

January 2021

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HIGHER EDUCATION:

Bachelor of Science (B.S.) in Entomology, College of Agricultural and Environmental Sciences, University of California at Davis. Mentor: Prof. Robert K. Washino, Ph.D. Additional course work in environmental studies. 1970-1974. Degree awarded June 1974.

Master of Science (M.Sc.) in Applied Parasitology, Liverpool School of Tropical Medicine, University of Liverpool, England. Thesis on the identification (speciation) of two major African mosquito vectors of malaria using immunotaxonomic techniques. Research Guide: Prof. Michael W. Service, Ph.D., D.Sc., F.I. Biol. 1974-1975. Degree awarded October 1975.

Master of Science (M.S.) Candidate in International Agricultural Development, University of California at Davis. All courses completed. Thesis (drafted, final version approved) on the effects of agricultural and rural development on health in tropical developing countries. Research Guide: Margaret E. Meyer, Ph.D. 1979-1983 (part-time). Candidacy granted February 1982.

Doctoral programs (Ph.D.) in Entomology and Ecology, University of California at Davis. All Entomology Ph.D. course work completed, transcript marked Candidate. Dissertation research (not completed) on the interaction between land development, settlement patterns, agricultural practices, and vector-borne diseases, especially malaria, schistosomiasis, and Chagas' disease. Entomology PhD 1976-1983, Ecology PhD 1993-1994. (Part-time doctoral student; studies interrupted due to family obligations, health issues, and employment change to JSI/USAID/Washington DC.) Major Professors: Prof. Robert Washino, Ph.D., later Prof. Jerold H. Theis, D.V.M., Ph.D.

Graduate Certificate Program in Occupational and Environmental Health (including Industrial Hygiene), George Washington University School of Medicine and Health Sciences, Washington, D.C. 1995-1997. (Part-time post-graduate student; studies interrupted due to employment change with transfer to PAHO/WHO-Guatemala.)

PROFESSIONAL POSITIONS (NON-TEACHING) (1978-2018)

SHORT TERM CONSULTANT. Client- Pan American Health Organization/World Health Organization, Dept. of Communicable Diseases and Environment Determinants of Health (CDE), Washington DC, USA. January-June 2018, January-December 2019, February-November 2020. Contacts available upon request. Principle results and outcomes:

- (i) Drafted as lead author/co-author of the PAHO *Plan of Action for Entomology and Vector Control 2018-2023*. Key outcome: Plan of Action and Resolution delivered in March and approved at the annual June meeting by the Ministers of Health of the PAHO/PASB Executive Committee, June 2018. Plan presented to and approved by the PAHO Directing Council in September 2018.
- (ii) Drafted and lead author of a five-year Business Plan 2018-2023 for the PAHO Director's new Flagship Initiative on Communicable Diseases Elimination in the Americas. Business Plan with budget framework delivered June 2018 and under review/revision.
- (iii) Drafted as lead author of a flagship report on PAHO's new disease elimination initiative 2020-2030, focusing on a brief history and current and expected elimination status of about 30 infectious diseases (ID) (including HIV/AIDs, TB, malaria, NTDs and vaccine preventable diseases) and of the elimination of selected environmentally-related and disease-triggering conditions (biofuel induced indoor air pollution from cooking stoves; open-air defecation). Drafted three chapters on conceptual framework, strategic goals and objectives, lines of action, and economic impacts of disease elimination, and one longer chapter with multiple ID profiles. Coordinated the preparation of several ID profiles drafted by PAHO advisors and specialists.
- (iv) Developed Terms of Reference (TORs) for a PAHO Strategic and Technical Advisory Group (STAG) of Experts on Disease Elimination and co-developed TORs for an internal Interdepartmental Working Group on Disease Elimination.
- (v) Assisted in the review and editing of the 2019 PAHO Policy on Disease Elimination, which was approved by the Ministers of Health of the PAHO Directing Council, October 2019.
- (vi) Reviewed and edited the 2017 PAHO framework document on integrated elimination of communicable diseases, revised, remade and published by PAHO in 2019 as the *Integrated Sustainable Framework for the Elimination of Communicable Diseases in the Americas*.
- (vii) Reviewed and edited various Communications materials for the external use by the Elimination Initiative, including draft brochures, display panels, and PowerPoint presentations.
- (viii) Assisted the CDE Director and team members to plan and conduct monthly core team meetings on the Elimination Initiative (including agenda-setting and meeting reports), and several virtual and face-to-face meetings with internal and external stakeholders in the Elimination initiative.
- (ix) Reviewed a draft of a new PAHO technical publication on diagnosis and treatment of Chagas disease.

SENIOR PROJECT MANAGER. Maryland Institute of Applied Environmental Health and Dept. of Epidemiology and Biostatistics, School of Public Health, University of Maryland at College Park. Management of the DARPA-funded "Prometheus program- Predicting Contagiousness to Prevent the Spread of Disease" (<http://www.darpa.mil/news-events/2016-06-13a>), conducted at the University of Maryland under the project titled *Contagious Phenotypes of Acute Respiratory Infection: Identification, Characterization, and Biomarkers*, by awardee and PI Dr. Donald Milton, MD, PhD. Devised, with the PI, an operational management plan (master plan) for a 12-month multi-million-dollar research project of significant importance to US Armed Forces biosurveillance programs (infectious diseases), focusing on human influenza virus transmission. Together with the PI, coordinated team meetings internally and externally, involving multiple institutes throughout USA, planned budget execution and monitoring, prepared ancillary research proposal (successfully funded), and revised and updated a Scope of Work together with IRB documentation and amendments; developed a management plan for clinical personnel operations. Mid-November 2016 - mid-March 2017. (Part-time) Contact: Prof. D. Milton.

TEMPORARY ADVISOR. Client- Pan American Health Organization/World Health Organization, Dept. of Communicable Diseases and Health Analysis (CHA), Washington DC, USA. 26 October-18 November 2016. Attend and report back to PAHO/CHA regarding Task Force for Global Health/USAID/Gates Foundation annual meeting of *Consortium on Operational Research for Neglected Tropical Diseases (COR-NTD)* and related meetings, 10-12 November 2016, Atlanta, GA, USA.

SHORT TERM CONSULTANT. Client- Pan American Health Organization/World Health Organization, Dept. of Communicable Diseases and Health Analysis (CHA), Washington DC, USA. January-June 2016.

- (i) Drafted the PAHO *Plan of Action for Elimination of Neglected Infectious Diseases and Post-Elimination Actions 2016-2022*. Key outcome: Plan of Action and Resolution approved by regional Ministers of Health at the annual PAHO Directing Council Meeting, September 2016. Contact: Dr. LG Castellanos.
- (ii) Technical and planning support to the new *PAHO Technical Advisory Group (TAG) on Public Health Entomology*, which met in March 2016. Key outcome: Final Executive Summary report approved. (iii) Assisted PAHO in the planning and coordination of the *WHO/PAHO International Verification Team (IVT)* visit to Guatemala May-June 2016, for verification of the elimination of transmission of onchocerciasis. Key outcome: IVT mission successful, Guatemala verified by WHO as free of onchocerciasis in September 2016. Contact: Dr. LG Castellanos.

SENIOR ADVISOR ON NEGLECTED INFECTIOUS DISEASES, Grade P-5 of UN System. Pan American Health Organization/World Health Organization of the United Nations, WHO Regional Headquarters in Washington, DC. 30 July 2012 - 30 November 2015. **Regional Advisor** (P-4) on Neglected Diseases and Parasitology from 01 March 2005 to 30 July 2012. (UN mandatory retirement age reached 30 November 2014, one-year extension to 2015 granted by PAHO Director)

Roles: Regional Advisor then Senior Advisor in the prevention, control and elimination of parasitic diseases and coordinator of the Neglected Infectious Diseases (NID) program for the Americas Region of the World Health Organization, with focus on communicable disease control and elimination. Secretariat of the PAHO/WHO Program for the Elimination of Lymphatic Filariasis in the Americas and Regional Focal Point for Control of Soil-Transmitted Helminths/Schistosomiasis and Onchocerciasis Elimination. PAHO representative in the Onchocerciasis Elimination Program for the Americas (OEPA)/The Carter Center, 10 years. Mobilization of resources for NTDs and parasitic disease control together with our team. Technical co-operation (capacity strengthening, technology transfer, IKM, advocacy, technical and administrative assessments and advice) to Ministries of Health and Agriculture in the Americas regarding NTDs control and elimination.

Some Key outcomes to date:

- Since 2012, assisted 3 countries in the Americas to be removed from the WHO list of lymphatic filariasis-endemic countries, and assisted 3 countries in the Americas to be verified by WHO as free from onchocerciasis transmission. Led or supported on-going PAHO/WHO processes to eliminate transmission of lymphatic filariasis in 4 countries, schistosomiasis in 4 countries, onchocerciasis in 6 countries, and blinding trachoma in 2 countries. Development and promotion of the foundations of integrated control of NTDs, see publications.
- Co-developer of multiple grants for control and elimination of NTDs in the Americas totaling \$4 million+, and PAHO focal point for the PAHO/Inter-American Development Bank/Sabin Vaccine Institute partnership on a Trust Fund for Neglected Diseases. *Coordinating the NTD program with average over ~ \$1 million annual budget for NTD prevention and control for PAHO*. Use of international training resources in NTD control including TIPAC. Liaison and partnerships with key international stakeholders and partners for NTDs: US CDC, The Carter Center, Sabin Vaccine Institute/GNNTD, IDB, WHO-HQ, Foundations (PAHEF, BMGF, Mundo Sano), NGOs (Task Force for Global Health-NTD Support Center, Children Without Worms/STH Coalition, Mectizan Donation Program, ITI), bi-lateral agencies (USAID, JICA, Cooperación Española AECID, Canada) and their partners (RTI International/ENVISION, TFGH etc.); universities (GWU, FIU, McGill, Baylor, JHU), private sector (GSK, Merck, J&J, Pfizer). PAHO liaison with COMEXA the Mexican-American Commission for Screw-worm Eradication (myiasis). PAHO focal point and coordinator supporting WHO HQ Dept. of Control of NTDs, serving the Americas.
- Together with our team, drafted Regional Strategic Plan of Action 2010-2015 for the prevention, control and elimination of neglected diseases in the Americas, in coordination with country focal points and regional experts. Produced with our team multiple peer-reviewed articles (>15) on NTD control strategies in the Americas, and NTD brochures, technical fact sheets, infographics and IEC and advocacy materials.
- Prepared and awarded grant of €237,000 for implementation of a regional project for the prevention, control and elimination of neglected tropical diseases in the Americas, 2006-07, focusing on lymphatic filariasis, soil-transmitted helminths and schistosomiasis. Co-prepared successful grant applications for use of COMBI (communication for behavioral impact) for NTD control in Brazil and Nicaragua. Drafted or co-drafted successful LOIs or grant applications to GSK, J&J, PAHEF, Izumi Foundation, CWW/TFGH.
- Organized and led/co-led the annual meetings of the PAHO/WHO Regional Program for the Elimination of Lymphatic Filariasis in the Americas (regional program managers and program review group) 2004-2015.
- Co-coordinated the development and publication of key PAHO documents on mapping of NTDs and related peer-review articles.

Responsibilities: PAHO regional focal point for neglected tropical diseases/neglected infectious diseases/diseases of poverty (esp.lymphatic filariasis, onchocerciasis, geohelminthiasis, schistosomiasis,blinding trachoma and

Chagas disease elimination, and leishmaniasis control. Liaison and coordinate with Ministers of Health, senior managers and technical program managers in international public health/global health for communicable diseases control, in particular advise Ministries of Health and state and municipal governments on the surveillance, integrated prevention, control and elimination of parasitic diseases and NTDs. Provide technical assistance and program evaluations for neglected diseases in Member States; gather and analyse data and maintain databases on the neglected diseases. Organize technical responses to imported disease cases, epidemics and emerging disease problems. Represented PAHO/WHO in regional and global meetings, congresses, forums, and alliances on public health. Served as Acting Coordinator for the PAHO/WHO Communicable Diseases Project (HSD/CD) on a frequent basis. Liaison officer for various WHO Collaborating Centres on NTDs based in the Americas

Management tasks: Coordinate with WHO Headquarters (Geneva), foundations, bi-lateral agencies, NGOs and other international agencies and their key partners, embassies, national and local governments for NTD control. Act on technical personnel selection committees; project design and project resources mobilization. Prepare regional strategic plans, plans of action, situation analyses, areas of work statements, scopes of work/terms of reference, budgets, work plans, newsletters and technical bulletins, infograms and all NTD periodic monitoring and progress reports to PAHO, WHO and external donors chiefly USAID. Prepare case statements and grant applications for external fund-raising. Identify, select and supervise technical staff, consultants, medical residents and interns. Supervise secretariat staff. Periodically act as Unit Chief and once as acting Division Director. Oversight of Webpage and SharePoint sites of the Neglected Diseases Initiative of PAHO, and (earlier) Lymphatic Filariasis PAHO regional newsletter editor.

Tenure: 01 March 2005 to 30 November 2015 (10+ years) as Regional Advisor then Senior Advisor.

Member, PAHO/WHO Advisory Selection Panel 2011-12. Appointed by the Director, PAHO/WHO, to serve on the Advisory Selection Panel for posts of Professional P-4 level, for the selection of PAHO/WHO Regional Advisors and other key professional posts of the organization. Review and evaluate potential candidates on the short lists, participate as a member of interview panels and in the formal selection/appointment processes. May 2011-Dec 2012

REGIONAL ECOLOGIST IN COMMUNICABLE DISEASES PREVENTION AND CONTROL (CD), Grade P.4, Steps 4 to 8, Pan American Health Organization/World Health Organization, WHO Representation in Brazil.

Roles: Advisor for the PAHO/WHO Communicable Diseases Prevention and Control Program in Brazil and the Americas. Served as Acting PAHO/WHO Representative (*Representante a.i.*) in Brazil, 1-2 weeks in Dec 1999-Jan 2000, 2000-2001, Dec 2001; and 15 Dec 2003-05 Jan 2004.

Key outcomes: Technical co-operation (capacity strengthening, technology transfer, IKM, technical advice) for Brazilian Ministry of Health and the Region in -

COMMUNICABLE DISEASE CONTROL:

- Since 2002, member of the PAHO Secretariat for the American Regional Program Managers (RPRG-Americas) for Elimination of Lymphatic Filariasis (LF) Transmission and editor of the RPRG-Americas Newsletter (2 editions/year).
- Assisting CD/PAHO to develop a PAHO/WHO Neglected Diseases Initiative for the American Region, through an integrated, multi-sectoral and multi-disease approach for prevention and control of parasitic and vector-borne diseases (together with Dr. John Ehrenberg)
- April 2003-April 2004, member of the Task Force for Communications of Global Alliance to Eliminate Lymphatic Filariasis (GAELF) (Chair, Prof. D. Molyneux, Liverpool School of Tropical Medicine).
- Assisted in the development and funding of **small operational research grants** on filariasis elimination in Brazil, and a **\$100,000 grant** for integrated geohelminth control in Maceió/AL, Brazil, 2002-2005.
- Since 2001, focal point in Brazil for WHO's technical cooperation to control or eliminate neglected diseases/diseases of poverty: onchocerciasis and lymphatic filariasis; schistosomiasis, geohelminthoses, plague, trachoma and ectoparasitism; and integrated vector control (for Chagas disease, malaria, dengue). Promoting school-based interventions for geohelminth and schistosomiasis control. Advised MOH on aspects of the national programs for control of schistosomiasis, filariasis, onchocerciasis and plague. Advised municipal officers in Maceió, Brazil on design, operation and maintenance of sewerage systems and on-site wastewater treatment systems for *Culex* control.
- Together with the focal points, assisted PWR-Brazil in aspects of the implementation of vectorial component of the WHO Roll Back Malaria Initiative, the PAHO Continental Plan to Amplify and Intensify the Combat against *Aedes aegypti*, and the PAHO Southern Cone Initiative to Eliminate the Chagas Disease vector *Triatoma infestans* in Brazil, 1999-today.
- Together with a team of senior National Sanitary Surveillance Agency (ANVISA) officers, designed and conducted two 6-day courses for 200 ANVISA officers in vector surveillance and control at ports, airports, transport hubs and frontiers, 2001.
- Coordinated the Housing and Health component of the PAHO/WHO inter-divisional Course of Excellence in "Housing, Health and Vectors" (2002-2004) and co-coordinator of the Human Behavior component of the same course. 16 semester hours of teaching credits.
- Instructed an 8-hour module of the course "Drainage for Control of Malaria", I International Seminar on Engineering for Public Health, FUNASA/Ministry of Health, Brazil. Module covers drainage, environmental sanitation and personal protection against malaria vectors. 13/3/2002, Recife, Brazil.
- Trained Latin American public health officers in environmental management methods for integrated vector control (dengue and malaria vectors) and social communication, in PAHO seminars in Perú, Nicaragua and Paraguay, 2000. Trained 50 community health agents in rural water and sanitation interventions and environmental management of vectors, with NGO Public Health International, Ecuador, 2001.
- Coordinated pesticide purchase requests and pesticide issues arising from the SVS/Ministry of Health, Brazil, 2003-2004.
- Assisted in analysis of the 1999-2000 sylvatic yellow fever (SYF) outbreak in Goiás state and the 2000-2001 outbreak in Minas Gerias state, Brazil, resulting in adding the surveillance of epizootics in parks as part of the national SYF surveillance plan.

BIOTERRORISM:

- Assisted in preparation of a PAHO/WHO regional project for BCR terrorism. Member of the Working Group of Ministry of Health and Civil Defense to prepare a national Contingency Plan for biological, chemical and radiological terrorism, Sept. 2001- Dec. 2002.

NATURAL AND TECHNOLOGICAL DISASTERS:

- PAHO/WHO focal point in Brazil for preparedness and response to natural and technological disasters, 2001-2004. Coordinated PAHO response to the national flooding emergency of early 2004 in Brazil, and member *ex-officio* of the Ministry of Health workgroup on the flooding emergency. Coordination with the PAHO/WHO Collaborating Center in Technological Disasters-CETESB, São Paulo.

TOXICOLOGY AND RISK ASSESSMENT:

- As part of a team of senior Ministry of Health officers, planned the health risk assessment and remediation of a hazardous waste site contaminated with lindane (gamma-HCH), DDT and trichlorobenzene; prepared health risk communication plans and materials, and evaluated soil remediation technologies with the Ministry, 1999-2001. Member of Advisory Commission on Hazardous Wastes “Cidade dos Meninos” of Ministry of Health, 1999-2001. Consulted in toxicology and health risk assessment for the WHO representation in Brazil 1999-2003, handling toxicology queries from the Ministry of Health, local government agencies and private sector - including pesticides, heavy metals contamination in Amapá and Bahia, Brazil, and health risks of fluorescent lights and cellular telephone base stations.

ENVIRONMENTAL & OCCUPATIONAL HEALTH:

- Lectured on “Water-transmitted Diseases”, in the “Health and Water Seminar”, Limeira, São Paulo, Brazil, March 2001. Assisted the PWR-Brazil in the promotion of the WHO Healthy Cities, Healthy Schools and Healthy Workplaces initiatives and the PAHO Primary Environmental Care strategy in Brazil (1999-2002) principally in Limeira SP, Uberlandia MG and with SESI Brazil, 1999-2002.

Responsibilities: PWR focal point for (1) neglected diseases/diseases of poverty (esp. filariasis, onchocerciasis, geohelminths, schistosomiasis, ectoparasitism, plague, trachoma); (2) integrated vector control, and (3) natural disasters. Responsible to advise the Ministry of Health and state and municipal governments in the surveillance, integrated prevention and control of disease vectors; health impacts of climate change; evaluation of the environmental and public health impacts of large economic development projects (dams, highways, mines) and promotion of the use of Environmental and Health Impact Assessments (EIAS); prevention and emergency response programs for natural and technological disasters and bioterrorism. Promotion of themes of healthy communities, schools and workplaces; community participation; IEC and social communication; risk assessment and risk communication; toxicology; and inter-agency cooperation.

Management tasks: Coordination with WHO and other international agencies, embassies, national and local governments; technical personnel selection committee; project design and project finance mobilization; program monitoring and progress reports; preparing scopes of work, budgets, work plans, and periodic reports; identifying, selecting and managing consultants. Webpage coordinator for CD Brazil and RPRG-Americas filariasis newsletter editor.

Tenure: 06 September 1999 to 28 February 2005.

ADVISOR IN HEALTH AND ENVIRONMENT, Grade P.4, Steps 1 to 3, Pan American Health Organization/World Health Organization of the United Nations, WHO Representation in Guatemala.

Roles: Coordinator of the WHO Environmental Health Program in Guatemala (capacity strengthening, technology transfer, IKM, technical advice). Also PAHO/WHO Focal Point in Disasters and PAHO/WHO Advisor in Occupational Health. Acting PAHO/WHO Representative in Guatemala (*Representante a.i.*) for 3 weeks.

Key outcomes: Technical co-operation and assistance with the following partners-

- Designed and established the first (computer-based) multi-agency Information System in Guatemala for the water and sanitation sector, SAS (*Sistema de Información en Agua y Saneamiento*) jointly with Ministry of Health (MOH) and Instituto de Fomento Municipal (INFOM).
- Strengthened and expanded the national water quality surveillance system in the Ministry of Health (MOH), its computerization (database), and the expansion of its training program and field equipment inventory.
- Guided the preparation of the first set of national environmental health regulations together with the MOH, covering water quality, wastewater and excreta disposal, solid waste management, hospital infectious wastes management, and (in process) health-based ambient air quality monitoring standards and recreational water standards.
- Coordinated the Joint WHO/UNICEF Global Water Supply and Sanitation Assessment for Guatemala, see http://www.who.int/water_sanitation_health/Globassessment/GlobalTOC.htm.
- Mobilized the development of formal Inter-institutional agreements between the Regional Post-Graduate Sanitary Engineering School (ERIS) of the Universidad de San Carlos (USAC), California State University at Chico, and the Universidad Autónoma de México in environmental engineering, which resulted in the presentation of two sub-regional courses (5 days) on Wastewater Treatment: Design, operation and maintenance (emphasis on oxidation lagoons), together with AGISA/AIDIS, and other technical cooperation activities. Evaluated municipal sewage oxidation lagoons and treatment plants in eastern Guatemala with faculty of ERIS.

- Designed and presented the first Seminar-Workshop in Guatemala on Gender and Environmental Health: Water and Sanitation Sector, together with UNICEF (February 1998).
- Coordinated PAHO technical and financial assistance to community groups in rural Esquintla, Guatemala for the procurement and installation of latrines and sodium hypo-chlorite on-site production units, and community education in their use and maintenance.
- Established a network of Healthy Schools coordinators with Ministry of Health and Ministry of Education, conducting a survey of environmental health in ~250 schools in the capital (to be published), and (in process) introduction of environmental health risk factors in the national primary school curriculum.
- Published a Manual of “Suggested Activities for the Implementation of the Program “Use, Conservation and Provision of Water” (including sanitation and wastewater management), with the Secretary of Water Resources of the Presidency of Guatemala, 1998.
- Co-prepared a PAHO project proposal for Cholera prevention and control in Central America after Hurricane Mitch with the Communicable Diseases Unit, which secured \$1 million in funding.
- Trained MOH staff in environmental management methods for vector control.
- Taught in the MPH program in the University of San Carlos (risk assessment, air pollution control), and helped strengthen its curriculum in environmental health. Provided advanced training opportunities in environmental epidemiology to the health sector and University of San Carlos.
- Investigated a lead poisoning outbreak at a battery recycling plant in cooperation with the MOH and National Commission of the Environment.
- Coordinated the PAHO response to Hurricane Mitch in the areas of water and sanitation, Nov-Dec 1998; secured \$150,000 in emergency donations from an international NGO.
- Led PAHO’s response to the severe national air pollution (forest fire) episodes and the major volcanic eruption of May 1998, mobilizing emergency resources and preparing health advisory bulletins.

Responsibilities and Management Tasks: Designed and managed technical cooperation, training, and institutional strengthening projects and activities in environmental and occupational health, including donor grants totaling more than \$1 million. Coordinated technically with government ministries and NGOs, particularly the Environmental Health Division of the MOH, in the design and implementation of surveillance systems for potable water and basic sanitation, solid waste, and ambient air pollution. Supervised 3 sanitary engineers, 1 secretary, and numerous long-term and short-term consultants. Advised in curriculum development in the MPH program of Universidad de San Carlos - environmental health specialization. Co-Coordinator of the Healthy Cities program of the Representation. Management tasks included: coordination with WHO, USAID and other international agencies and embassies; program monitoring and progress reports; preparing scopes of work, budgets, work plans, and periodic reports; selecting and managing teams of consultants; planning and conducting team meetings, seminars, workshops; arranging travel logistics; preparing briefing packages for senior government officials.

Tenure: 01 April 1997 to 05 September 1999.

TECHNICAL DIRECTOR FOR PUBLIC HEALTH, John Snow, Inc., Boston, MA, seconded to USAID¹ Environmental Health Project (EHP) led by CDM Engineering, Arlington, Virginia.

Roles: Program manager for USAID’s EHP project in environmental, occupational and public health.

Key outcomes:

- Co-led EHP to gain a \$1.6 million contract for Central Europe which resulted in establishing a Certificate Program in Environmental Health in Jagiellonian University, Krakow, Poland; a major revision of the medical student curriculum in environmental and occupational health in Medical University of Cluj, Romania, and the development of community-based air pollution/heavy metals/radon monitoring and health promotion/Healthy Cities programs in three communities in Slovakia.
- Co-designed the concept for the EHP Diarrheal Diseases Prevention Toolkit (1997), which led to the publication of USAID/EHP’s *Preventing Child Diarrheal Disease: Options for Action*, 1999.
- Gained a \$180,000 contract for EHP on control of exposure (directly, and through contact with wastewater holding ponds and rivers) of gold miners and families to mercury and cyanide in rural Nicaragua.
- Management of USAID contracts to evaluate the Guatemalan Highlands water supply and sanitation project and onchocerciasis control program in Guatemala.
- Co-led a \$750,000 contract to develop a national-level lead exposure abatement plan in Egypt, including environmental lead studies and behavioral linkages to exposure.
- Development and promotion of the foundations and principles of integrated vector management (IVM).

¹. USAID - U.S. Agency for International Development

- Co-authored with J. Gittleman the report, *A Monitoring System for Biological and Environmental Lead During the Phase-Out of Lead in Gasoline in Latin America and the Caribbean* (1996) (a joint activity with the World Bank and PAHO/WHO).
- Team leader for project scoping assignments in environmental and occupational health in Poland, Romania, and Slovakia.
- Member of Inter-agency steering committee with PAHO and World Bank to develop solid waste management sector assessment guidelines for Latin America. Evaluated US EPA course on solid waste management planning for developing countries.

Responsibilities and management tasks. Design and management of technical assistance, training, and institutional strengthening projects and activities for USAID for implementation overseas. Project liaison with USAID Latin America and Caribbean Bureau, WHO/PEEM, and WHO Food Safety Unit. Tasks included preparing scopes of work, budgets, work plans, and periodic reports; selecting and managing teams of consultants; planning and conducting team meetings, formal workshops, briefings and debriefings; arranging travel logistics; monitoring and reporting on activity progress.

Tenure: June 1994 - March 1997.

DEPUTY DIRECTOR, Comparative Risk Project, State of California Environmental Protection Agency (Cal-EPA), Sacramento, California.

Roles: Assisted the project director to plan and execute a federal and state-funded project for Cal-EPA.

Key outcomes:

- Co-produced the California Comparative Risk Assessment Report, titled: Towards the 21st Century: Planning for the Protection of California's Environment (2 volumes, 1994) to protect the public health and environment of Californians to the year 2000.

Responsibilities and management tasks. Oversaw the work of 7 subcommittees assigned the task of identifying and ranking the major human health hazards and ecosystem problems in the state of California, identifying risk reduction measures and mitigation measures for each hazard, educating the state's citizens about the identified hazards, and involving them in risk identification and ranking, and identification of management options. Acted as Project Director as needed.

Tenure: Feb 1992 - Sept 1993 (18 months, 50% time)

SENIOR WASTE MANAGEMENT SPECIALIST (SUPERVISORY), State of California Environmental Protection Agency, California Integrated Waste Management Board, Sacramento, California.

Roles: Chief of Research Services. Acting Branch Manager at times.

Key outcomes:

- Completed a health risk assessment study of exposure to *Aspergillus fumigatus* in composting operations, published as a LEA Advisory (technical report) "*Aspergillus, Aspergillosis and Composting Operations in California*", Technical Bulletin, December 1993. Served on the State of California/Santa Clara County Medical Advisory Panel on health risk assessment of *Aspergillus* in composting operations, 1993-94.
- Co-managed the special project with the California Council on Science & Technology (academic, government, NGO partners) titled Science and Technology Research Priorities for Waste Management in California, 1992 and final report preparation.
- Established the CIWMB Solid Waste Management Research Network (SWMR-NET) of 48 scientists (academic, government) state-wide. April 1994. Co-designed a research study on Compost Stability Methods.
- Authored California's waste characterization regulations and standards. Supervised the development of weight-volume conversion factors for solid waste fractions. Designed and managed the Interim Waste Generation/Waste Characterization Database Project of the Board.
- Researched and made recommendations to the Board regarding the environmental and health impact of waste-by-rail operations proposed for California.

Responsibilities and management tasks: Supervised 8 engineers and biologists who conducted research and consulted with California counties and cities to develop and implement integrated solid waste management plans. Supervised the review of EIRs and other environmental documents under CEQA and NEPA, and Board research contracts. Prepared work plans, contract concepts, BCPs (staff and program budgets); periodic reports to the Division, Cal-EPA and the Legislature on program implementation. Worked directly with state legislature's staff.

Tenure: 1991-1994. (Approved 2-year leave of absence June 1994 - June 1996.)

TECHNICAL OFFICER (REGIONAL), P.2, Step 1, Pan American Health Organization/World Health Organization of the United Nations, Panama City, Republic of Panama

Roles: Regional consultant in the control of vector-borne diseases, esp. dengue and malaria, in Latin America and the Caribbean.

Key outcomes:

- *Rapporteur* for preparation of Dengue and Dengue Hemorrhagic Fever in the Americas: Guidelines for Prevention and Control (PAHO/WHO Sci. Pub. No. 548, 1994), and author of its section on Environmental Management for *Aedes aegypti* control.
- Taught environmental management, health impacts and ecological risk assessment of development projects, and applications of medical anthropology techniques in the M.Sc. course in control of vector-borne diseases, University of Panama.
- Prepared part of malaria section of annual PAHO report on Health Status of the Americas.

Responsibilities and management tasks. Headed unit's new program on environmental management for vector control.

Tenure: January - June 1991. Via 6-month leave of absence from State of California.

CONSULTANT, The World Bank, Economic Development Institute (EDI). Lecturer, World Bank/EDI Policy Seminar on Water Resources Development and Environment, Bangkok, Thailand. Topic: health impacts of large dam projects. **Tenure:** 5 days, June 1990.

ASSOCIATE WASTE MANAGEMENT SPECIALIST, State of California, California Waste Management Board, Sacramento, California.

Roles: Technical specialist in integrated municipal solid waste planning. Sometimes Acting Chief, Local Planning Division.

Responsibilities and management tasks. Consulted with Southern California counties and cities to develop and implement integrated county solid waste management plans; prepared technical reviews of EIRs and other environmental documents. **Tenure:** 1988-1991

MEMBER, United Nations WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control (PEEM), Geneva, Switzerland. See example work product at <http://www.bvsde.paho.org/bvsacd/who/train.pdf>

Role: Technical advisor with voting rights on the Panel

Key outcomes:

- Consulted on techniques for environmental management (EM) and control of the insect vectors of malaria and other diseases. Reviewed technical documents for PEEM and attended annual meetings.

Tenure: 1988-1991. Appointed by WHO for 3-year term.

REGISTERED SANITARIAN, Yolo County Public Health Department, Woodland, California

Roles: Administration/enforcement of environmental laws and regulations; outbreak and incident investigation.

Key outcomes:

- Responded to several hazardous chemical spills as a member of Yolo County Emergency Response/Hazardous Materials Team. Co-coordinated household hazardous waste collection events.
- Inspected solid waste disposal sites, leachate collection systems and sludge disposal operations, sprinkler treatment systems for wastewater disposal, sewage treatment plants, and food facilities.

Responsibilities and management tasks. Member of the solid waste, hazardous waste, and infectious waste management and enforcement team. **Tenure:** 1988-1989

MEMBER, Task Force on Involuntary Resettlement, American Anthropology Association, Washington, D.C.

Specialist in health impacts of involuntary resettlement as a result of development projects. **Tenure:** 1989-1990.

PRINCIPAL, Environmental Health Consultants International, Davis, California. Founded sole proprietorship consulting business in environmental health. Consulted for international and local private clients. **Tenure:** 1988-1994

REGISTERED SANITARIAN, San Joaquin County Local Health District, Stockton, California.

Roles: Administration/enforcement of environmental laws and regulations; outbreak and incident investigation.

Key Outcomes:

- Inspected and enforced laws and regulations for safe operation of dairy wastewater ponds and sludge treatment, solid waste management facilities, and agricultural labor camps.
- Investigated psittacosis outbreak; conducted rabies quarantine and surveillance following animal bites.
- Conducted food safety inspections and abated numerous environmental health complaints.

Tenure: 1987-1988

TEMPORARY ADVISOR, United Nations WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control (PEEM), Geneva, Switzerland.

- Prepared technical reports on health impacts of dams and water resources projects and cost-effectiveness analysis for vector control.

Tenure: 1986-1988

REGISTERED SANITARIAN, Nevada County Environmental Health Department, Nevada City, California.

Roles: Administration/enforcement of environmental laws and regulations; outbreak and incident investigation.

Key Outcomes:

- Disease outbreak investigation: Investigated numerous water-borne and wastewater-borne disease outbreaks. Controlled outbreaks of cercarial dermatitis (avian schistosomiasis) at several public and private campgrounds. Investigated mosquito plagues to establish possible health risks.
- Served on Nevada County/Nevada Irrigation District Joint Committee on Raw Water Pipelines, to convert them to potable treated water supply, 1987.
- Introduced the use of Cross-Connection control inspection in Nevada County.
- Inspected and enforced laws and regulations for operation of public and private sewage oxidation (stabilization) lagoon systems, engineered mound systems, package wastewater treatment plants, infiltration galleries, public water systems (slow sand filtration and package plants), solid waste facilities, food facilities, public pools and spas, and organized camps and campgrounds.
- Designed and taught sanitation, hygiene and safety course to certified day care center operators.

Tenure: 1985-1987

ROBERT S. McNAMARA FELLOW, The World Bank - Economic Development Institute, Washington, D.C. Field research in rural Sri Lanka on agricultural development patterns and water contact behavior as they affect malaria vectors and water-related parasitic disease epidemiology (schistosomiasis).

Tenure: 1983-1984

RESEARCH ASSOCIATE, Agricultural Development Council, New York City, New York. Researched public health implications of dual use of agricultural irrigation systems and agricultural runoff for domestic water supply in developing countries, for USAID. *Tenure (contract):* 1981

CONSULTANT, American Public Health Association, International Health Division, Washington, D.C. Researched relationship between agricultural/rural development and public health for USAID; review and analysis of positive and negative health effects of rural development process. *Tenure (contract):* 1981

FOREIGN AFFAIRS SPECIALIST, Bureau for Program and Policy Coordination, U.S. Agency for International Development (USAID), US Dept. of State, Washington, D.C. Reviewed development programs and projects proposed by USAID missions in developing countries: evaluated Project Papers, Annual Budget Submissions, Country Development Strategy Statements, and environmental documents (Project Identification Documents, Environmental Assessments, and EISs). Ensured USAID Mission projects and programs comply with USAID Policy Papers and Federal Regulations. *Tenure:* June-December 1980-81

CONSULTANT, Hesperian Foundation, Palo Alto, California and Project Piaxtla, Ajoya, State of Sinaloa, México. Planned, designed and implemented public health, environmental health, and livestock disease control programs in conjunction with a community-based primary health care clinic and an international NGO. *Tenure:* Jan-April 1978

OTHER APPOINTMENTS: Member of Scientific Research Committees and other Advisory Committees

Global Health Advisory Committee, School of Public Health, University of Maryland-College Park. *Ex-officio* and now regular member of faculty committee developing global health programs for the School and University. October 2016 to present.

US National Academies of Science PEER Program. Peer reviewer of multiple grant proposals in biomedical sciences for the 4th -7th, 9th (2015-2018, 2020) cycles of the *US National Academies of Science* PEER Program for international research grants in health and development, USAID funding to National Academies of Sciences (NAS) and covering NTDs, Maternal and Child Health Program, Environmental and Occupational Health, Indigenous and Refugee Health and One Health.

PAHO/WHO Technical Advisory Group (TAG) on *Health in the Americas 2017+*, PAHO/WHO Washington, DC. Tasked to help prepare the 5-year report of the PAHO Director to the Ministers of Health, including recommendations on emerging public health issues and expected trends. Member, appointment from 08 September 2016 to 30 September 2017. See <https://www.paho.org/salud-en-las-americas-2017/>

Indonesian Science Fund/collaboration with US National Academies of Sciences. August 2016 to August 2017. Peer reviewer of grants of SAINS45-Indonesian Science Agenda, theme life-health-nutrition. See www.dipi.id

Office of the Assistant Dean for Development/Office of the Dean, School of Public Health, University of Maryland-College Park. July 2016 to September 2017. Leader: Assistant Dean Elly Brtva, MPH. Adviser to the Assistant Dean. Developed a draft Concept Note and briefing sheet for a proposed Center for Global Health, SPH/UMD.

International Task Force for Disease Eradication (ITFDE), at The Carter Center, Atlanta. Acting Member, substituting for Director of WHO Dept. of Control of Neglected Tropical Diseases, session of 10 November 2015. See www.itfde.org

PAHO/WHO Technical Advisory Group (TAG) on Public Health Entomology and Integrated Vector Management, PAHO/WHO, Washington, DC. Member, appointment from December 2015 to date. See http://www.paho.org/hq/index.php?option=com_topics&view=article&id=65&Itemid=40780&lang=en

Committee of the Kyelem Prize for Neglected Tropical Diseases, October 2015-November 2017, Task Force for Global Health/NTD Support Center, Atlanta. Member since 2015. Four prizes awarded so far. Example <http://www.prweb.com/releases/2015/10/prweb13038039.htm>

Technical Advisory Committee of *Footwork*: The International Podoconiosis Initiative, Maryland USA and Brighton UK, member from December 2015 to date. See www.podo.org Reviewed organization's strategic plan and provided technical and managerial advice to core management team. Part of core team which prepared a grant proposal for the global *100andChange* competition <https://www.100andchange.org/> of the MacArthur Foundation, October 2016. *100andChange* is a competition for a \$100 million grant to fund a "single proposal that promises real and measurable progress in solving a critical problem of our time." Proposal passed Administrative Review (800 out of 1904 applications) on 05 December 2016, see <https://www.macfound.org/press/perspectives/update-100change-applications/> and <https://www.100andchange.org/#news/1>

PROFESSIONAL LICENSES, CERTIFICATIONS AND REGISTRATIONS

Full Member (Industrial Hygienist) No. 153103-00, American Council of Governmental Industrial Hygienists (ACGIH), 1995-2018. (now retired)

Registered Environmental Health Specialist (R.E.H.S.) No. 5171, with the California Department of Health Services (Sacramento). 1987-2010, 2020-2021

Registered Sanitarian (R.S.) No. 84729, with National Environmental Health Association (Denver, Colorado). 1994-2004. (retired)

CITI and US Navy-CITI certified for Human Subjects Research [commonly known as Institutional Review Board (IRB) certification], January 2017-Jan 2019. 2-year certification validity. See Collaborative Institutional Training Initiative (CITI) at <https://about.citiprogram.org/en/homepage/> and US Dept. of Defense/US Navy Human Subjects Research Protection (Navy CITI) at [file:///C:/Users/aults/Downloads/Directions%20for%20accessing%20CITI%20-%20Extramural%20New%20Users%20\(1\).pdf](file:///C:/Users/aults/Downloads/Directions%20for%20accessing%20CITI%20-%20Extramural%20New%20Users%20(1).pdf)

Certified in Hazardous Waste Operations (HAZWOPER), State of California EPA, 1992-1993.

Certified Water Treatment Plant Operator Grades I and II, Public Water Supply Branch, California Department of Health Services. 1986-1988.

Certified Public Health Vector Control Operator, California Department of Health Services- Environmental Management Branch for mosquito control, vertebrate vector control, and terrestrial invertebrate vector control. 1986-1988.

Certified Public Pool Operator, Bensco-Stranco Inc. May, 1986.

Certified Kitchen Hood and Ventilation Design Review. Food and Drug Branch, State of California Department of Health Services. January, 1986.

ACADEMIC RESEARCH AND TEACHING POSITIONS AND ROLES 1979-2020 (41 years)

ADJUNCT FACULTY INSTRUCTOR/ADJUNCT LECTURER. Dept. of Health Policy and Management and Office of the Dean, University of Maryland School of Public Health and Office of Extended Studies, University of Maryland. Co-Instructor (online) for SPHL 610, *Program Policy, Planning, Implementation and Evaluation*. Core Course for UMD MPH degree. Spring 2019, 2020 and 2021. 5 credit hours. Approx. 32 and 40 graduate students, respectively. To teach a online module- and lecture-based course focusing on an introduction, including a team project, of current public health program design, planning, implementation and evaluation in the USA and global contexts; designed to fulfill the USA-CEPH requirements.

ADJUNCT FACULTY INSTRUCTOR/ADJUNCT LECTURER. Dept. of Epidemiology and Biostatistics, University of Maryland School of Public Health. Instructor for EPIB 330, *The Coming Plague- Public Health Perspectives*. Fall 2018, Summer 2019 & 2020 online. 3 credit hours. Approx. 30 undergraduate students in class, 8-12 online. To teach a lecture- and module-based course, in class and online, focusing on outbreaks, epidemics, pandemics and emerging/re-emerging infectious diseases showing results of basic and field epidemiologic methods and techniques in the global context, using current examples, use of case studies and didactic learning tools.

ADJUNCT FACULTY INSTRUCTOR. Maryland Institute for Applied Environmental Health, University of Maryland School of Public Health. Co-instructor (with Prof. M Haider) for the graduate courses *Global Classroom: Addressing Current, Pressing Global and Environmental Public Health Challenges* which focused on solid waste management and public health in Bangladesh (MIEH 606) and the course *Fundamentals of Global Health* (MIEH 605). 3 credit hours. Fall 2018. Contact: Dr. M. Haider, professor.

ADJUNCT FACULTY INSTRUCTOR/ADJUNCT LECTURER. Dept. of Epidemiology and Biostatistics, University of Maryland School of Public Health. Instructor for EPIB 632, *Field Epidemiology for Global Health Interventions*. Summer 2017 and Summer 2019. 3 credit hours. 10 and 6 graduate students respectively. Taught a lecture course, co-developed with another UMD faculty member, focusing on practical applications of field epidemiology methodology and techniques in the context of lower and middle-income countries, using current examples, case studies and didactic learning tools. Summer 2017. Taught the same course, online, with adjustments for online environment, Summer 2019.

GUEST LECTURER, School of Public Health, University of Maryland-College Park, undergraduate course *Introduction to Global Health* (MIEH 400). Each Fall 2016-2020. Contact: Dr. Amir Sapkota.

GUEST LECTURER, School of Public Health, University of Maryland-College Park, in graduate course *Solid Waste Management and Health in Bangladesh* (MIEH 606). Fall 2016. Contact: Dr. M. Haider

ADJUNCT INSTRUCTOR (Profesor), Instituto Nacional de Higiene, Epidemiologia y Microbiologia (INHEM), Havana, Cuba, for distance learning course “Vivienda Saludable y el Control de Enfermedades Transmisibles: Curso virtual sobre el control de vectores, reservorios y agentes en la vivienda y el peridomicilio”. 16 academic credit hours course. Coordinator/author of course master line 2 titled “Housing and Health”, 2002-2004. Joint course of INHEM and PAHO/WHO, see <http://www.paho.org/Spanish/AD/DPC/CD/vbd-curso-viviendas-2003-2004.htm>

GUEST LECTURER, School of Medical Sciences, Master of Public Health Program, Environmental Health Curriculum, Universidad de San Carlos, Guatemala, 1997-98.

GUEST LECTURER, Master of Science Program in Medical Entomology, Universidad de Panama (in collaboration with PAHO/WHO Vector Control Program), 1991.

SENIOR LECTURER (earlier LECTURER), Department of Environmental Studies, California State University, Sacramento. Course Director and principle lecturer, 3 semester-unit upper-division lecture course titled "International Environmental Problems." Themes included tropical disease control and environmental health. Designed the course curriculum; evaluated students. 1983, 1987, 1989-90

ASSOCIATE IN ENTOMOLOGY, Department of Entomology, University of California at Davis. Instructed two laboratory courses in public health vector control and parasitology, evaluated students. 1981-1983

POSTGRADUATE RESEARCH PARASITOLOGIST, Dept. of Medical Microbiology, Immunology and Pathology, School of Medicine, University of California at Davis. Developed degree-day model of malaria transmission by local Anopheline mosquitoes (*An. freeborni*). 1981-1983

STAFF RESEARCH ASSOCIATE, Dept. of Veterinary Microbiology & Immunology, School of Veterinary Medicine, University of California at Davis. Collected, identified, and prepared ticks for microbiological cultures, and cultured arboviruses in a study of Epizootic Bovine Abortion Syndrome. 1979-1981

GRADUATE STUDENT COURSE COORDINATOR, joint special course on "Health Care Systems in Developing Countries", with the Department of Family Practice Medicine/School of Medicine and the International Agricultural Development program/College of Agricultural and Environmental Sciences at University of California-Davis. Designed the course curriculum and coordinated all lectures and student evaluations. April-June 1979.

ADDITIONAL SPECIALIZED TRAINING (1982-2009): (Additional short trainings 2010-2020 too numerous to note)

1st Panamerican Virtual Conference on Development and Evolution of the Internet Portal of Public Health in Spanish-speaking America. PAHO/WHO with Government of Spain/Instituto de Salud Carlos III of Spain and University of Salamanca, Spain, 3-4 December 2009. 12 hours.

International Public-Sector Accounting Standards (IPSAS). Mini-course from ZHAW-Institute of Public Management/School of Public Management and Law, Geneva Switzerland, 16 September 2009, given at PAHO HQ, Washington DC. 04 hours.

Workshop to Construct a National Policy of Health Promotion. Joint Ministry of Health-Brazil and PAHO/WHO-Brazil workshop, 01-02 April 2004, PAHO/WHO office, Brasilia, Brazil. 15 hours.

Basic Security in the Field - Staff Safety, Health and Welfare. UN course, PAHO/WHO office, Brasilia, Brazil, 09 January 2004. 04 hours.

National Seminar on the Health Effects of Human Exposure to Electromagnetic Fields from High Tension Electric Power Lines. Ministry of Health/FUNASA, Brasilia, Brazil, 15-16 April 2002. 10 hours.

International Seminar on Civil Defense in Protection and Assistance against Chemical Weapons. OPCW - International Organization for the Prohibition of Chemical Weapons. Brasilia, Brazil, 25-27 March 2002. 17 hours.

Leaders in Preparation and Response to Disasters and BCR Terrorism. Program of Emergencies and Disasters (PED), PAHO/WHO, Tegucigalpa, Honduras, 19-23 November 2001. 40 hours (12 modules).

Introduction to Immunochemistry. University of Brasilia Faculty of Medicine May 2000. 60 hours.

Prevention, Preparation and Response to Disasters produced by Hazardous Chemical Substances. PAHO/WHO/CETESB-Government of the State of São Paulo Brazil, October 1999. 40 hours.

Water Quality: Effective Disinfection. PAHO/WHO Seminar, Lima Peru, 27-29 October 1998. 24 hours.

Application, Development and Methodological Aspects of Primary Environmental Care, PAHO/WHO and Institute of Political Ecology, Santiago, Chile, 09-10 March 1998. 16 hours.

Strategies for Healthy Islands, Healthy Municipalities and Project Negotiation. Pan American Health Organization/World Health Organization, Washington DC. 8-12 September 1997. 40 hours.

Diversity in the Workplace - Workshop. USAID/Environmental Health Project with Professional Resources Inc. 18 October 1995. 8 hours.

Basic Supervision. State Government of California, January 1994. 40 hours.

Risk and Decision-Making. 1993. US Environmental Protection Agency, San Francisco office. 24 hours.

Leadership II. The empathetic leader. State Government of California. 06-08 April 1993. 24 hours.

Leadership I. Building an effective culture. State Government of California. 09-13 September 1992. 40 hours.

HAZWOPER (Hazardous Waste Operations) - Health and Safety Training for Hazardous Materials Workers, 29 CFR part 1910.120, OSHA. Response to hazardous chemicals emergencies - theory and field application. University of California Extension. January 1992. 40 hours.

Geographic Information Systems (GIS): Introduction. University of California at Davis Extension. 04 September 1991. 8 hours.

Basic Supervision. National Career Workshops, Sacramento. April 1989. 8 hours.

Public Pool Operation and Maintenance, Bensco-Stranco Inc., 21-23 May 1986. 24 hours.

Commercial Hoods and Kitchens Ventilation Systems. Food and Drug Branch, State of California Department of Health Services, January 21, 1986. 6 hours.

Toxic Substances, Hazardous Wastes - Legislative Update. University of California at Davis Extension. February, 1982. 8 hours.

PUBLICATIONS AND WRITING SKILLS

Published 25+ peer-reviewed academic papers. Published chapters in PAHO/WHO Guidelines for Control of Dengue and DHF in the Americas, 1994; two chapters in Demography and Vector-borne Diseases, MW Service (ed.), CRC Press, 1989; and one chapter each in monographs of US National Academy of Sciences/Institute of Medicine (NAS/IOM) and New York Academy of Sciences (NYAS), as well as numerous technical reports, reports to donors, project reports (progress, midterm, final) and grant proposals. *Separate* list of publications and communications available upon request. Also search in PubMed: Ault SK as author search term at <http://www.ncbi.nlm.nih.gov/pubmed>; and Google Scholar: Steven K Ault at <https://scholar.google.com/?hl=en>; also Research Gate

SCIENTIFIC JOURNAL PEER-REVIEWER (occasional)

- *BMJ Open* (UK), *Acta Tropica* (Switzerland); *Revista Panamericana de Salud Publica/Pan American Journal of Public Health* (PAHO/WHO); *Regional Health Forum* (WHO/SEARO), *Waste Management* (UK); others.

FELLOWSHIPS, RESEARCH GRANTS, OTHER AWARDS

- PAHO Merit Promotion Award, July 2012 (promotion from Regional Advisor to Senior Advisor)
- Outstanding Team Award: Pan American Health Organization/World Health Organization. Steven Ault as member of Influenza A (H1N1) emergency response team to combat the H1N1 Pandemic. Awarded 17 June 2010.

- Robert S. McNamara Fellow, The World Bank. Field research on malaria vectors and water-related diseases in rural agroecosystems in Sri Lanka. (1983-84)
- Commendations for Outstanding Service: Nevada County Department of Environmental Health (1987); California Integrated Waste Management Board and California EPA (1991, 1993, 1994), Universidad de San Carlos Faculty of Medical Sciences, Master of Public Health Program, Guatemala City, Guatemala (1999). Ten-year and 15-year Service awards, Pan American Health Organization/WHO (2007, 2012).
- Graduate Student Research Grants and Awards -1978-83. University of California-Davis International Agricultural Development Travel Scholarships (2); University of California-Davis Earle C. Anthony Graduate Research Award (1); University of California Cooperative Extension Mosquito Research Program grants (2); California Association of Professional Scientists research grants (3).

OTHER RESEARCH/PROFESSIONAL COLLABORATIONS

- MacArthur Foundation, *100&Change*. 2016. Team member of pre-proposal submitted by HKI and Footwork, October 2016; proposal cleared round 1. <https://www.macfound.org/press/press-releases/new-macarthur-competition-award-100-million-help-solve-critical-social-problem/>
- NASA. Co-Investigator 2010. EARTH SCIENCE APPLICATIONS FEASIBILITY STUDIES: PUBLIC HEALTH (A.31). Proposal Title: Application of RS/GIS to identify risk for schistosomiasis in Suriname. Principal Investigator (PI): Jeffrey Luvall, NASA, Huntsville Alabama. Registered in NSPIRES.

PROFESSIONAL ASSOCIATION - RECENT AND ACTIVE MEMBERSHIPS

- Member, Royal Society of Biology (MRSB) (U.K.). April 2017-date.
- Full Member (Industrial Hygienist), American Conference of Governmental Industrial Hygienists (ACGIH), Washington DC, since 1995. Retired 2019.
- Member, NACCHO, National Association of City and County Health Officers. Active 2020.
- Member, National Environmental Health Association (NEHA, USA). Retired member, 2020
- Member, International Society for Infectious Diseases (ISID). Active 2020.
- Project Management Institute (PMI). Active 2020.
- Participant, COR-NTD (Consortium for Operational Research on NTDs) since its foundation through 2019 (TFGH, Atlanta, GA)

Recent/Previous/Occasional Member:

- Participant, STH Coalition/Task Force for Global Health-Children Without Worms (Atlanta, GA)
- Member, Royal Society of Tropical Medicine and Hygiene (RSTMH, London)
- Member, Global Health Council (GHC), Washington, DC.
- Member, American Public Health Association (APHA)
- American Society of Tropical Medicine and Hygiene (ASTMH)
- American Mosquito & Vector Control Association; California, Florida and Virginia Mosquito Control Associations
- New York Academy of Sciences (NYAS)
- Institute of Biology, 1976-1980s (MI Biol) (UK)
- Entomological Society of America (ESA) (Medical and Veterinary Entomology)
- Society of Vector Ecologists (SOVE)
- Brazilian Society for Tropical Medicine, 2003-2006.
- Brazilian Society of Parasitology 2003-2010.
- American Anthropological Association (Medical Anthropology)
- Ecological Society of America (ESA)
- California Environmental Health Association (CEHA)
- British Society of Parasitology (BSP)
- Life Fellow, Royal Society of Tropical Medicine and Hygiene (RSTMH, London), since 1975. Category closed in ~1980s.
- Water Supply and Sanitation Coordinating Council (WSSCC), 2009-2011.

LANGUAGES

English - native proficiency (5S/5R)

Spanish - advanced professional proficiency (4S/4R); lived and worked for more than 3 years in Spanish-speaking areas of Latin America.

Portuguese - general professional proficiency (3S/3R); lived and worked for nearly 6 years in Brazil.

Italian - basic understanding and reading

French - basic reading only

Computer Proficiency: User of Windows and Apple platforms. Use and command of MS Office package programs, use select social media (Twitter, Facebook, LinkedIn, Pinterest etc.), and internet browsers. User of Epi-Info and select Databases. Former technical coordinator of web page for Disease Prevention and Control project, PWR-Brazil, <http://www.opas.org.br/> Experience with SharePoint, WebX, Elluminate and WorkDay. Experience with REDCap program for clinical data capture.

OTHER INTERESTS AND PERSONAL INFORMATION

- US State Department security clearance 1980-81 (now expired)
- Member, Lions Club, Mason Neck chapter (Lorton, VA) since 2010
- Self-study MBA courses on Business Management and Strategic Planning, Project Management
- U.S.A. citizen. Home and family in Alexandria, Virginia.
- Bicycling, walking, birding, day hikes, golf, tennis, squash, yoga, swimming, gardening.