophosphate insecticides. *Phil. Agr.* 77(4) 447-454.
23. Ohsawa, K., S. Kato, J.R. Medina, **S.M.F Calumpang**, M.J. Barredo-Medina and N.T. Saavedra. 1994. Screening of various Philippine plants for pesticidal activity. Sanchez, F.F. and K.Ohsawa (Eds.) *Natural Bio-Active Substances in Tropical Plants*. NODAI Center for International Programs. Tokyo University of Agriculture.
24. **Calumpang, S.M.F.**, M.J.B. Medina, A.W. Tejada, and J.R. Medina. 1995. Environmental impact of two molluscicides: niclosamide and metaldehyde in a rice paddy ecosystem. *Bull. Environ. Contam. Toxicol.* 55:494-501.
25. **Calumpang, S.M.F.** 1995. Exposure of four Filipino farmers to methyl parathion while spraying string beans. *Pestic. Sci.* 46(1):93-102.
26. Tejada, A.W., L.M. Varca, **S.M.F. Calumpang** and C.M. Bajet. 1995. Pesticide residues in foods affected by crop protection practices. *ASEAN Food J.* 10(2):1-5.

27. Tejada, A.W., L.M. Varca, **S.M.F. Calumpang**, P.P. Ocampo, M.J.B. Medina, C.M. Bajet, E.P. Paningbatan, J.R. Medina, V.P. Justo, C. dL. Habito, M.R. Martinez and E.D. Magallona. 1995. Assessment of the Environmental Impact of Pesticides in Paddy Rice Production. P.L. Pingali and P.A. Roger (eds). Impact of Pesticides on Farmer Health and the Rice Environment. IRRI. pp.149-180.
28. **Calumpang, S.M.F.** and A.W. Tejada. 1995. Insecticide residues in eggplant (*Solanum esculentum*) and okra (*Hibiscus esculentum*). Phil. Agr. 78 (2): 119-128.
29. Medina, M.J.B., **S.M.F. Calumpang**, G. L. Magsino, J.R. Medina. 1995. Shoot and root inhibition of cucumber, corn and rice by some plant extracts. Phil. Agr. 78(2):129-136.
30. Tejada, A.W., **S.M.F. Calumpang** and E.D. Magallona. 1995. Effect of processing on residues of ¹⁴C-chlorpyrifos in coconut oil. IAEA-TECDOC-818. Isotope aided studies of pesticide residues during food processing. International Atomic Energy Agency, Vienna, Austria. pp. 41-44.
31. **Calumpang, S.M.F.**, M.J.B Medina and A.W. Tejada. 1995. Leaching behavior of coumaphos from a spent cattle dip solution and its bioavailability to plants. Phil. Agr. 78(3&4)315-321.
32. **Calumpang, S.M.F.** and M.J.B. Medina. 1996. Applicator exposure to imidacloprid while spraying mangoes. Bull. Environ. Contam. and Toxicol. 57:697-704.
33. **Calumpang, S.M.F.**, M.J.B. Medina A.W. Tejada, and J.R. Medina. 1997. Toxicity of chlorpyrifos, fenubucarb, monocrotophos and methyl parathion to fish and frogs after a simulated overflow of paddy water. Bull. Environ. Contam. and Toxicol. 58:909-914.
34. Medina, J.R.M., S.P. Catelo, D.P. Callo, Jr., **S.M.F. Calumpang**. 1998. Implementation of IPM: The Philippine Experience. Research and Implementation System (RIS) Biotechnology and Development Review. pp. 73-86.
35. Medina JR and **SMF Calumpang**. 2006. Insecticides and Insecticide Use. *In* Judicious Use of Insecticides, Bridging the gap between agriculture and public health in the Philippines, CB Adalla (Ed.) ACT Malaria, pp.9-25

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36. **Calumpang, S. M. F.**, G. G. L. Morillo, M. E. Flavier and B. B. Quintana. 2001. Further method development and Improvement of the accuracy of Rapid Test Kits for pesticide residue analysis. Phil. Agric. Scientist Vol. 84 (4) 362-374.
37. **Calumpang, S. M. F.**, G.G.L. Morillo, M. E. Flavier, J. H. Santos, and B. B. Quintana. 2001. Development of rapid methods of detecting pesticide residues in stored grains. Phil. Agric. Scientist Vol. 84 (3): 246-254.

38. **Calumpang, S.M.F.** 2003. Applicator exposure to the insecticides deltamethrin, cypermethrin, imidacloprid and profenofos sprayed on crops of different canopy heights. *The Philippine Agricultural Scientist*, Vol. 86 No. 3, 266-281.
39. J. R. Medina, O. S. Opina, L.R.A. De Jesus, and **Calumpang, S.M.F.**, 2005. Development of integrated pest management for mango in Palawan, Philippines *The Phil. Agricultural Scientist*, Vol. 88 No. 4, 453-461.

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39. FC Sta Cruz, R.G. Bayot, J.C.E. Ontoy, P.R.V. Elvira, A.M. Fabro, E.C. Marfori and **S.M.F. Calumpang**. 2010. Detection and transmission of *Candidatus liberibacter* sp. causing leaf mottling of citrus species grown in three provinces of Southern Luzon, Philippines. *Phil. J. Crop. Science* 35(1): 53-61.

2. Non-Technical Publications:

1. **Calumpang, S.M.F.**, M.J.V. Barredo and E.D.Magallona. 1988. EBDC fungicide residues in cabbage. *NCPC, Newsletter*. 2(3-4).
2. **Calumpang, S.M.F.**, A.W. Tejada and M. M. Hoque. 1988. Insecticide residues in market basket samples: String beans (1987). *NCPC Newsletter* 2(3-4).
3. **Calumpang, S.M.F.**, M.J.V. Barredo and E.D.Magallona. 1989. Effect of washing and cooking on EBDC fungicide residues in cabbage. *NCPC Newsletter* 3(1)
4. **Calumpang, S.M.F.**, and A.W. Tejada. 1989. Insecticide residues in string beans: Effect of washing. *NCPC Newsletter* 3(1).
5. **Calumpang, S.M.F.** 1994. Effect of rainfall on the dissipation of some insecticide formulations on pechay. *NCPC Newsletter*.

b. Technical Bulletins/ Leaflets:

1. **Calumpang, SMF.** 2005. How to Reduce Pesticide Residues in Fruits and Vegetables. OVCRE, UPLB
2. Medina, J.R., C. T. Cardenas, **S.M.F. Calumpang**, J. V. Bariuan, G. Peralta, J. P. Descalsota, R. Z. Tamayo and D. G. Ramos. 2003. Bayan-Anihan Para sa Magsasakang Siyentista. A Strategy to Promote Sustainable Rice Technologies in ARC-ARISP Communities. *PhilRice Technical Bulletin*
3. **Calumpang, S.M.F.** and A.W. Tejada. 2000. Reducing pesticide residues in our food. *NCPC Bulletin*.
4. **Calumpang, S.M.F.** 2000. Proper Use of Pesticides in Mango Production. *NCPC Bulletin*.
5. **Calumpang, S.M.F.** 1996. Reducing Stringbean Farmers' Exposure to Pesticides. *NCPC Bulletin*.
6. **Calumpang, S.M.F.** 1996. Reducing Stringbean Farmers' Exposure to Pesticides. *NCPC Bulletin*. Tagalog Version.

7. **Calumpang, S.M.F.** 1996. Reducing Stringbean Farmers' Exposure to Pesticides. NCPC Bulletin. Ilonggo Version.
8. **Calumpang, S.M.F.** 2005. How to reduce pesticide residues in food, 2005. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
9. **Calumpang, SMF**, Gideon Aries Burgonio, Marcela M. Navasero Mario V. Nasvasero, Gil L. Magsino . 2013 Tagbak repels green leaf hoppers in rice. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
10. **Calumpang, SMF**, Gideon Aries Burgonio, Marcela M. Navasero Mario V. Nasvasero, Gil L. Magsino . 2013 Tagbak (Tagalog) National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
11. **Calumpang, SMF** and Gil L. Magsino. 2013 Corn entwined with *Ipomoea* emits a repellent chemical against the Asian corn borer. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
12. **Calumpang, SMF**, and Mario V. Nasvasero. 2013. Eggplant intercropped radish has fewer eggplant fruit and shoot borer, legumes reduce leafhoppers and thrips. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
13. **Calumpang, SMF**, Gideon Aries Burgonio. 2015. Kakawate repels green leafhopper in rice. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños
14. **Calumpang, SMF** and RG Bayot. 2015. Lemon grass repels eggplant fruit and shoot borer. National Crop Protection Center, College of Agriculture, University of the Philippines Los Baños

c. Manual/ Book

1. Medina, J.R.M., S.M.F. Calumpang, G.L. Magsino and K. Ohsawa. 1997. Basic Survey on Technical cooperation for Improved Safety of Philippine Agricultural Products. Japan External Trade Organization (JETRO)
2. Medina, JR and SMF Calumpang. 2006. Insecticides and Insecticide Use. Chapter in book. Judicious Use of Insecticides. Pp. 9-26. In Adalla, CB (ed.) Bridging the Gap between Agriculture and Public Health in the Philippines. ACT Malaria, Philippines, 240 pp.
3. Technical Working Group for the Establishment of GAP Manual for Mango. 2009. Philippine National Standard. Code of Good Agricultural Practices (GAP) for Mango PNS/BAFPS 45:2009. ICS 65.020.20
4. Calumpang, SMF. Pesticide Management (Module 6) Good Agricultural Practice (GAP) for Mango. Mango GAP Training Manual. Dept of Agric -BAFPS.

d. Proceedings:

- 1 Tejada, A.W., L.M Varca, **S.M.F. Calumpang** and C.M. Bajet. 1998. Enzyme inhibition and other rapid techniques for pesticide residue detection. ACIAR Proceedings #85. Seeking Agricultural Produce Free of Pesticide Residues. pp. 223-234.

e. Posters

Calumpang, SMF. 2005. How to Reduce Pesticide Residues in Fruits and Vegetables.

Calumpang, SMF. 2005. How to Reduce Exposure to Pesticides. NCPC, UPLB

Calumpang, SMF. Gideon Aries Burgonio, Marcela M. Navasero Mario V. Nasvasero. 2013. Kakawate volatile chemicals repel green leafhopper (Berdeng Ngusong Kabayo). NCPC, UPLB

Calumpang, SMF. Gideon Aries Burgonio, Marcela M. Navasero Mario V. Nasvasero. 2013. Volatile organic chemicals of tagbak repel green leaf hopper of rice. NCPC, UPLB

Research Accomplishment:

A. Research Completed

1. Development of rapid method for residues of commonly used pesticides, Researcher, 1979-1981
2. Insecticidal activity of *Artemisia vulgaris* and *Lantana camara*, Researcher, 1979-1983
3. Pesticide management survey of selected rice and vegetable producing areas in the Philippines, Researcher, 1979
4. Gas chromatographic relative retention times of several formulated insecticides, Researcher, 1981
5. ¹⁴C-EBDC fungicides in cabbage, Project Leader, 1984-1987
6. ¹⁴C-EBDC fungicides in cucumber, Project Leader, 1987-1988
7. Degradation and persistence of chlorpyrifos in soil, Study Leader
8. Radio tracer studies on ¹⁴C-mancozeb in soils, Project Leader, 1988-1989
9. IAEA Technical Assistance on Pesticide Residues Using Nuclear Techniques, Study Leader
10. Effect of processing on degradation of pesticides, Study Leader
11. Predictive approach to pesticide degradation, Study Leader, 1979-1989
12. Model approach to pesticide residue data generation of commonly used insecticides in string beans, Study Leader
 - a. Supervised pesticide residue degradation trials at UPLB, CES, 1990- 1992
 - b. Monitoring of pesticide residues in market basket samples of okra and eggplants from major market outlets in Manila and Laguna, 1990- 1992
13. Endosulfan in rice-fish ecosystem, Study Leader, 1989
14. Effect of processing on residues of ¹⁴C- chlorpyrifos in stored rice, 1989-1990, Project/Study Leader
 - a. Degradation of chlorpyrifos in stored rice
 - b. Effect of washing and cooking on chlorpyrifos residues in rice
 - c. Bound residues of chlorpyrifos in rice
15. Movement of pesticide residues in soil and ground water, Study Leader, 1989-1991.
 - a. Movement of organophosphate insecticide residues in saturated clay loam and sandy loam soil, 1989-1991
 - b. Movement and persistence of organochlorine insecticide residues in saturated clay loam and sandy loam soil, 1989-1991
 - c. Leaching of herbicide residues in saturated clay loam and sandy loam soil, 1990-1991

16. Evaluation of promising plants for herbicidal activity, Project Leader
 - a. Effect of some selected plants or weeds on rice and corn, 1988 – 1993
17. Studies on Ethylenebisdithiocarbamate (¹⁴C-mancozeb fungicide and ¹⁴C-ethylene thiourea) fungicide residues, Project Leader, IAEA, 1987-1990
18. Persistence of acaricides in cattle dips. Coumaphos. Project Leader. 1991 -95. IAEA
 - a. Acaricide dissipation, degradation and binding to sediment
 - b. Effect of pH, temperature and microbial activity on the stability of acaricides
 - c. Movement of coumaphos and its metabolites in soil.
 - d. Bioavailability and uptake of coumaphos and its metabolites by plants.
19. Monocrotophos residues in well waters, Study Leader, 1992- 1995.
 - a. Survey of pesticide history in 4 major rice-producing areas. 1-year
 - b. Monitoring of monocrotophos residues in well waters in major rice producing areas of the Philippines 1992 - 1995.
20. Chemical basis for the reduction of the population of the Asian corn borer in the presence of *Ipomoea triloba*, Project Leader. 1991 - 1996.
 - a. Effect of *Ipomoea triloba* on feeding, growth and oviposition of *Ostrinia furnacalis* Guenee in a laboratory culture, 1991 - 1994
 - b. Attractancy and repellency of *Ipomoea* species to *Ostrinia furnacalis* adults, 1991 -1996.
 - c. Fractionation, isolation and characterization of the active plant principle.1994-1996.
 - d. Effect of *Ipomoea triloba* on the behavior of the parasitoid, *Trichogramma evanescens*. 1994-1995
 - e. Chemical profile changes in plant volatiles of corn and *Ipomoea triloba*. 1995-1996.
 - f. Attractancy and repellency of corn volatiles to *Ostrinia furnacalis* adults, 1997.
21. Human exposure to pesticides in rice and stringbean production, Project Leader. 1993 - 1996.
 - a. Exposure of farmers to pesticides in rice production 1993 - 1994.
 - b. Exposure of farmers to pesticides in stringbean production 1993 - 1996.
 - c. Effect of laundering on pesticide residues in farmer attire, 1993 - 1995.
22. Establishment of maximum residue limits and degradation of some selected pesticides in rice and fruits. Study Leader.
 - a. Effect of storage on fungicide residues in bananas. 1994, 1997.
 - b. Effect of storage on imidacloprid residues in bananas. 1994.
 - c. Worker exposure to imidacloprid in mango production. 1994.
 - d. Degradation of imidacloprid residues in banana after bud injection. 1994.
23. Farmer's exposure to pesticides and evaluation of the use of protective clothing, 1994 to 1998. Project Leader. PCARRD-DOST
 - a. Farmers' exposure to insecticides in mango production. 1994- 1995.
 - b. Farmers' exposure to insecticides in ampalaya production. 1995-1997.
 - c. Farmers' exposure to insecticides in cabbage production.1997-1998.

24. Development of site-specific IPM program in mango. Study Leader. PCARRD. 1998-2000
25. Refinement of the Rapid Test Kit and development of rapid test for pesticide residues in grain
26. Evaluating biofumigation for soil borne disease management in tropical vegetable production. Study Leader. ACIAR 2001 to 2002.
27. Behavioral control of the mango pulp weevil. Co-project leader. DA-BAR. 1998.
28. Chemically-mediated insect behavior in a sustainable herb-vegetable cropping system. Project Leader, DA-BAR 2001 to 2002, to 2006 - NCPC, UPLB
29. Dietary risk assessment of pesticides used in the Philippines, Project Leader, DFI - NCPC, UPLB.
30. Behavioral response of *Ostrinia furnacalis* and its natural enemies to volatile chemicals of selected plants and weeds closely associated with corn. DA-GMA CORN, 2004-2005
31. Influence of herbs as companion plants for eggplant insect pest management, 2007-2010 NCPC Core funds
32. Risk assessment and mitigation for organophosphate insecticide use in vegetables, NCPC Core Funds
33. Assessment of Drift from Aerial Spraying in Banana Plantations, 2011
34. Effect of Radish (*Raphanus sativus*) on the Oviposition Preference and Adult Behavior of Fruit shoot borer (*Leucinodes orbonalis*), 2011- 2012.
35. Behavioral response of common cutworm to eggplant and selected herbs: Oviposition preference, Host-plant finding behavior, Larval mobility, feeding and survival
36. Effect of Basil (*Ocimum basilicum*) and Marigold (*Tagetes erecta*) on the Oviposition Preference and Moth Behavior of Eggplant Fruit shoot borer (*Leucinodes orbonalis*), NCPC Core Funds, College of Agriculture, UPLB, 2013-2014
37. Volatile Organic Chemical Profile of eggplant (*Solanum melongena*), tagbak (*Kolowratia elegans*) and kakawate (*Glyricidia sepium*) with implications to pest management of selected major insect pests of rice, eggplant and tomato, NRCP-DOST, 2012-2014

B. On-Going Researches

1. Appropriate postharvest technologies and mitigating measures to ensure quality and food safety in intact, fresh-cut and sprout vegetables, PCAARRD-DOST, 2013-2015
2. ASEAN Tropical Fruit Residue Project: Supervised Pesticide Residue Trials (SPRT) for Admiral 10EW (Pyriproxyfen) on Papaya, ASEAN-USDA, 2014 to present
3. Olfactory and behavioral response of eggplant fruit and shoot borer (*Leucinodes orbonalis*) and common cutworm (*Spodoptera litura*) to tagbak (*Alpinia elegans*) volatile organic chemicals, NCPC Core Funds, 2015 to 2016
4. Development of sensitive sensors for insecticide residues in fruits and vegetables to address current MRLs, PCIEERD-DOST, Nov 2014 – present
5. Utilization of Sargassum seaweed against Asian Corn Borer for increased corn productivity, DA-BAR, August, 2015 – to present

8. Training and Extension Activities

As Resource Person on Pesticide Residue Analysis

- a. Apprenticeship Training on Pesticide Residue Analysis for Mohd. Zulkifli from MARDI, Malaysia, Aug. 1- Oct. 31, 1982, NCPC, U.P. at Los Banos (Resource Person) 32 hours.
- b. Tenth Youth Research Apprenticeship Action Program (YRAAP), April 24 - May 17, 1985, U.P at Los Banos (Adviser) 128 hours.
- c. Apprenticeship Training Course on Pesticide Analysis for 2 Indonesian Trainees, May 1 - June 15, 1988, NCPC, U.P. at Los Banos (Resource Person) 39 hours
- d. Specialized Course on Research Methodologies in Integrated Pest Management (IPM) for Rice and Rice-based Farming Systems, NCPC, UPLB, May 2-30, 1989 (Resource Person) 10 hours
- e. Specialized Course on Research Methodologies in Integrated Pest Management (IPM) for Rice and Rice-based Farming Systems, NCPC, UPLB, April 16 - May 15, 1990 (Resource Person) 10 hours
- f. Training on Integrated Pest Management (IPM) for Food and Agriculture Organization (FAO) Fellows from Tanzania, April 15 - 19, 1991, U.P. at Los Baños-Lecturer, 4.5 hrs.
- g. Pesticide Management Training Course in IPM for Provincial Agricultural Development Specialists in Crop Protection, June 4,5,18,19,1990, NCPC, U.P. at Los Banos, Lecturer, 10 hrs.
- h. Pesticide Management Training Course in Integrated Pest Management for Provincial Agricultural Development Specialists in Crop Protection, June 2 - 9 and 16 - 23, 1991 National Crop Prot. Center, College of Agriculture, U.P. at Los Baños - Lecturer, 10 hrs.

As Resource Person on Pesticide Management for Good Agricultural Practice

Importance of Protective Garments while Spraying. Safe Use of Pesticides Seminar Series. FPA-Bayer-FMC sponsored, Zarraga and Oton, Iloilo, Jan 21 - 23, 1996

Pesticide Management, UP CIDS -Education Research Project, Valencia, Negros Oriental, April 27 - May 5, 1996.

Lecture on Pesticide Management, Refresher Course for Pest and Disease Diagnosis and Management in Rice, Corn, Vegetables and Other Crops, NCPC, UPLB, May 15-26, 2000, June 20-30, 2000.

Pesticide Management in Banana Production. FPA Product Stewardship Program, Davao, January 29-30, 2007

Pesticide Management in Mango Production. Resource Speaker Training of Trainers in Mango Production, Croplife Phils/ FPA, Cebu and Davao, December 2007

Pesticide Management, Resource Speaker DA-BAFPS, Good Agriculture Practices (GAP) in Mango, Training for Mango Contractors, Zambales, Tarlac, Pampanga, Nueva Ecija, Bulacan, Dagupan, La Union, Nueva Vizcaya, Isabela, Davao , 2010- 2011

Pesticide Management, Resource Speaker, DA-BAFPS, Good Agriculture Practices (GAP) in Mango, Training of Trainers

1. Lipa Batangas, August 18, 2010
2. Iba, Zambales, October 6, 2010
3. Dumaguete City (Oct 3-7, 2011)
4. Dipolog City (October 17-23, 2011)
5. Leyte State University (July 2012)
6. Nabua, Camarines Sur (August 3-10, 2012)
7. Butuan City (Oct. 15-22, 2012),
8. Cagayan de Oro City (Oct. 22-26, 2012)
9. Zamboanga City, Zamboanga del Sur (Nov 19-23, 2012)
10. Digos City, Davao del Sur (Dec. 10-13, 2012)

Pesticide Management, Resource Speaker NCPC, UPLB Master's Training on Mango Production: Tactics, Insects, Disease and Pesticide Resistance, Post Harvest and Food Safety.

1. Bustos, Bulacan (Sept 14-16, 2011),
2. Cebu City (Sept 21-23, 2011)
3. General Santos City (Oct 12-14, 2011)

Pesticide Management, Resource Speaker, Refresher Course on Rice, Corn and Vegetables

1. National Crop Protection Center, UPLB, Iloilo and Davao, 2007.
2. National Crop Protection Center, UPLB, Sept 4 -7, 2012
3. National Crop Protection Center, UPLB, April 18, 2013.
4. National Crop Protection Center, UPLB, March 10-14, 2014
5. National Crop Protection Center, UPLB, July 23, 2015

International Training of Trainers on Good Agricultural Practices (GAP) for Mango, Bayview Park Hotel and Subic City, Resource Speaker, Pesticide Management in Mango GAP. ASEAN sponsored through ATI, DA October 8-11, 2013

Pesticide Management, Resource Speaker in Training: Identification and management of pests and diseases in various crops, TREES, UPLB and Davao City, October 7 -23, 2013.

Training of Trainers on Good Agricultural Practices (GAP) for Mango, Queen Margaret Hotel, Lucena City, Resource Speaker, Pesticide Management in Mango GAP. Sponsored by ATI, Reg 4A, DA, February 2014

As Resource Person on Pesticide Management for Agrarian Reform Beneficiaries and LGUs

DAR-ARISP II Volunteerism Project for Agricultural Development in Agrarian Reform Communities. Project Leader, Oct. 1-Dec. 31, 2004.

Facilitator's Training Workshop for Participatory Approach to Agricultural Extension on Rice, PhilRice-Maligaya, Munoz, Nueva Ecija. Ugnayan ng Pahinungod, October 18-21, 2000.

Facilitator's Training Workshop for Participatory Approach to Agricultural Extension, Comprehensive, Integrated and Sustainable Development Program for Lopez Jaena, UP-Education Research Program (ERP), Lopez Jaena, Misamis Occidental, October 24-28, 2000.

Rice-based Technology Adoption Facilitation Training, Inland Hotel, Butuan City, Oct. 21-29, 2003

KASAKALIKASAN Corn Specialists Training, University of Southern Mindanao, Kabacan, North Cotabato, Feb 1-3, 2006

Paper: Scientific Basis for the Asian Corn Borer-*Ipomoea triloba*-Maize Complex in Managing Insect Pests

As Resource Person on Scientific Writing

Writeshop on Writing a Publishable Paper for Bicol University Faculty and Researchers, Lake Buhi Resort, Buhi, Camarines Sur, July 28-30, 2012

Technical Editor:

1. Journal of International Society for Southeast Asian Agricultural Sciences. (2 issues per year, 2002 – 2013)
2. Manual, Integrated Production and Pest Management (IPPM) in Processing Tomato, DA-KASAKALIKASAN, present
3. Potato Scab Management in Vietnam and Japan, Academic Frontier Research Project, Tokyo University of Agriculture, 2008

9. **Recognition Received:**

2013 Achievement Award Research, Kapisanan ng mga Kimiko sa Pilipinas – Southern Tagalog Chapter, October 2013, SEARCA, UP Los Baños

NRCP First Prize Scientific Poster, Cluster IV. SMF Calumpang, MM Navasero and GA Burgonio. 2013. Volatile Organic Chemicals of Tagbak, *Alpinia elegans* (C. Presl.) K. Schum) Repel Rice Green Leafhopper (*Nephotettix virescens* (Distant). National Research Council of the Philippines, General Membership Assembly, Manila Hotel, March 13, 2013

NAST Outstanding Scientific Paper. 2009. J. R. Medina, O. S. Opina, L.R.A. De Jesus, and Calumpang, S.M.F. 2005. Development of Integrated Pest Management for Mango in Palawan, Philippines. The Phil. Agricultural Scientist, Vol. 88 No. 4, 453-461. Given July 9, 2009, Manila Hotel.

UPLB Outstanding Extension Program 2007. Volunteerism Project for Agrarian Development (VPAD) in Agrarian Reform Communities. UPLB Foundation Day Celebration March 6, 2007.

Outstanding Researcher 2006 College of Agriculture, UPLB. 97th Foundation Day Celebration of the UPLB College of Agriculture, March 8, 2006

CA Outstanding Extension Project 2004. Sustainable Agriculture Participatory Research and Extension Model (SAPREM). 95th Foundation Day Celebration of the UPLB College of Agriculture, March 11, 2004

Best Paper in Entomology, 1997. Chemical basis for the population reduction of the Asian corn borer in corn fields with *Ipomoea triloba* (co-authored with J.R. Medina, K. Ohsawa, T. Mitsui and H. Honda) Pest Management Council of the Philippines, 28th Anniversary and Annual Scientific Meeting, Hotel del Rio, Iloilo City, May 20-23, 1997.

1993 Presidential Award for Outstanding Publications. "Fate of carbofuran in rice, fish and livestock farming" J. Tropical Pest Management, 36:237-243 (co-authored with A. W. Tejada and E. D. Magallona) Malcolm Hall, University of the Philippines, Diliman, Quezon City, 1993.

Best Research. 1990. Effect of processing on residues of chlorpyrifos in stored corn and rice. (co-authored with A. W. Tejada and N. B. Gambalan) 31st Annual Convention, Radioisotope Society of the Philippines, Club Filipino, March 1, 1991, Manila

Outstanding Researcher, National Crop Protection Center, U.P. Los Baños, 14th Anniversary Celebration, May 16 - 21, 1990

Service Award, Research, Extension and Professional Staff (REPS), National Crop Protection Center, U.P. at Los Baños, 14th Anniversary Celebration, May 16 - 21, 1990.

Best Paper Award: New approach to insecticide residue data generation (co-authored with E.D. Magallona, A.W. Tejada, E.B. Lakan-Illaw and J.A. Alcantara) presented at the

Pest Management Council of the Philippines, 11th Annual Convention, Hotel de Mercedes, Cebu City, April 23 - 26, 1980.

Distinguished Service Award, National Crop Protection Center, U.P. at Los Baños, 20th Anniversary Celebration, May 21, 1996.

Team Award:

College of Agriculture Outstanding Extension Program 2007. Volunteerism Project for Agrarian Development (VPAD) in Agrarian Reform Communities. College of Agriculture Foundation Day Celebration March 6, 2007

1992 Outstanding Research Team, The Pesticide Toxicology and Chemistry Laboratory, National Crop Protection Center, College of Agriculture, University of the Philippines, Los Baños, March 6, 1992.

Outstanding Research Team, Pesticide Environmental and Impact Monitoring Team, National Crop Protection Center, University of the Philippines, Los Baños, 14th Anniversary Celebration, May 21, 1990.

International Publication Award:

Susan May F. Calumpang, RG Bayot, DG Vargas, MD Ebuenga and PG Gonzales. 2013. Impact of intercropping lemon grass on infestation of eggplant fruit and shoot borer (*Leucinodes orbonalis* Guenee) in eggplant (*Solanum melongena* L.). Silliman Journal, 54(1)114-130.

Susan May F. Calumpang. 2013. Behavioral response of *Spodoptera litura* (F) (Lepidoptera: Noctuidae) to selected herbs and eggplant. J ISSAAS 19(2)95-103.

Mario V. Navasero, Marcela M. Navasero, Maureen Ceres dL. de Roxas and **Susan May F. Calumpang**. 2013. Occurrence of the Moraceae-feeding Bombycid, *Trilocho varians* (Walker) (Bombycidae, Lepidoptera) as pest of jackfruit and some ornamental species of Ficus in the Philippines. J ISSAAS 19(2): 41-48.

Susan May F. Calumpang, Gideon Burgonio, Marcela M. Navasero, Mario V. Navasero. 2013. BEHAVIORAL AND OLFACTORY RESPONSES OF RICE GREEN LEAF HOPPER, *Nephotettix virescens* (Distant) TO VOLATILE CUES FROM TAGBAK (*Alpinia elegans* (C. Presl) K. Schum). Phil J Sci. 142(2)

Susan May F. Calumpang, Gideon Burgonio, Marcela M. Navasero, Mario V. Navasero. 2014. Repellency of Kakawate, *Glyricidia sepium* (Jacq.) Walp., to Rice Green Leafhopper, *Nephotettix virescens* (Distant) (Hemiptera:Cicadellidae). Philippine Agricultural Scientist. 97(2) 148-154.

Mario V. Navasero and **Susan May F. Calumpang**. 2013. Influence of intercropping vegetable crops on the population of some arthropods associated with eggplant (*Solanum melongena* L.) and damage potential of eggplant fruit and shoot borer (*Leucinodes orbonalis* Guenee) in the presence of radish (*Raphanus sativus* L.). Philippine Agricultural Scientist. Vol. 96, No.3: 148-156. September 2013

SMF Calumpang and MV Navasero. 2013. Behavioral response of Asian corn borer, *Ostrinia furnacalis* Guenee (Lepidoptera: Pyralidae) and earwig [*Euborelia annulipes* Lucas (Dermaptera: Anisolabiidae)] to selected crops and weeds associated with sweet corn. The Philippine Agricultural Scientist. Vol. 96, No.1, 84-90. March 2013.

Susan May Calumpang, Gil L. Magsino, Melvin Ebuenga, Rolando G. Bayot, Daniel G. Vargas, Flor V. Bariuan and Ernesto B. Cayaban Jr 2012. Incidence of arthropod pests and natural enemies in rice-tagbak (*Alpinia elegans* (Presl.) Schum.) and vegetable cropping systems without insecticide application. Silliman Journal. 53(1)19-51

FC Sta Cruz, R.G. Bayot, J.C.E. Ontoy, P.R.V. Elvira, A.M. Fabro, E.C. Marfori and **S.M.F. Calumpang**. 2010. Detection and Transmission of *Candidatus Liberibacter* sp. Causing Leaf Mottling of Citrus Species Grown in Three Provinces of Southern Luzon, Philippines. Phil. J. Crop. Science 35(1): 53-61.

J. R. Medina, O. S. Opina, L.R.A. De Jesus, and **Calumpang, S.M.F.** 2005. Development of Integrated Pest Management for Mango in Palawan, Philippines. The Phil. Agricultural Scientist, Vol. 88 No. 4, 453-461

De Jesus, L. R. A., **S. M. F. Calumpang**, J. R. Medina and Kanju Ohsawa. Floral Volatiles of *Mangifera indica* L. (c.v. Carabao) Attractive to *Sternochetus frigidus* (Fabr.) (Coleoptera: Curculionidae) UP Diliman, Quezon City, Feb. 28, 2005.

DA Secretary's Award and 2003 UP International Publication Award. L.R.A. de Jesus, J. R. Medina and K. Ohsawa. 2003. Component fatty acids for green mango fruit surface stimulate oviposition of the mango pulp weevil, *Sternochetus frigidus* (Fabr.), Phil. Agricultural Scientist Vol. 86 No. 1, 38-45 16th BAR Anniversary Celebration, Diliman, Quezon City, Oct. 9, 2003 and UP, Diliman, Quezon City, March 17, 2004.

2003 UP International Publication Award (UP System). L.R.A. de Jesus and Kanju Ohsawa 2003. Feeding and reproductive behavior of the mango pulp weevil, *Sternochetus frigidus* (Fabr.) at different phenological stages of mango, *Mangifera indica* L., Phil. Agricultural Scientist Vol. 86 No.3, 282-289 National Institute for Science and Mathematics Education Development (NISMED) Auditorium, UP Diliman, Quezon City, March 17, 2004.

Calumpang, S.M.F. 2003. Applicator exposure for the insecticides deltamethrin, cypermethrin, imidacloprid and profenofos sprayed on crops of different canopy heights.. Phil. Agricultural Scientist Vol. 86 No. 3, 266-281, March 17, 2004. National Institute for Science and Mathematics Education Development (NISMED) Auditorium, UP Diliman, Quezon City.

Calumpang, S.M.F., E Flavier and G. Morillo 2001. Further method development and improvement of the accuracy of rapid test kits for pesticide residue analysis. The

Philippine Agricultural Scientist 84 (4): 362-374, December 2001. UP Diliman, Quezon City March 13, 2002.

Calumpang, S.M.F. E Flavier and G. Morillo. 2001 Development of Rapid Methods of Detecting Pesticide Residues in Stored Grains. The Philippine Agricultural Scientist 84 (3): 246-254, December 2001. UP Diliman, Quezon City March 13, 2002.

Professional Advancement:

Formal Training Courses:

1. First Regional Seminar-Workshop Pesticide Residue and Formulation Control, Bureau of Plant Industry, San Andres, Manila, May 3-9, 1979
2. Pesticide Residue Analysis Training Course, University of Miami, Florida, September 15 - October 17, 1980
3. FAO/IAEA Interregional Training Course on Nuclear and Related Techniques in Pesticide Research, College Station, Texas, USA, Sept. 14 - Oct. 16, 1987
4. National Training on Environmental Epidemiology, College of Public Health, University of the Philippines Manila, June 19 - 30, 1995.
5. Safety in the Use of Nuclear Devices, Philippine Nuclear Research Institute, DOST, 2014

Research Fellowship:

1. Study on Natural Substances by Mass Spectrometry, NODAI Research Institute, Tokyo University of Agriculture, Sept.9 - Oct.3, 1985 (Dr. Kanju Ohsawa)
2. Botanical Insecticide - Fractionation, Isolation and Characterization and Bioassay of Essential Oils in *Cinnamomum mercadoi* bark. NODAI Research Institute, Tokyo University of Agriculture, March 21-30, 1988 (Dr. Kanju Ohsawa)
3. Photolysis of Paraquat and Diquat for Generation of Fluorophores. University of Florida, Institute of Food and Agricultural Sciences, Gainesville, Florida, Sept. 15 - Dec. 15, 1988 (Dr. H. Anson Moye)
4. Botanical Insecticides NODAI Research Institute, Tokyo University of Agriculture, 1989 (Dr. Kanju Ohsawa)
5. Chemical Ecology: Preliminary studies on the chemical basis for the population reduction of the Asian corn borer in the presence of specific weeds. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, Oct. 15 - April 15, 1992. (Prof. Hiroshi Honda)
6. Chemical studies on *Ipomoea triloba* extracts. JSPS. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, March 28- June 12, 1993. (Prof. Hiroshi Honda and Prof. Kanju Ohsawa)

7. Chemical studies on *Ipomoea triloba* extracts. JSPS. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, Oct. 15 - December 15, 1993. (Prof. Hiroshi Honda and Prof. Kanju Ohsawa)
8. Worker exposure to pesticides and fate of pesticides in the environment. Bayer AG, Monheim, Germany. Dr. Wolfgang Schultze. November, 1992
9. Chemical studies on the effect of *Ipomoea triloba* on the behavior of *Trichogramma evanescens*. JSPS Sponsored. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, February 1 to March 31, 1995. (Prof. Hiroshi Honda and Prof. Kanju Ohsawa)
10. Chemical studies on the head-space volatiles in the corn- *Ipomoea triloba* complex. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, October 21 to November 3, 1995. (Prof. Kanju Ohsawa)
11. Studies on the olfactory response of corn borer moths to the head-space volatiles in the corn-*Ipomoea triloba* complex. JSPS Sponsored. NODAI Research Institute, Tokyo University of Agriculture, Tokyo, Japan, March 1 to 31, 1996. (Prof. Kanju Ohsawa and Prof. Hiroshi Honda).

Meetings/Conferences Attended

A. International

As FAO Expert on Pesticide Residues in the Environment

1. 25th Session of the Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Toxicological Core Assessment Group on Pesticide Residues. FAO Headquarters, Rome, Italy, 15-29 September 1999.

Policy Paper: Evaluation of Fenthion Residues in Food.

2. 54th Session of the Joint FAO/WHO Expert Committee on Food Additives, as FAO Panel Member of the JMPR, WHO Headquarters, Geneva, Switzerland, 15-24 Feb. 2000.

Policy paper: Evaluation of Insecticides common to food and veterinary use.
Cypermethrin and Alpha-cypermethrin.

3. 1st Meeting on Global Zoning, Organization for Economic Cooperation and Development (OECD), WHO Headquarters, Geneva Switzerland, 12-13 September 2000.

4. 26th Session of the Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Toxicological Core Assessment Group on Pesticide Residues. WHO Headquarters, Geneva, Switzerland, 15-29 September 2000.

As Philippine Expert on Pesticide Residues

1. Annual Meeting, Codex Committee on Pesticide Residues (CCPR), Country Representative. April 2006. Brazil.

2. International Experts and Intergovernmental Meetings on Persistent Organic Pollutants (POPs). Sponsored by the Governments of the Philippines and Canada and the Intergovernmental Forum on Chemical Safety. June 17-22, 1996. New World Hotel, Makati

Paper: A Developing Country's Perspective on POPs
(Authored by the Philippine Panel)

3. 31st Session, Codex Committee on Pesticide Residues (CCPR), Country Representative. 12-17 April 1999, The Hague, The Netherlands.

4. Seminar-workshop on FAO and WHO Pesticide specifications and Maximum Residue Limits, PHINMA Training Center, Tagaytay City, Philippines, January 17-18, 2007

5. ASEAN Expert Working Group Workshop on MRLs, CropLife ASEAN, Renaissance Hotel Makati, Jan 14-18, 2008

6. 3rd ASEAN Food Safety Standards Harmonization Workshop, Aryaduta Hotel, Jakarta, Indonesia, Dec. 10-11, 2003
Paper: Risk Assessment of Pesticide Residues in the Filipino Diet
7. Regional Workshop on the Implementation of Prior Informed Consent (PIC) Hyatt Regency Hotel, July 29 - August 2, 1991. (Organized jointly by FAO under the auspices of the Regional Project (GCP/INT/ 457/JPN on the Implementation of the International Code of Conduct on the Distribution and Use of Pesticides and the United Environmental Programme (UNEP).
8. Crop Life Asia Regional Stewardship Workshop. The Marriot Hotel, Cebu City. September 14-16, 2005. Sponsored by CropLife Asia.
Paper: Educating farmers in integrated pest management: The NCPCE Experience.

As a Researcher on Pesticide Management and Chemical Ecology

1. First FAO/IAEA Research Coordination Meeting on Radiotracer Studies on Fungicide Residues in Food Plants, Panama City, Oct. 21-25, 1985
Paper: Radiotracer studies on ethylenebisdithiocarbamate fungicides in cabbage (co-authored with E.D. Magallona and M.J.V. Barredo)
2. Second FAO/IAEA Research Coordination Meeting on Radiotracer Studies on Fungicide Residues in Food Plants, Neuherberg, Germany, F.R., May 4-8, 1987
Paper: Radiotracer studies of ethylenebisdithiocarbamate fungicides in cabbage and soil and mancozeb and ETU levels in stored Dithane M-45 (co-authored M.J.V. Barredo and E.D. Magallona)
3. 11th International Congress on Plant Protection, Oct. 5-9, 1987, PICC, Manila.
Papers:
 1. Radiotracer studies on ¹⁴C-zineb in cabbage (co-authored with E. D. Magallona and M.J.V. Barredo)
 2. Modified approach to pesticide residue data generation: Insecticide residues in string beans (*Vigna sesquipedalis* Fruw.) and pechay (*Brassica chinensis* spp.) (co-authored with A.W. Tejada, E.D. Magallona and M.J.V. Barredo)
4. Third FAO/IAEA Research Coordination Meeting on Radio Tracer Studies on Fungicide Residues in Food Plants, Beytepe, Ankara, Turkey, March 13-17, 1989
Papers:
 1. Residues of mancozeb and ethylene thiourea in cucumber sprayed with ¹⁴C-mancozeb under field conditions
 2. Studies of ¹⁴C-mancozeb fungicide and ¹⁴C-ethylenethiourea in silty clay loam soil (both papers co-authored with M.J.V. Barredo and E.D. Magallona)
5. First FAO/IAEA Research Coordination Meeting on "Radiotracer Studies to Reduce or Eliminate Pesticide Residues during Food Processing", March 12-16, 1990, Vienna, Austria.
Paper: Effect of storage and processing on chlorpyrifos residues in stored corn and rice (co-authored with A.W. Tejada and N.B. Gambalan)

6. Workshop on Environmental and Health Impacts of Pesticide Use in Rice Culture, International Rice Research Institute, Los Baños, Laguna, Philippines, 28-30 March 1990.
Papers: 1.) Insecticide Residues in Well Water (co-authored with J.R. Medina and M.J.V. Barredo-Medina)
2.) Movement of Pesticide Residues in Soil and Groundwater (co-authored with E.P. Paningbatan, Jr., J.R. Medina and M.J.V. Barredo-Medina).
7. 13th ASEAN Seminar on Grain Postharvest Technology, Bandar Seri Begawan, Brunei Darussalam, 4-7, September, 1990
Paper: Effect of processing on residues of chlorpyrifos in stored corn and rice (co-authored with A.W. Tejada and N.B. Gambalan)
8. Third FAO/IAEA Research Coordination Meeting on Radiotracer Studies in Rice-Fish Culture, Bangkok, Thailand, March 1992.
Papers: 1.) Fate of endosulfan in a rice-paddy ecosystem
2.) Chlorpyrifos in a model rice ecosystem (co-authored with M.J.B. Medina, A.W. Tejada, J.R. Medina and E.D. Magallona)
10. Workshop in Bio/Botanical Pesticide Development, UNIDO/UNDP (RENPAF), Department of Agriculture, Bangkok, Thailand, December 11 - 18, 1991
Paper: Country Paper – Philippines
11. Workshop on Environmental Impact of Pesticides, ERMP/CIDA/UPLB, SEARCA Drilon Hall, U.P. Los Baños, April 14, 1992
12. Second FAO/IAEA Research Coordination Meeting on Development of Procedures to Stabilize Acaricides in Livestock Dips and Simplified Methods to Measure their Concentration using Nuclear Techniques, Panama City, April 11-15, 1994
Paper: Coumaphos residues in a cattle dip: Leaching, bioavailability and rapid detection (co-authored with A.W. Tejada and M.J.B. Medina).
13. Annual Convention Japan Pesticide Society. Tokyo University of Agriculture. Tokyo, Japan. March 25-30, 1995.
14. International Society for Southeast Asian Agricultural Sciences (ISSAAS) 2002. Tokyo University of Agriculture. November 14-15, 2002.

Paper: DIETARY RISK ASSESSMENT OF PESTICIDE RESIDUES: FAR EASTERN DIETS
15. International Congress 2003 of the International Society of Southeast Asian Agricultural Sciences (ISSAAS), Setagaya Campus, Tokyo University of Agriculture, Tokyo, Japan. Nov.13-18, 2003.

Paper: APPLICATOR EXPOSURE TO PESTICIDES
16. International Congress 2004 of the International Society of Southeast Asian Agricultural Sciences (ISSAAS), Hanoi Agricultural University, Gia Lam, Ha Noi, Vietnam, Dec. 5-12, 2004

Paper: Research on Alternative Pest Management Strategies at NCPCC, UPLB

17. International Congress 2005 of the International Society of Southeast Asian Agricultural Sciences (ISSAAS), Hanoi Agricultural University, Ha Noi, Vietnam, December, 2005
Paper: Oviposition Preference of Cutworm and Fruit shoot borer in Vegetables and Herbs
18. Academic Frontier Research Project (AFRP) Workshop, Hanoi, December, 2005,
Paper: Commentary Paper on AFRP
19. Academic Frontier Research Project Workshop, Mines Resort Hotel, December 12-13, 2006, Kuala Lumpur, Malaysia
Paper: AFRP Research and Extension Directions and Prospects 2006.
20. International Congress 2007 of the International Society of Southeast Asian Agricultural Sciences (ISSAAS), Mahkota Hotel, Melaka, Malaysia, December, 2007
Paper: Behavioral response of *Ostrinia furnacalis* and its natural enemies to selected plants and weeds closely associated with corn. SMF Calumpang and JR Medina
21. Academic Frontier Research Project (AFRP) Workshop, Mahkota Hotel, December, 2007, Melaka, Malaysia
Paper: Commentary Paper on AFRP 2007 International Congress 2008 of the International Society of Southeast Asian Agricultural Sciences (ISSAAS), Emerald Hotel, Bangkok, Thailand, Feb 23-27, 2009.

Paper: RISK IDENTIFICATION AND MITIGATION FOR INSECTICIDE USE IN VEGETABLES
33. International Congress 2009 of the International Society of Southeast Asian Agricultural Sciences, (ISSAAS), Nong Noch Botanical Garden and Resort, Pattaya Thailand, January 2010
34. International Congress 2010 of the International Society of Southeast Asian Agricultural Sciences, (ISSAAS), Bali, Indonesia, November 14-18, 2010.
35. International Congress 2011 of the International Society of Southeast Asian Agricultural Sciences, (ISSAAS), Bogor Agricultural University, Bogor, Indonesia, November 2011
36. International Congress 2012 of the International Society of Southeast Asian Agricultural Sciences, (ISSAAS), Bicol University, November 13-15, 2012
37. International Congress 2013 of the International Society of Southeast Asian Agricultural Sciences, (ISSAAS), Acacia Hotel Manila, November 11-15, 2013

Paper: Behavioral and olfactory responses of rice green leafhopper to volatile cues from tagbak (*Kolowratia elegans*)

Poster: Kakawate volatile chemicals repel green leafhopper (Berdeng Ngusong Kabayo)
38. International Congress 2014 of the International Society of Southeast Asian Agricultural

Sciences, (ISSAAS), Tokyo University of Agriculture, November 2014

Paper: Behavioral and olfactory responses of eggplant fruit and shoot borer (*Leucinoides orbonalis*) to volatile cues from marigold (*Tagetes erecta*)

B. National

1. Pest Control Council of Philippines, 9th Annual Convention, PICC, Manila, May 3-6, 1978
2. Kapisanan ng mga Kimiko sa Pilipinas, Los Banos Chapter, 8th Annual Convention, Calamba, Laguna, October 30, 1978.
3. Pest Control Council of the Philippines, 10th Annual Convention, Silahis Hotel, Manila, May 2-5, 1979
Paper: Pesticide management survey in selected vegetable, rice and fruit producing areas in the Philippines (co-authored with E.D. Magallona, E.B. Lakan-llaw, E.R. Tiauzon and J.A. Alcantara)
4. Kapisanan ng mga Kimiko sa Pilipinas, Los Banos Chapter, 9th Annual Convention, Pagsanjan, Laguna, Oct. 1979
5. Pest Control Council of the Philippines, 11th Annual Convention, Hotel de Mercedes, Cebu City, April 23-26, 1980.
Paper: A new approach for the generation of pesticide residue data (co-authored with E.D. Magallona, A.W. Tejada, J.A. Alcantara and E.B. Lakan-llaw, **Best Research Paper in Entomology**)
6. Kapisanan ng mga Kimiko sa Pilipinas, Los Banos Chapter, 13th Annual Convention, Forest Products Research Development Institute, Oct. 16, 1984
7. Kapisanan ng mga Kimiko sa Pilipinas, National Annual Convention, United Laboratories, Inc., Manila
8. Pest Control Council of the Philippines, 16th Annual Convention, Mountain State Agricultural College, Baguio City, May 2-4, 1985.
Poster: Photo decomposition of insecticide formulations using a sunlamp (co-authored with A.W. Tejada and E.D. Magallona)
9. Kapisanan ng mga Kimiko sa Pilipinas, Los Banos Chapter, 15th Annual Convention, Oct. 23-24, 1986, IRRI
10. Radioisotope Society of the Philippines, 27th Annual Convention, Feb. 28-March 1, 1987, CEC, UPLB
Paper: Radio tracer studies of pesticide residues in food plants (co-authored with E.D. Magallona, A.W. Tejada and M.J.V. Barredo)
11. Pest Control Council of the Philippines, 18th Annual Convention, Venice Hotel, Davao City, May 5-8, 1987.
Paper: Radio tracer studies on ¹⁴C-zineb in cabbage (co-authored with E. D. Magallona and M.J.V. Barredo)

13. Pest Control Council of the Philippines, 19th Annual Convention, Sacred Heart Center, Cebu City, May 3-7, 1988
Paper: The fate of carbofuran in rice-fish and livestock farming (co-authored with A.W. Tejada and E.D. Magallona)
14. Radioisotope Society of the Philippines, 29th Annual Convention, Magnolia Plant, Quezon City, Feb. 28, 1989
15. Fifth Philippine Chemistry Congress on the Role of Chemistry in the Philippines' Quest for NIC Status by 2000. PCARRD, Los Banos, Laguna, May 25-27, 1989
16. Second National Review and Planning Workshop on Botanical Pesticides, Feb. 19-20, 1990, PCARRD Headquarters, Los Banos, Laguna
Paper: Evaluation of some plants for herbicidal activity (co-authored with G.L. Magsino)
17. Kapisanan ng mga Kimiko sa Pilipinas, Los Baños Chapter, 19th Annual Convention, Oct. 16-17, 1990, SEARCA, Los Baños
Paper: Effect of processing on residues of chlorpyrifos in stored corn and rice (co-authored with A.W. Tejada and N.B. Gambalan)
18. Sustainable Agriculture Fair, University of the Philippines, Diliman, Quezon City, Dec. 5, 1990
Paper: Environmental impact of pesticides: The case of residues in groundwater
19. 31st Annual Convention, Radioisotope Society of the Philippines, Club Filipino, March 1, 1991
Paper: Effect of processing on residues of chlorpyrifos in stored corn and rice (co-authored with A.W. Tejada and N.B. Gambalan, **Best Research 1990**).
20. Kapisanan ng mga Kimiko sa Pilipinas, Sangay sa Los Baños, 20th Annual Convention, October 30, 1991, National Crop Protection Center, U.P. Los Banos
Paper: Rapid method for the detection of organophosphate insecticides (co-authored with A.W. Tejada, L.M. Varca, E.B. Lakan-Ilaw and E.D. Magallona)
21. Kapisanan ng mga Kimiko sa Pilipinas, Sangay sa Los Banos, 21st Annual Convention, October 27 - 28, 1992, National Crop Protection Center, U.P. Los Baños.
Paper: Movement of some Insecticides in Rice Paddy Soil and its Presence in Well Water (co-authored with M.J.B. Medina, J.R. Medina and E.P. Paningbatan)
Poster: 1.) Fate of chlorpyrifos in a model rice-fish ecosystem (co-authored with M.J.B. Medina, A.W. Tejada and J.R. Medina)
2.) Residues of Pesticides in Food as a Consequence of Crop Protection Practices in the Calabarzon (co-authored with A.W. Tejada, L.M. Varca and C.M. Bajet)
22. Kapisanan ng mga Kimiko sa Pilipinas, Sangay sa Los Baños, 22nd Annual Convention, October 26 - 27, 1993, SEARCA Auditorium, U.P. Los Banos

- Poster: The fate of chlorpyrifos in coconut by root infusion and the effect of processing on its residues (co-authored with A.W. Tejada and B.B. Quintana).
23. Pest Management Council of the Philippines, 25th Anniversary and Annual Scientific Meeting Pryce Plaza Hotel, Cagayan de Oro City, May 3 - 7, 1994.
Paper: Exposure of some Filipino farmers to methyl parathion in string bean production.
 24. Kapisanan ng mga Kimiko sa Pilipinas, Los Baños Chapter, 23rd Annual Convention, Oct. 25-26, 1994, SEARCA Auditorium, Los Baños
Paper: Environmental Impact of Two Molluscicides: Niclosamide and Metaldehyde in a Rice Paddy Ecosystem (co-authored with Medina, M.J.B., Tejada, A.W. and J.R. Medina).
 25. National Ecotoxicology Workshop: Pesticides. CIDA/Fertilizer and Pesticide Authority Coordinated. Development Academy of the Philippines, Tagaytay, October 17 - 19, 1994.
Paper: NCPC's Program on Environmental Impact of Pesticides (co-authored with J.R. Medina and A.W. Tejada)
 26. Seminar-Workshop on the Legal Framework and Scientific Basis of the Philippine Water Quality Criteria, CIDA Sponsored. ANEST Tower, Los Baños, February, 1995.
 27. Pest Management Council of the Philippines, 26th Anniversary and Annual Scientific Meeting, Benguet State University, La Trinidad, Benguet, May 2 - 5, 1995.
Papers: 1.) Exposure of farm workers to dimethoate while spraying string beans (co-authored with H.L. Cuevas)
2.) Allelochemicals from *Ipomoea triloba* which affect the behavior of the parasitoid, *Trichogramma evanescens* Westwood
 28. Environmental Risk Management, EISAM/CIDA, Fertilizer and Pesticide Authority, 26 January 1996
 29. Responsible Care in the Use of Pesticides. Fertilizer and Pesticide Authority. Drilon Hall, SEARCA, UPLB. February 1996.
 30. Pest Management Council of the Philippines, 27th Anniversary and Annual Scientific Meeting, Venes Hotel, Davao City, May 7-10, 1996.
Poster: 1.) Fate and Toxicity of Two Molluscicides: Niclosamide and Metaldehyde in a Rice Paddy Ecosystem.(co-authored with MJB Medina, AW. Tejada and JR Medina)
2.) Toxicity of Chlorpyrifos and BPMC to Fish and Frogs after a Simulated Overflow of Paddy Water (co-authored with MJB Medina, AW Tejada and JR Medina).
 31. Planning Workshop on the Implementation of the National Monitoring Program on Pesticide Residue in Agriculture and the Environment and Pesticide Formulations, Fertilizer and Pesticide Authority, NIA Complex, Quezon City, July 10-11, 1996.

32. FMC R and D Regional Workshop, September 21, 1996, EDSA Plaza Hotel, Ortigas Center, San Juan, Metro Manila
Paper: Assessment of worker exposure to pesticides in the Philippines
33. Pest Management Council of the Philippines, 28th Anniversary and Annual Scientific Meeting, Hotel del Rio, Iloilo City, May 20-23, 1997.
Paper: Chemical basis for the population reduction of the Asian corn borer in corn fields with *Ipomoea triloba* (co-authored with J.R. Medina, K. Ohsawa, T. Mitsui and H. Honda; adjudged **Best Paper in Entomology**)
34. International Society of Asian Agricultural Science in Philippine Chapter, Continuing Education Center, UPLB, October 1997
35. Kapisanan ng mga Kimiko sa Pilipinas, Los Baños Chapter, 26th Annual Convention, Oct. 23-24, 1997, SEARCA Auditorium, Los Baños
Paper: Semiochemicals in the corn - *Ipomoea triloba* ecosystem that affects Asian corn borer behavior.
36. Kapisanan ng Kimika ng Pilipinas, Los Baños Chapter, 27th Annual Convention, Oct. 27-28, 1998, SEARCA Auditorium, Los Baños
37. Consultative Workshop on Endocrine Disrupters, 10 March 1999, Continuing Education Center, UP Los Banos
Paper: Philippine Studies on the Exposure and Health Effects of Pesticides on Farmers and Their Families
38. Workshop on the Administration of the National Codex Organization, 18-19 May, 1999, BSWM Convention Hall, Department of Agriculture, Diliman, Quezon City.
Paper: Insights from the Academe (co-authored with E. B. Esguerra).
39. Silliman University Chemistry Department. Balik-Talent Program. August 26, 2000, Dumaguete City.
Paper: Worker exposure to pesticides: Concerns and implications for Philippine Agriculture.
40. Kapisanan ng Kimika ng Pilipinas, Los Baños Chapter, 29th Annual Convention, Oct. 27-28, 2000, SEARCA Auditorium, Los Baños
Paper: Applicator exposure to pesticides: Concerns and implications for Philippine Agriculture
41. Kapisanan ng Kimika ng Pilipinas, Los Baños Chapter, 31st Annual Convention, Oct. 27-28, 2002, DENR Auditorium, Los Baños
Paper: Dietary Risk Assessment of Pesticide Residues: The Filipino Diet
42. 19th Asian-Pacific Weed Science Society Conference, March 17-21, 2003, Westin Philippine Plaza Hotel, Manila
Poster: Influence of *Ipomoea triloba* on population reductions of Asian corn borer [*Ostrinia furnacalis* (Guenee)] (co-authored with G. L. Magsino)

43. Seminar-Workshop on University Policies, Rules and Regulations, Operations Room, Abelardo G. Samonte Hall, UPLB, College, Laguna, April 11-12, 2003
44. Fifth Training Workshop on General Plant Quarantine, NCPC, UPLB, April 21, 2003.
45. Drafting of Phil. Position on the 11th Session of the Codex Committee on Fresh Fruits and Vegetables (CCFFV), National Pesticide Analytical Laboratory (NPAL), BPI Compound, Manila.
46. 42nd Annual Convention of the Phil. Association of Food Technologists, Inc. (PAFT), Holiday Inn, Manila Galleria Suites, Robinsons, EDSA, Pasig City. November 20, 2003.
Paper: Risk assessment of pesticides in the Filipino diet.
47. International Life Sciences Institute Southeast Asia Region (ILSI-SEA) Symposium on Food Safety (The State of Contaminants and Pesticides in Agricultural Products in the Philippines and the Strategies being employed for their Control), Holiday Inn Manila Galleria (formerly Manila Galleria Suites), 4th Flr., Amorsolo A, Pasig City. Feb. 20, 2004.
48. Workshop on the Impact of Insecticide Use on Health, Agriculture and Environment, Bayview Park Hotel, Ermita, Manila, March 2-5, 2004.
49. National Workshop in Developing the National Biosafety Framework, DAP Conference Center, Tagaytay City, March 2-3, 2004.
50. Pest Management Council of the Philippines, 36th Anniversary and Annual Scientific Meeting, Amigo Terrace Hotel, Iloilo City, March 16-19, 2004.
Paper: 1) Utilization of Codex MRLs for Dietary Risk Assessment: Filipino Diet (SMFCalumpang)
2) Influence of Mango Chemicals on the Mango Pulp Weevil *Sternocherus frigidus* (Fabr.) (LRA de Jesus, SMFCalumpang, JR Medina and K. Ohsawa)
Poster: 1) Feeding and reproductive behavior of the mango pulp weevil, *Sternochetus frigidus* (Fabr.) at different phenological stages of mango, *Mangifera indica* L. (LRA de Jesus, SMFCalumpang, JR Medina and K. Ohsawa)
51. Eggplant IPM Seminar-Workshop, Lisland & Resort Hotel, Urdaneta and Bo. Bantug Multi-Purpose Cooperative, Asingan, Pangasinan. April 20-21, 2004.
Paper: Pesticide Residues in Vegetables and their Implications to Health and Trade
52. Inter-Institutional Forum on Pesticide Use in Sampaguita Farming, NCPC, UPLB, June 9, 2004. Sponsors: Crop Life, Phils. And UPWARD-CIP.
53. Multi-stakeholders' Presentation of the Persistent Organic Pollutant's Project, Century Imperial Palace Suites, Timog Avenue, Quezon City. Sponsored by Environmental Management Bureau-DENR, June 10, 2004.

54. Developing “National” Pest and Disease Collections in the Philippines to Underpin Agricultural Exports” Sept. 1-2, 2004. Sponsored: AusAid. Splash Resort Hotel, Barangay Lalakay, Los Banos, Laguna.
Paper: Plant Pest and Disease Records at the National Crop Protection Center
55. Priority Criteria & Objective Setting Workshop for the Development of the National Implementation Plan for Stockholm Convention on POPs, MMLDC Foundation Inc., Sumulong Highway, Antipolo City, Rizal, September 30 to October 1, 2004.
56. Intergovernmental Forum on Chemical Safety (IFCS) Asia-Pacific Regional Meeting held at Aloha Hotel, Manila, November 22-23, 2004.
57. 4th ASEAN Food Safety Standards Harmonization Workshop, Shangri-La, Makati, November 29-30, 2004
58. MRL Seminar-Workshop. BPI-NPAL, Diliman, Quezon City. Jan. 19, 2005.
Paper: Introduction to Maximum Residue Limits
59. Seminar on Regulations of Food Derived from Modern Biotechnology. Rizal B, Makati Shangri-la Hotel, Makati City. March 7, 2005
60. Seminar Cum Workshop in the Control of Mango Pulp Weevil in Palawan. Livestock Resource Center at Irawan, Puerto Princesa City. April 5-7, 2005.
Paper: Researches on Mango Pulp Weevil (*Sternochetus frigidus* Fabr.) at NCPC, UPLB.
61. Integrated Production and Pest Management in Processing Tomato: Issues and Prospects. July 19-22, 2005. Palazzo de Laoag Hotel, Laoag City, Ilocos Norte. Sponsored by DA and FAO.
62. Crop Protection Cluster Graduate Seminar. September 7, 2005. Department of Plant Pathology, UP Los Banos. College, Laguna.
Paper: Chemical Ecology and Pest Management
63. Silliman University Chemistry Department Seminar Series. Sept. 13, 2005. Silliman University, Dumaguete City.
Paper: *Insect Behavior Modifying Chemicals*
64. Product Stewardship Seminar for the Proper and Judicious Use of FuradanUltra 3G. Iloilo City. Sponsored by FMC. Oct. 11, 2005

Paper: Significance of Pesticide Residues in Food Crops and Practical Ways to Reduce these Residues
65. Philippine Association of Food Technologists, Inc. 44th Annual Convention. Crowne Plaza Galleria Manila, Quezon City. November 23-25, 2005.

Paper: Technologies for Improved Pesticide Management Food Safety and Health Concerns

66. University of the Philippines Visayas, School of Technology Foundation Day, Feb 16, 2006. Miag-ao, Iloilo
- Paper: Technologies for Improved Pesticide Management Food Safety and Health Concerns
67. WESVARRDEC Iloilo City, August 2006.
- Paper: Good Agricultural Practice in Mango Production (GAP): Pesticide Management
68. ISSAAS Philippines Chapter Annual Scientific Congress, SEARCA, 2007
69. Consultative Meeting on Aerial Spraying of Fungicides in Banana Plantations, FPA, CropLife Phils, CPAP, PBGEA, UP Mla, UPLB, Somerset Millenium Hotel, Makati, May 27, 2008
- Paper: Worker, Bystander and Drift Exposure Assessment in Aerial and Ground Spraying of Fungicides in Banana Plantations
70. Use of Fungicides in Banana Plantations – Risk Assessment Process. Briefing Presentation to Congressman Rufus Rodriguez, Quezon City, Feb 4, 2009
71. NRCP 80th General Membership Assembly, March 13, 2013, Manila Hotel
- Poster: Volatile organic chemicals of tagbak (*Alpinia elegans* Presl.) repel green leaf hopper (*Nephotettix virescens* Distant)
- First prize Scientific Poster Category, Certificate of excellence**
72. National Research Council of the Philippines, Research Information and Policy Forum, “Small Farmer Competitiveness towards Market Integration and Inclusive Development”, Traders Hotel, Pasay City, September 29, 2014
- Paper: Repellency of tagbak (*Alpinia elegans*) volatile organic chemicals to rice green leaf hopper

11. Teaching Actiivities

1. Laboratory Instructor, 1975 - 1978
General Chemistry - Chemistry Department, Silliman University
2. Laboratory Assistant, Entomology Dept, UPLB
Entomology 125 - 1981- 1983
3. Lecturer & Lab. Instructor
Diploma Course in Agriculture, College of Agriculture, UPLB
Crop Protection A, 1984-1988; Crop Protection C, 1984-1988

4. Basic Organic Chemistry (Chem. 40) Institute of Chemistry, UPLB
Laboratory Instructor, 1997- 2002, 2009 - 2010
5. Adviser, Chemistry BS Thesis, Institute of Chemistry, UPLB, 1999, 2005-2006,
2015
6. Affiliate Faculty, Pesticide Residues (Entom 295) Entomology Dept., College of
Agriculture, UPLB, June 1-Oct. 31, 2003
7. Visiting Professor, Tokyo University of Agriculture, Japan, June 16-30, 2013 and
November 2014. Lectures on "Food and Environment in Economic Development" and
"Food and Nutrition"

12.a. Past and Present Membership in Organizations:

International:

Country Representative to CODEX Committee on Pesticide Residues (CCPR), Fortaleza, Brazil. April 2006

Expert for the Persistent Organic Pollutants Review Committee, UNEP, POPS, United Nations, 2007

FAO Expert, Panel of Experts on Pesticide Residues in Food and the Environment. WHO Headquarters, Geneva, Switzerland, September 2000.

FAO Expert for the FAO/WHO Joint Meeting on Pesticide Residues (JMPR), FAO Headquarters, Rome, Italy, September 1999.

Member, International Society for Southeast Asian Agricultural Sciences (ISSAAS) 1995 to present

Editor, Journal of the International Society of Southeast Asian Agricultural Sciences (ISSAAS) 2002 to present

Local:

Member, CODEX Sub-Committee on Pesticide Residues, Department of Agriculture, 2011

Member, Technical Working Group, Mango Good Agricultural Practice, Department of Agriculture, Bureau of Agriculture and Fisheries Product Standards, 2008- 2009

Member, Sub-Committee Codex Committee on Pesticide Residues, Department of Agriculture, 2006-2007

Member, Sub-Committee on Pesticide Residue on Agricultural Commodities, FPA-DA, September 29, 2005.

Member, Steering Committee on Brontispa Action Team (BAT) for the abatement of the invasive coconut leaf beetle (*Brontispa longissima* infestation. Department of Agriculture-Special Order No. 256.

Member, Core Technical Team for the Crop Protection Research, Development and Extension (RDE) Network, DA-BAR, April 1, 2003 – December 31, 2004

Evaluator, Fertilizer and Pesticide Authority, Philippines, 1990- 1998

Member, Committee on Pesticide Residues and Pesticide Products (CPRAPP). Fertilizer and Pesticide Authority, Philippines, 1997

Member, Philippine Delegation to the International Experts and Intergovernmental Meetings on Persistent Organic Pollutants (POPs). Sponsored by the Governments of

the Philippines and Canada and the Intergovernmental Forum on Chemical Safety. June 17-22, 1996, New World Hotel, Makati

Member, Committee on Substantive Matters, Department of Agriculture, International Experts and Intergovernmental Meetings on Persistent Organic Pollutants (POPs). Sponsored by the Governments of the Philippines and Canada and the Intergovernmental Forum on Chemical Safety. June 17-22, 1996, New World Hotel, Makati

Member, Science Watch and Action Team (SWAT) on Pesticide Contamination in Food and Environment, PCARRD 1995

Member, Philippine Panel, Working Group on Persistent Organic Pollutants, April 1995.

Board Member, Pest Management Council of the Philippines, 1994-1995

Secretary, Philippine Association of Entomologists, 1994-1995

Life Member, Kapisanan ng mga Kimiko sa Pilipinas, Sangay sa Los Baños (KKP-LB)

Member, Integrated Chemists of the Philippines, Inc.,

Regular Member, National Research Council of the Philippines, 1992 to present

Regular Member, Philippine Association of Entomologists, 1988 - present

Regular Member, Radioisotope Society of the Phils., Inc., 1987 - 1992

Regular Member, Silliman University Chemical Society, 1970-1974

12.b. Past and present membership in committees within UPLB

Chair, Committee to draft Crop Protection bill for Senator Cynthia Villar, July 2015

Chair, Committee on REPS Welfare, OVCRE, UPLB

Member, Search Committee for Director, BIOTECH, UPLB, April 2015

Chair, Search Committee for Museum of Natural History, UPLB, 2015

Member, Search Committee for UPLB Chancellor, September-October 2011

Member, Medicinal Plants Committee, College of Agriculture RDE Team, UPLB, 2013, 2015

Member, Vegetable Research Committee, College of Agriculture RDE Team, UPLB, 2008 - 2010

Member, Organic Agriculture Committee, College of Agriculture, UPLB, 2009 - 2011

Member, Ad Hoc Committee for the College of Agriculture Program on Nutraceuticals, 2007.

Member, Research Committee 2007-2010, Crop Protection Cluster, College of Agriculture, UPLB
Occupational Health and Safety, CPC, UPLB 2007-2008, 2010-2015

Member, UPLB Fact-Finding Committee, Jan.27, 2005

Member, Search Committee, Dean of College of Economics and Management, UPLB, 2005

Member, Pool of Research and Extension Evaluators, Jan. 3, 2005-Dec. 31, 2008

Member, Committee to Draft the Policy and Program Framework for a Unified National Agricultural Research Agenda, UPLB, 2003-2004

Chairperson, Sub-Committee on R & DE of the Crop Protection Cluster, UPLB, 2003-2004

Member, Pool of Evaluators for Applied Research, UPLB, Feb. 1, 2003 – Dec. 31, 2004

Member, Pool of Evaluators for Basic Research, UPLB, Feb. 1, 2003 – Dec. 31, 2004

Member, UREC - Committee on Welfare, UPLB, 1995-1996

Member, College of Agriculture Panel of Judges, Selection of Nominees for UPLB Outstanding Administrative Personnel Award, 1989

Member, University Research and Extension Council, NCPC Representative, 1987 -1995.

Member, UREC - Research Direction and Utilization Working Groups - Environmental Management Committee, UPLB, 1987

Member, Committee of Bids and Awards, UPLB, 1986 – 1987

Member, Academic Personnel Committee, NCPC, UPLB, 1984 – 1985