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Ms. Lilia Factor Napoli Shkolnik PLLC 400 Broadhollow Rd., Ste. 305 Melville, New York

In re: Romano, *et al.*, v. Northrop Grumman Corporation et al.; United States District Court, Eastern District of New York Case No. 16-cv-5760

Dear Ms. Factor:

I have been asked to prepare a submission on the medical and surveillance management of the current and former residents of Long Island affected by environmental toxic exposures related to the operations at the former Grumman facilities in Bethpage, New York.

In my capacity as an expert in causation I have been tasked with developing a proposed medical monitoring program for residents exposed to relevant chemicals in this location.

Qualifications

My name is Tee Lamont Guidotti. I live in the state of Delaware and I am professionally active and active as a physician and consultant in Maryland, Washington D.C., and Ontario (Canada). I work from offices in the Washington area and Ottawa. I am self-employed as a physician and consultant in health, safety, environment and sustainability, sometimes doing business under the name Occupational + Environmental Health & Medicine. My full biography is attached as Exhibit 1, and a list of my significant publications is attached as Exhibit 2.

Prior to becoming a full-time consultant, I had an academic career spanning 30 years in medicine and public health. Until 2009, I was Professor of Occupational and Environmental Medicine at the George Washington University in Washington D.C, where I held the positions of Chair of the Department of Environmental and Occupational Health in the School of Public Health and Health Services, Director of the Division of Occupational Medicine and Toxicology in the Department of Medicine of the School of Medicine and Health Sciences, and Director of the Center for Risk Science and Public Health, which was associated with the Department. Prior to that, I was the founding Professor of Occupational Medicine at the University of Alberta, in Edmonton, Alberta, Canada, where I established the Occupational Health Program, chaired the department, and also held several related positions. Prior to that, I was the founding Professor of Occupational Health at the then-new Graduate School of Public Health in San Diego.

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I received my M.D. in 1975 from the University of California at San Diego, where I developed a special research interest in occupational lung diseases and in inhalation toxicology. I also obtained an MPH degree in 1981 from The Johns Hopkins School of Hygiene and Public Health (now the Bloomberg School of Public Health). The MPH heavily emphasized epidemiology, and, in later years, I supplemented the degree with additional advanced training in epidemiology.

I trained in internal medicine, pulmonary medicine, and occupational medicine at The Johns Hopkins Hospital and became Board certified in each of these specialties. I subsequently earned credentials equivalent to Board certification in occupational medicine in both Canada and the United Kingdom.

In addition to my medical credentials, I earned and maintained the additional credentials of Diplomate of the American Board of Toxicology (DABT), which is the standard credential for research and regulatory toxicologists, and the Qualified Environmental Practitioner (QEP) from the Institute for Professional Environmental Practice, specializing in air pollution, a recognized credential that is much more common in pollution control engineering and environmental protection management than in health sciences.

I have performed research and served as an expert on cases involving toxic chemical exposures and the risk of cancer and other diseases.

I have conducted original research, employing epidemiology, clinical research, toxicology, and risk science, as well as other methodologies, in the fields of my expertise.

My areas of expertise include occupational and environmental cancer, systemic toxicity, risk science, causation analysis, health protection and prevention, and air toxics (point-source release of airborne toxic substances). I have published scholarly contributions on topics in these fields, am professionally active in scientific and professional organizations central to these fields, and have been the recipient of awards and honors from those organizations.

I have been qualified as a medical expert in proceedings before federal courts, state courts, workers' compensation tribunals, and federal and state regulatory agencies in the United States and provincial agencies in Canada. I have been designated as a qualified federal expert witness and have served as such in cases for the United States Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).

Site History

I have reviewed and rely upon a large number of documents related to this case that were provided to me by counsel for the plaintiffs. These include the technical history of the site prepared by Dr. Richard Bost of I2M and titled "Assessment of Historical Ambient Air Emissions from Northrup Grumman Bethpage Facility, Bethpage, New York". I have reviewed the Third Amended Complaint in the case. I have also reviewed the report of SWAPE (Soil/Water/Air Protection Enterprise) prepared by Dr. Paul E. Rosenfeld. I have scanned the "Evaluation of Cancer Incidence and Environmental Exposures …" report prepared by the New York State Department of Health from 2013 which showed migration of volatile solvents through soil in area homes. I reviewed the report prepared by Earth Forensics (Dr. W. Richard Laton). I have also reviewed recent newspaper clippings from *Newsday*, the journal of record in the area.

Nassau County was an early center of aircraft manufacture and innovation, due to the company's facilities. The Grumman Corporation was established by Leroy Grumman and a group of aircraft engineers and fabrication technologists who stayed behind in New York State when their employer, an aircraft manufacturer, moved to Pennsylvania. They started their own company on Long Island, in Baldwin, New York, beginning operations in 1929 and specializing in aircraft for the Navy and naval usage, such as float planes. Innovations in design fueled a rapid expansion of the company the 1930's. Long Island offered space for the company's own airfield and for sprawling fabrication and assembly plants. Grumman played a major role in designing and producing military aircraft through World War II. Production peaked in 1944. In the 1960's it became a major contractor for the National Aeronautics and Space Administration but its role declined in the face of business reversals and it branched instead into business aircraft, which is the core of its current business model although production is now in other locations. (Sources for this capsule history include the SWAPE report, Wikipedia, and the Northrop Grumman corporate website.)

The Bethpage site in Nassau Co., New York, is just north of Levittown. Grumman also operated an adjacent site on land owned by the US Navy, known as the Naval Weapons Industrial Reserve Plant. The footprint of the combined complex totaled 600 acres.

Together, the SWAPE, the I2M report, and the Earth Forensics report provide a comprehensive profile of emissions to air and releases to surface water and groundwater, respectively.

Basis for My Opinions

In the course of my normal professional duties, I have already read extensively in the literature on hazards relevant to this case. I have now also conducted supplementary literature searches on issues specific to this case and have reviewed and have relied upon the scientific literature on specific hazards involved, including literature in epidemiology (the science of determining health trends and risks in a population or community), toxicology (the science of adverse effects of chemical agents and related hazards upon the body), and relevant aspects of clinical medicine.

My understanding is that these proceedings require an expert opinion to a standard of certainty commonly referred to as "reasonable medical certainty", which implies that a conclusion is based on the weight of evidence, preponderance of evidence, or "balance of probabilities", sometimes colloquially referred to as a probability of "50% + 1". My opinions in this declaration and further will reflect a reasonable standard of "medical" certainty.

It is my expectation and belief that further information will become available during the course of this case. If further information comes to light that requires reconsideration and a change in my conclusion, I will revise my opinion accordingly with respect to the circumstances of this case. However, my opinions on general causation are based on the scientific knowledge about the chemicals in question and so are unlikely to change because the toxicity profile of these compounds has been extensively studied.

Exposure Assessment and Class Definition

SWAPE has developed dispersion maps for both hexavalent chromate and trichloroethylene. These dispersion maps are based on concentrations in air that would be expected at a distance from the center of the site. A dispersion model has been created based on reasonably estimated emissions from emissions from the plant. However, given that data that are known to be incomplete and are likely significant underestimates, given the history of production, the quality of the records, and the absence of reliable data on fugitive emissions and exposure from other sources (such as passive exposure and groundwater contamination) the estimate of exposure from the model must be considered *underestimates*. Thus, the airborne concentrations should be considered a "floor" that establishes a lower bound. In my opinion there is confidence to a reasonable scientific certainty that exposure is not overestimated.

SWAPE has then converted the dispersion model to an additive or attributable risk model (in epidemiological terms) by translating the concentration using standard methods used by the Environmental Protection Agency (EPA) for the assessment of risk. The data are presented in the SWAPE report as a series of isopleths defining cumulative exposure and by extension risk. These are nested within the class boundary. The isopleths are drawn as near-circular perimeters within which risk of cancer above baseline community risk is increased. It is not based on proportionate or relative risk. The EPA methodology is based on rigorously-derived, conservatively-estimated absolute risk associated with a particular exposure concentration to a specific chemical. As a consequence, the isopleths are not influenced by community cancer experience or any risk factor of a given individual. The calculation strictly reflects the minimum additional cancer risk to an individual living in the area within the isopleth under standard conditions defined by the EPA. EPA builds in a variety of assumptions and interpolations in its model that are intended to avoid overestimating risk and so its models are considered "conservative", meaning that it is designed to avoid exaggerating risk estimates. In my opinion there is confidence to a reasonable scientific certainty that risk in absolute terms is not overestimated.

The de minimis risk that triggers remedial action by EPA under Superfund is 1 in one million $(10^{-6}, \text{ also written } 1E-06)$ which happens to correspond to a concentration in real terms of 3.33E-05 of hexavalent chromium and 0.64E-06 of trichloroethylene. The SWAPE model demonstrates risk far in excess of this trigger level and sufficient to cause health effects.

Sufficiency is established based on the cumulative exposures (doses) of hexavalent chromium and trichloroethylene modeled by SWAPE. It is further refined by cutoff criteria for the years of residency required for admission into the class that vary depending on proximity to the Grumman Site. These residency duration requirements are consistent with the epidemiological studies in the SWAPE report, my own review of epidemiological studies in occupational and community cohorts, and with a careful weighing of the Bradford Hill factors. In my opinion, the available evidence indicates to a reasonable degree of medical certainty that exposure to each chemical of concern at the modeled levels can cause the diseases of concern in the adult general population within class boundaries.

Conversion of concentration to which a class member is exposed to absolute risk allows definition of the class at a particular isopleth, further reducing uncertainty. Because the class definition is directly based on absolute risk (expressed as a probability, not a relative risk), it is independent of community baseline or individual risk factors in daily life or on the job. (Occupational exposures for class representatives who worked at Grumman are not considered.) This conversion of exposure (concentration) to risk addresses and satisfied the expectation for sufficiency implicit in the Bradford-Hill criteria (epidemiology), the science of toxicology (implicit given the linear model of carcinogenesis), and the science and practice of exposure science (per Reference Manual for Scientific Evidence, 3/ed.).

Not surprisingly, because air dispersion is similar, the isopleths for both hexavalent chromium and trichloroethylene are similar. This means that at most points along the isopleth used for definition of the class, a resident would be exposed to hexavalent chromium at levels driving the cumulative or total risk as the major factor and trichloroethylene would carry additional risk, further rendering the model conservative.

Given the conservative assumptions and the risk-based class definition, it is my opinion that the isopleths defining the class are robust, unlikely to exaggerate risk (it is more likely to be an underestimate because of incomplete information) and describe risk specific to exposure from the Grumman site, unaffected by other community or individual risk factors.

In my opinion, the conservative assumptions in the SWAPE model, the probable underestimation of exposure and risk support the model and meet the implicit criterion of sufficiency in the Bradford-Hill criteria for causation. It does so by linking known risk assessment model at an exposure level linked to sufficient for cancer causation to exposure in a chain of evidence for which there is reasonable scientific certainty that risk is not overestimated but is still sufficient to increase the probability of cancer in an individual and in the population constituting the class.

General Causation

The chemicals of greatest relevance to this action are hexavalent chromium and trichloroethylene, although there may be others that emerge as significant as investigation and discovery proceed.

Both exposures have been extensively studied and have been the subject of review by the International Agency for Research on Cancer (IARC), which is the World Health Organization's specialized agency that, among other functions, undertakes exhaustive and authoritative reviews to determine whether particular chemicals (singly or in combination), physical exposures, or specific environmental conditions cause cancer.

Hexavalent Chromium

Hexavalent chromium (chromate, chromium (VI), Cr(VI), "hexachrome") is a chromium metal-

element ion in a specific valence state (+6), a chemical state determined by incomplete electron filling of the outer shell of the chromium atom that confers an affinity for electron-rich chemical interactions and stability of the ion in aqueous media (water). The hexavalent ion is not found in nature, for all practical purposes, because it readily converts to the more stable trivalent valence (CrVI \rightarrow CrIII) and stays there. Thus, significant exposure to hexavalent chromium is exclusively from industrial origin and there is no background or natural exposure.

Chromium metal is also not found in nature. In concentrated solution, hexavalent chromium is bright yellow and highly irritating. As a contaminant of aqueous media at lower concentrations, it is highly chemically reactive, known to be carcinogenic in all forms, and has the property of inducing allergic reactions, usually of a chronic nature in skin or uncommonly as chromeinduced asthma. In the situation in this action, the primary hazard is carcinogenicity because of the concentrations involved, the route of exposure, and the mechanism of injury. Exposure to hexavalent chromium is regulated by the U.S. Environmental Protection Agency primarily because of its intrinsic cancer risk. Hexavalent chromate is heavily used for chrome plating in industry, to prevent corrosion of metal parts. Hexavalent chromium is usually found in solution (water) as a salt and in solid form compounded with other elements in Portland cement, stainless steel, ferrochrome (a synthetic mineral used in making stainless steel), or as a chromate, such as potassium dichromate.

Hexavalent chromium has been intensively studied for many years and its chemistry and toxicology are generally understood. The single most convenient reference for hexavalent chromium is the 2012 Agency for Toxic Substances and Disease Registry (ATSDR) *Toxicological Profile for Chromium* (https://www.atsdr.cdc.gov/toxprofiles/tp7.pdf) which, although almost a decade old, is still valid and current. In this affidavit I will try whenever possible to use this document as the sole source for citation and will refer to other sources only sparingly and when necessary. The second essential resource cited here is Monograph 100C of the International Agency for Research on Cancer, the global authority on chemical cancer risk (2018, https://monographs.iarc.who.int/wp-content/uploads/2018/06/mono100C-9.pdf). Conveniently, an authoritative review from a respected institution in Japan (the University of Occupational and Environmental Health), is also available that summarizes recent findings in accessible language. (Yatera, 2018, provided as a resource but not relied upon as evidence.)

The primary and in most cases the only presumed route of exposure in this population to hexavalent chromium is by the airborne route. Hexavalent chromium is carried in air adherent or forming part of the composition of small particles which are densely concentrated in the workplace but can be carried long distances. The absorption of such airborne chromium bearing aerosol is in the respiratory tract, depending on location of deposition, which is governed by particle size, and primarily affects the lung.

The world literature primarily addresses occupational exposure to hexavalent chromium. The literature on community air pollution from hexavalent chromium relies heavily on the occupational exposure literature for health effects, makes note of the high risk of hexavalent chromium, and treats the chemical as an air toxic (a term of art referring to a hazardous chemical that is released locally and is not one of the air pollutants for which there is a National Ambient Air Quality Standard under the Clean Air Act). Hexavalent chromium has been recognized

officially as a toxic air contaminant in California since 1986 and the potential for community air pollution impact downwind from a source has been studied there, in Russia, and in Canada. These studies are consistent with the risk estimates used in the SWAPE analysis for the same outcomes, as the same data have been used to derive the US EPA's risk estimates on which the model is based.

Exposure to hexavalent chromium is consistently associated with elevated risk of lung cancer, primarily. There are sufficient papers on environmental exposure to document an increased risk of both lung cancer associated with airborne exposure and stomach cancer associated with water contamination Smoking does not appear to have a modifying effect on the relationship with lung cancer, so that interactive effects do not seem to be present. This simplifies projection of future cancer risk for purposes of medical monitoring.

Exposure to hexavalent chromium is also consistently associated with elevated risk of cancer of the head and neck. Because of its anatomy and tissue density, the head is a difficult part of the body on which to perform screening tests for cancer. However, markers of head and neck cancer often include oral lesions, changes in the nasal cavity, and evidence of chronic irritation, which can be identified on examination, with subsequent positive identification of cancer in imaging studies and specialty rhinoscopic examination. Smoking may or may not have a modifying effect on this relationship in the head and neck.

In summary, the available evidence indicates to a reasonable degree of medical certainty that, at levels relevant to this action, exposure to hexavalent chromium presents a risk of lung cancer, and cancer of the head and neck (nose, nasal sinus, pharynx). IARC has concluded that by its rigorous criteria there is sufficient evidence in humans to conclude that hexavalent chromium causes cancer of the lung, a statement roughly equivalent to "beyond reasonable doubt", and has categorized it as a Group 1 (human) carcinogen.

Non-cancer risks of exposure to hexavalent chromium are highly dependent on concentration in air or water and present themselves mostly after relatively high exposure levels such as may be seen in contaminated water supplies, the electroplating technology of an older era, welding on stainless steel (which is a ferrochromium alloy) and experimental studies with animals to calculate an exposure-response relationship. This literature primarily comes from toxicology rather than epidemiology and is complicated to interpret. The totality of this literature indicates that at levels relevant to this action the anticipated effects of exposure to hexavalent chromium are most likely, to a reasonable degree of medical certainty, to be impairment of host defense mechanisms in the respiratory tract, leading to diminished capacity to fight off infection or, indirectly, suppress cancer.

Two types of skin effects from deposition of hexavalent chromium occur, allergic contact dermatitis (sensitization) and skin ulcers. Contact dermatitis is a random event among exposed individuals and is thought to be unlikely in this class. However, because contact dermatitis involves skin sensitization and may involve an immune response, it can occur at relevant levels of exposure in this population. Chrome skin ulcers are unlikely to occur in this population as they require concentrated exposure, usually from contact with Portland cement.

Asthma is known to be associated with Cr(VI) exposure in two ways. Allergic sensitization and hypersensitivity is a "stochastic" event (a term of art meaning random within defined limits). The probability of sensitization to Cr(VI) increases with increasing concentration and duration of exposure. This means that it is much more likely to occur at high concentrations but may occur on a random basis at low concentrations as well, less often. Allergic asthmatic reactions to Cr(VI) is called "chromate asthma" and is seen in occupational settings, particularly associated with cement (which contains Cr(VI)). Cr(VI) sensitization is not tested for in environmental settings, in part because of the risk of causing new sensitization by the tests used to confirm it. However, it is clear that there is a finite, non-negligible probability of sensitization to Cr(VI) at ambient (environmental) levels.

As or more significantly for members of the class, exposure to Cr(VI) is well documented in experimental studies to be strongly "proinflammatory," a term of art meaning that exposure to Cr(VI) is known to amplify at the cellular level the inflammatory response in the lung to an antigen to which the subject (animal) is already sensitized. Studies of this effect on human beings would be unethical in a laboratory and unapproachable epidemiologically. The effect is clear, however, and the US EPA has expressed concern that airborne Cr(VI) may be significant as a cause of asthma in ground-level (ambient) air pollution. Within the boundaries of the class, exposure levels are significantly higher for class members than for the general population exposed to ambient air pollution. Therefore the effect is therefore even more likely, to a reasonable medical and scientific certainty.

There is only one specific biomarker of effect for hexavalent chromate-induced disease at levels below historically excessive occupational exposures. That is patch testing with chromate for allergic sensitivity to hexavalent chromium, a cumbersome diagnostic test not suited for surveillance and only used in specialty dermatological practice. Certain biomarkers for systemic toxicity have been investigated (such as urinary β_2 -microglobulin and β -N-acetyl-glucosaminidase) but they are non-specific, not generally available, and unreliable as biomarkers for screening. Tests for genotoxicity or impaired host defenses are neither specific nor validated for monitoring hexavalent chromium effects.

Short-term, recent exposure to hexavalent chromium can be characterized by trace element analysis, usually performed on blood or collected urine with determination of the concentration of chromium in the body fluid. However, the half-life of chromium in the blood or urine is relatively brief and the method is not used for routine surveillance of chromate-exposed workers. It has no usefulness for exposure in the distant past.

Trichloroethylene (Trichoroethene, TCE, "trike", Cl₂C=CCl)

Trichloroethylene is a small molecular-weight organic molecule consisting of two carbons linked by a double bond ($Cl_2C=CHCl$), with two chlorine atoms on one and a single chlorine atom on the other. This chemical is rapidly evaporating and has the property of easily dissolving grease, lipids, and other substances. This has made it useful in industry as a solvent, degreasing agent, and for cleaning metal parts.

Cancer risk associated with trichloroethylene has been extensively characterized in recent years.

The strongest and most consistent association with disease outcome in both human and animal has been found to be with kidney cancer, with strong evidence emerging for non-Hodgkin lymphoma (including myeloma).

Trichloroethylene has been studied for many years, but more intensively recently because of its importance as a water pollutant (it is highly mobile in groundwater, can be absorbed by the skin, and may be released into air from contaminated water) and concerns about cancer and reproductive risk. The single most convenient reference for trichloroethylene is the Agency for Toxic Substances and Disease Registry (ATSDR) *Toxicological Profile for Trichloroethylene* (https://www.atsdr.cdc.gov/toxprofiles/tp19.pdf) which was published in 2019 and is still current. In this affidavit I will try whenever possible to use this document as the sole source for citation and will refer to other sources only sparingly and when necessary. The second essential resource cited here is Monograph 106 of the International Agency for Research on Cancer, the global authority on chemical cancer risk (2018, https://monographs.iarc.who.int/wp-content/uploads/2018/06/mono100C-9.pdf). This monograph was produced in 2015 and focused on kidney cancer, but there has been significant further research on trichloroethylene since then. This research has mostly served to strengthen the evidence for a causal association with non-Hodgkin lymphoma (including myeloma).

Further, the National Toxicology Program, which is the US federal program for cancer risk screening for chemicals, relies upon assessing chemical hazard risk in priority chemicals and for methodology development, has concluded that trichloroethylene is a known human carcinogen, is a cause of kidney cancer, and has a causal association with non-Hodgkin lymphoma and liver cancer. The U.S. Environmental Protection Agency concurs in this assessment.

Trichloroethylene has numerous well-documented health effects which have resulted in its withdrawal from many industrial uses and stringent regulation. Non-cancer risks of exposure to trichloroethylene are highly dependent on concentration in air or water and present themselves mostly after relatively high exposure levels.

The risk of male infertility has been studied in occupational exposures and in experimental models and has been shown to be significant under workplace conditions, and it would be a reasonable extrapolation of risk to lower levels given that fertility effects often show an exposure-response relationship by degree as well as incidence.

Similarly, under workplace conditions there is a large body of evidence documenting elevated risk for systemic sclerosis, with a particularly impressive cluster arising in an outbreak in Hungary in 1989. Although there is not a robust literature on systemic sclerosis from which to derive risk estimates because of the absence of documented exposure data, there is abundant corroborative evidence for workers exposed to trichloroethylene specifically, for workers exposed to chlorinated solvents in general, in animal studies, and in resemblance to other exposures that "denature" or alter protein antigens in the body, which is considered the likely process by which these exposures lead to autoimmune disorders.

There are no practical screening tests for exposure to trichloroethylene at levels that apply to this class. The chemical breaks down and leaves the body rapidly. The chemical's metabolites are not

specific for trichloroethylene exposure and such tests are not readily available.

Short-term exposure to trichloroethylene can be characterized by measuring blood concentrations (as trichloroethanol). However, trichloroethanol is a metabolite that can be affected by other exposures and does not last long in the blood or urine. The duration of its detectable presence is brief and the method is not used for routine surveillance of exposed workers. It has no usefulness for exposure in the distant past.

Perchloroethylene (Tetrachloroethylene, Tetrachloroethene, PCE, "perc", Cl₂C=CCl₂)

Perchloroethylene has been identified as a chemical used at the site. Exposure and therefore risk has not been characterized but the physical characteristics of "perc" are similar to trichloroethylene except that perc is somewhat more dense $(1.62 \text{ v}, 1.46 \text{ g/cm}^3)$ and therefore may settle in air more rapidly, an effect unlikely to be of great significance with air turbulence or currents already accounted for in the model. Thus, the dispersion of perc is likely to mirror that of TCE.

In animal studies, tetrachloroethylene is associated with renal carcinoma, as well as cancers of liver, kidney, and blood-forming organs. IARC has concluded that the evidence is sufficient to classify tetrachloroethane (better known as perchloroethylene) as an animal carcinogen probably carcinogenic to humans (Group 2B), and the US EPA considers tetrachloroethylene likely to be carcinogenic to humans by all routes of exposure (including skin and inhalation).

1,4-Dioxane

1,4-Dioxane (not to be confused with "dioxin") is an organic compound also reported to have been found at the Grumman site. The cancer risk data available for 1,4-dioxane is derived almost entirely from experimental studies. It is considered to be an "epigenetic" carcinogen of limited potency, acting as a promoter, mostly associated with the risk of liver neoplasia (pre-malignant or species-specific processes associated with cancer in human) and nasal cancers. Dispersion of airborne 1,4-dioxane would model the same as for other release and the effects would in all probability be less than that of hexavalent chromium for nasal cancer or trichlorethylene for systemic cancers. There is no reason to expect an interaction in cancer risk. The net quantitative influence of 1,4-dioxane on the analysis would be to confirm that the analysis is conservative with respect to risk estimation. The net qualitative influence of 1,4-dioxane on the analysis would be negligible since the outcomes of concern for 1,4-dioxane are already part of the proposed medical monitoring program. Therefore, there is deemed to be no need for further consideration of this chemical.

Specific Health Outcomes of Greatest Concern

In the absence of strong evidence for interactive effects, and the absence of evidence for a positive interaction in lung cancer risk from cigarette smoking and exposure to hexavalent chromium, it is reasonable to consider the risk following of exposure to these chemicals as singular and additive, not synergistic. That has two important implications in this case.

First, the risk of cancer and non-malignant outcomes from exposure to hexavalent chromium, trichloroethylene, or both are stand-alone risks. In other words, they can be considered individually and without statistical or other adjustment to account for more complicated effects beyond simple combination.

Second, the background risk of lung cancer or other outcomes in the community can be separated from the additional risk imposed on the population by exposure from emissions from the plant. Therefore, the risk imposed by exposure is not proportional to existing risk in the community and risk factors does not need to be compared to background in the community or past history and lifestyle in the individual.

The diseases of greatest concern and most likely to be of elevated risk due to hexavalent chromium are lung cancer and cancer of the head and neck among malignancies and asthma among nonmalignant conditions. The diseases of greatest concern and most likely to be of elevated risk due to trichloroethylene exposure are kidney cancer and non-Hodgkin lymphoma (including myeloma), primary liver cancer, and breast cancer among malignancies and chronic infertility, and systemic sclerosis among non-malignancies.

Screening modalities exist for lung cancer and oral cancer. For other outcomes, detection is possible only when the disease becomes symptomatic or advanced enough to require clinical work-up: non-oral cancer of the head and neck, kidney cancer, and non-Hodgkin lymphoma. For these disorders, a screening program is not practical to prevent the disease but may identify the cancers early when treatment is more likely to have a favorable outcome.

Kidney Cancer

Kidney cancer is most often derived from kidney (renal) cells or from tissue that forms the collecting duct system and is continuous with the ureter and bladder (urothelial).

Renal cell, which is also called "clear cell", carcinoma, is the predominant type of kidney cancer and has a recognizable cell type, although any individual kidney cancer may include other cell types in a mixed picture. Renal cell carcinoma is an uncommon but not rare malignancy, and is growing in incidence. This is thought to reflect increasing prevalence of the most important known risk factors for this cancer: obesity, hypertension, survival with chronic renal disease, and probably hepatitis C infection.

Cigarette smoking is associated with an increased risk of kidney cancer but the association is much less than for lung cancer and other smoking-related cancers. The risk of kidney cancer among cigarette smokers is about 1.25 to 2.00 (meaning 125% of the rate of non-smokers), compared to about 10 (1000%) for lung cancer. Therefore, cigarette smoking is not of concern as a confounding factor for kidney cancer in this situation.

Although the two main types of kidney cancer, renal cell and urothelial, arise from very different cell types, they have been shown to have very similar risk factors following exposure to similar kidney carcinogens, such as cigarette smoking: both types are elevated and to about the same degree. (This is explicable because of the toxicology of the kidney, which tends to concentrate

carcinogenic chemicals in the organ.) Furthermore, the specific cell type of renal cancer observed in this type of tumor is often unusually varied at the microscopic level compared to other cancers, with different renal cell types found often within the same cancer. Therefore, it is not possible or reasonable to specify a particular cell type as being most likely due to trichloroethylene. Therefore, there is no basis for excluding individual cases of kidney cancer on the basis of cell type.

Non-Hodgkin Lymphoma

IARC has concluded that, according to its rigorous criteria, there is "sufficient" evidence in humans, supported by animal studies, to conclude that trichloroethylene causes non-Hodgkin lymphoma, a term of art used by IARC that roughly corresponds to "beyond reasonable doubt", and has categorized it as a Group 1 (human) carcinogen.

Myeloma ("multiple myeloma") is now known to be a type of lymphoma, not a separate biological class. Myeloma should therefore be treated as a non-Hodgkin lymphoma for purposes of this action.

There are 30 or more recognized types of non-Hodgkin lymphomas (not counting myelomas) and it is possible that some types are associated with trichloroethylene exposure and others are not. Epidemiological research has not identified the particular lymphomas or subsets of lymphoma and myeloma that are definitively causally associated with TCE (although two are highly suspect). Therefore, there is no basis for excluding individual cases of NHL or myeloma on the basis of cell type or biomarkers.

Cancer of the Head and Neck

"Cancer of the head and neck" is a term of art in oncology and medicine generally that refers to malignant tumors of several different types that occur in anatomical spaces of the nose, nasal sinuses, mouth, throat (pharynx and hypopharynx). Such tumors, by definition, do not include cancers of the glands in the neck, brain case, central nervous system or cancers metastatic to the head and neck. The rubric does not include cancer of the brain or spinal cord. The cancers designated in the broad category of "cancers of the head and neck" are defined as such as a practical matter, because they are within the field of practice of specialized head and neck surgeons, common evaluated by otolaryngologists (ear, nose and throat specialists), and are often detected and involve reconstruction by dentists

"Cancer of the head and neck" involve many different structures but share many commonalities. They are predominantly squamous cell cancers (also known as epithelioid tissue type) which reflects the tissue origin of most. (Lymphomas, sarcomas, and adenocarcinomas do occur in the head and neck but much less commonly and only in certain structures. The major exception is that cancers of the salivary glands, which are adenocarcinomas.)

Primary Liver Cancer

Primary liver cancer is very rare in the United States. Its presence in this class would not be

expected by chance alone and any cases arising would be presumed to have arisen from exposure. Almost all colloquially designated "liver cancers" in the United States are metastatic from another site in the body. Exclusionary criteria would be cancer in the liver that is metastatic from other sites.

Breast Cancer

Breast cancer risk among women exposed to trichloroethylene is elevated but not widely recognized. Female breast cancer risk is elevated but the elevation did not achieve overall statistical significance in some studies. Very recent (Pedersen et al., 2020) studies of women in a large enough population to separate out solvent exposure, showed an elevated risk that was age-dependent, exposure-dependent, and highly specific for trichloroethylene among women older than 50. The exposure of class members as a class ceased in 1995, so that residents who were 26 years of age or older in 1995 are members of the class. A person born in 1969 or before would therefore be both a member of the class and at elevated risk for trichloroethylene-associated breast cancer, as well as satisfying a conventionally presumptive 20-year latency period. The risk of breast cancer is significantly elevated and conforms with the demographic profile of the women in the class, ad so is a highly significant outcome of concern.

Other supportive studies of elevated risk for women exposed to trichloroethylene have come from electronics workers in Taiwan (Sung et al. 2007)

Male breast cancer has only recently (in Lyngge et al., 2020) been identified as a trichloroethylene-related cancer, although Monograph 106 mentions a possible role in endocrine disruption in both women and men. Earlier studies, including studies of residents of Camp Lejeune NC at a time when the water supply was contaminated with trichloroethylene, have pointed in a similar direction but were not as definitive as the recent Danish studies.

IARC has not had the opportunity to evaluate the risk of male (or potentially female) breast cancer associated with trichloroethylene. Male breast cancer is rare and so difficult to study. In this Danish study of rare cancers (Lyngge 2020), the data strongly support a causal association: a clear exposure-response relationship, in which the risk is higher with documented higher exposure to trichloroethylene, a high risk overall (almost a doubling, at 1.9), and a broad elevation in risk in occupations which involve metalworking, metal fabrication, and a higher risk in occupations involving the manufacture of automobiles than in those involving automotive repair; exposure levels tend to be higher in metal fabrication. This strong evidence supports a causal association to a reasonable degree of medical certainty.

Male breast cancer is rare and even if the risk is elevated it is still rare. Mammography has greater predictive value for detecting cancer in men because there is less overlying breast tissue but the yield is still low compared to female breast cancer, which is so much more common. On the other hand, the radiation dose is less for men (because there is little or no breast tissue for the radiation to penetrate) but there is a theoretical possibility of an adverse outcome. The most appropriate strategy is therefore to ensure that annual mammography is undertaken by women in the class and the recommendation is for examination with manual palpation is recommended for men.

Non-Malignant Outcomes

Non-cancer risks of exposure to trichloroethylene are highly dependent on concentration in air or water and present themselves mostly after relatively high exposure levels. The best documented and most consistent of these involve liver and kidney damage at high levels of exposure. Decreased male fertility outcomes have been reported together with changes in reproductive hormones and the presence of trichloroethylene in seminal fluid of exposed men who were infertile, suggesting a true association by weight of evidence although the chain of evidence is not complete. The autoimmune disease systemic sclerosis (scleroderma) showed a marked elevation in two studies. For this class, these non-cancer health outcomes other than scleroderma are concluded to be "more likely than not", meeting the weight of evidence for this class, although scientific evidence is not complete. It should be noted that scleroderma carries with it a risk of subsequent cancer but not as a first or primary manifestation of disease. Should a case arise in this class, however, would not be expected by chance alone and any cases arising would be presumed to have arisen from exposure.

Asthma has also been found to be significantly elevated among men and women exposed to trichloroethylene in aircraft maintenance (Blair et al., 1998), together with other outcomes associated with other solvent exposure. This association is likely to be causal because solvents such as trichloroethylene aggravate airways reactivity and at times provoke irritant occupational asthma, particularly in persons with pre-existing reactive airways disease.

This is an aging population and therefore susceptible to diseases that manifest later in life, particularly cancer. Because of the demographics of the class, monitoring for some age-related disorders, such as infertility, may not be practical except by history. As a hypothetical it is possible that a member of the class in his fourth or fifth decade of life who was exposed in or before 1995 may be affected by clinical infertility. However, the means of detecting this would rely on an individual history of lack of conception despite effort because the numbers of such individuals is almost certain to be too small to apply epidemiological methods of group fertility assessment.

Interactions with Smoking and Other Risk Factors

The class definition is based on estimated absolute risk, not relative or proportionate risk compared to the community. As a consequence, the cancer experience of the community or the cancer risk profile of any one individual resident is not germane to risk as a class or the additional risk imposed on the resident by exposures relevant to this action.

However, there are reasons to consider that persons in the class are more highly predisposed to injury from these exposures than other people.

It is well known that some carcinogens interact with cigarette smoking and other risk factors. This has not been well documented for either hexavalent chromium or trichloroethylene although it may occur. In the absence of information to the contrary, we are assuming in the proposed medical monitoring protocol that such interaction is not significant and so will not be taken into account in the medical monitoring model.

There is weak evidence for an interaction between smoking and trichloroethylene exposure with respect to genotoxicity presenting a risk of cancer. In our opinion this evidence does not meet the standard of weight of evidence *as yet* and so will not be taken into account in the medical monitoring model.

Some individuals in the class have already developed cancer, of a type not identified as associated with either hexavalent chromium or trichloroethylene (or perchloroethylene). It is well established that having one cancer, regardless of type, predisposes to incidence of a second cancer, regardless of type, in the future. In addition, treatment for cancer, especially chemotherapy, predisposes to second cancers. The risk of these second cancers is not independent of external causes and often represents an acquired defect in cancer suppression because of the first cancer. Subsequent exposure to a carcinogen than may result in initiation of the second cancer with compromised defenses and a defective inability to suppress the new cancer. When this occurs, the proximate and underlying cause of the new cancer is the carcinogen, not the compromised response. (This may be restated as an example of the more familiar "thin skull" or "eggshell skull" principle.) Thus, cancers of the type relevant to this action that arise in the future in such individuals should be considered new, incident cancers within the medical monitoring framework.

Similarly, on theoretical grounds it is possible that toxic effects other than carcinogenesis may result in an increased future risk of cancer in members of the class due to chronic inflammation, immune suppression, and comorbidities (for example, systemic sclerosis is itself associated with a risk of lung cancer).

Design of a Medical Monitoring Program

A medical monitoring program is feasible and advisable for this class. Given the serious nature of the health risks and conditions that may develop as a result of the exposure in this population, and the fact that it is an aging population, such a monitoring program should be instituted as soon as practicable.

Clinical Governance

The medical monitoring program would be overseen by a panel of experts representing the specialties of occupational medicine, pulmonary medicine, and oncology, together with experts in epidemiology and toxicology who may or may not be physicians. with consultation as needed from experts in hepatology (gastroenterology) or hepatic oncology, infertility evaluation, otolaryngology/head and neck surgery, and rheumatology. Members of the expert panel would review any cases with objective evidence of an outcome of interest, monitor the performance of the screening program as a whole, assess each case individually for association with the exposures of concern, and recommend modifications of the protocol, especially as regards periodicity, new modalities, and screening test performance. The panel may, at its discretion, audit negative results if there is reason to suspect significant false negative results. When referral is deemed necessary because of a positive finding, the expert panel shall request permission from

the class member to document and follow the case to final disposition, using usual informed consent. The expert panel will advise on the best use of this information (for example, anonymized case reports or a registry) for the benefit of others.

Members of the panel of experts shall be available for consultation with the personal or treating physician of the class member who is enrolled in the medical monitoring program. Members of the expert panel shall be under no obligation to be directly accessible to any class member.

In the event of lack of agreement between the guidance of the panel and the class member's personal or treating physician, the panel findings shall be deemed authoritative for purposes of the screening program but not binding on the class member with or disqualifying with respect to continued participation in the medical monitoring program.

Members of the panel of experts will be selected on the basis of excellence, medical qualification, and experience and it is expected that they will be senior members of the faculty of medical institutions or large hospital networks and therefore accountable to peers, engaged in research and scholarship, and involved in teaching and mentoring students.

Population and Risk Profile

An estimated 25 years have elapsed since the last air emissions from the site. The neighborhoods surrounding the Bethpage site have not grown appreciably in population over this period except for the housing that was built on parts of the site. This means that most residents defined in the class are older and most are entering the period of life with rising cancer rates. The National Cancer Institute demonstrates (https://www.cancer.gov/about-cancer/causes-prevention/risk/age) an inflexion point in the previously steady rise in risk at about age 45, followed by a more rapid rise to a peak at 80 - 84. Members of the class are most likely to be on the upslope of this curve.

Outcomes of Concern

The proposed medical monitoring program would screen for the following cancers: lung cancer, cancer of the head and neck (nose, nasal sinus, pharynx), kidney cancer, non-Hodgkin lymphoma, and breast cancer (in both men and women). The proposed medical monitoring program would also screen for the following non-cancer-related outcomes: asthma, chronic infertility, and systemic sclerosis. The program would also record and track incident cases of the following disorders that are not amenable to screening: primary liver cancer, non-Hodgkin lymphoma and myeloma.

Clinical observation by medical history, examination and limited testing can identify other outcomes, but not at an early stage: systemic sclerosis, chronic infertility.

Of the outcomes identified, the most effective early screening modalities exist for early detection of lung cancer. Unsatisfactory but helpful early screening programs exist for oral cancer, but not other head and neck cancers. Screening tests for lymphoma and primary liver cancer have not been developed as yet. Chronic infertility can be assessed by questionnaire querying "intent to conceive" followed by referral for evaluation (which is likely to be deferred for most class members as they will have aged out of the time of life). Systemic sclerosis may be revealed by skin changes (scleroderma) or known complications (including renal insufficiency or failure).

Proposed Medical Monitoring Program

Subject to modification with new research prior to implementation, but within parameters of agreement and cost, the proposed medical monitoring program would have these elements, each modality conducted annually unless advised otherwise by the expert panel, guided by evidence:

- 1. A database to track individual members of the class, their medical history, reconstructed exposure estimates, occupational history, and test outcomes.
- 2. A questionnaire administered to all members of the class at baseline (on initiation of the program) and repeated annually. One element of the questionnaire would be items modelled on elements of the American Thoracic Society standardized assessments to determine if symptoms of airways reactivity are present.
- 3. A physical examination performed by one or more qualified health practitioners examining the mouth (dentists would qualify), skin, breast, chest (for wheezing), and liver (which is not effective as an early screening measure but is very low cost, can be conducted as an additional service during a clinic visit, and may identify unsuspected advanced disease).
- 4. Annual mammography for women, breast examination for men with mammography if abnormality found.
- 5. Low dose-computerized tomography (LDCT) of the chest or its equivalent as technology advances for the detection of lung cancer.
- 6. Routine referral for voluntary follow-up for smoking cessation, clinical evaluation for positive findings, work-up for suspected chronic infertility if this remains an issue for individuals, and self-care emphasizing early detection of disease.
- 7. Routine periodic medical evaluations, such as an annual physical examination or an examination incidental to other medical care, are not sufficient to substitute for these elements of surveillance and care because they are not targeted to the outcomes of concern, the examination modalities are nonspecific and insensitive to the outcomes of concern, do not include evaluation modalities specific to the outcomes of concern (such as an interim questionnaire and LDCT), and in the absence of a data collection system would not be reliably tracked by the database.
- 8. Referral for evaluation for reversible airways obstruction (hallmark of asthma) when a history compatible with asthma is obtained on questionnaire.

Lung Cancer Screening

The lung cancer component medical monitoring protocol proposed here is based on the recommendations of the US Preventive Medicine Task Force (USPMTF), recently revised (2021), which was originally designed for older persons aged 50 to 80 years and defined to be at elevated risk. (JAMA, 9 March 2021;325(10):962 – 970).

The USPMTF, when it began, was particularly concerned with modifying health risks due to smoking. For purposes of the USPMTF, the working definition of elevated risk was smoking ≥ 20

pack years (a cumulative measure of amount smoked for how long), which for smoking and lung cancer is roughly a breakpoint indicating an inflexion in the curve of risk corresponding to elevated risk but not to an extreme. No such breakpoint applies to the proposed medical monitoring class members in this action because risk is already defined by membership in the class. Smoking is not a consideration because the contribution of risk arising from membership in the class is an absolute risk, not relative to the community, for the reasons given above. *The working definition of elevated risk for this protocol is the class definition*, which is based on a calculated elevation in risk that serves the same purpose. This working definition also satisfies the expectation that exposure be *sufficient* to cause cancer, since it is based on the EPA's own model for population risk which satisfies the criterion for sufficiency.

Value of Questionnaire Information and Medical Interview

Capturing health information by questionnaire followed up by a medical interview can, in every case, document and record the incidence of these disorders and provide information to assist in planning for treatment and rehabilitation. Questionnaires may be comprehensive (possibly integrating information useful for personal care) or may target specific symptoms and signs or recent medical diagnoses: hemoptysis (coughing blood, one possible sign of lung cancer), flank pain or blood in urine (possible signs of kidney cancer), night sweats (a common sign of lymphoma), or skin changes suggestive of scleroderma. Specific screening questions will be formulated.

Risks and Benefits of the Medical Monitoring Program

The obvious benefit to members of the class from a medical monitoring program is early detection and early or, in the case of cancers and other disorders that cannot be detected early, earlier treatment. This gives members of the class the best opportunity to achieve cure, chronic management, reduced disability, or appropriate long-term management of their evolving condition. There will be medical intervention at the earliest possible moment.

The risks of medical monitoring are not negligible but are in my judgment small in relation to the benefits. The risk of a false positive result from a screening test is minimized by confirmatory tests and referral to a specialist, which is standard procedure. The risks of harm from diagnostic tests, treatment, and complications of management are unlikely to be great with experienced and vigilant medical management and oversight. The risks of such misadventures do not compare to the risk of missing the diagnosis in the diseases of concern. The risk of "labelling" is a theoretical possibility but unlikely in this older population. Labelling is a term of art referring to the psychological burden of knowing that a possibility of a dread disease (usually cancer) exists and consequent worry, anxiety, and depression and inappropriately lower medical threshold of suspicion. It is most often a concern when young people are told early that they may become seriously ill later in life and this knowledge changes behavior and attitude.

Future Modification

Given the scope of such medical monitoring and the possibility of linking it to a trial of more sensitive detection methods that may be under development (including blood tests and new

genomic technology), consideration may be given to establishing the medical monitoring program at a research or academic institution convenient to the members of the class or a network serving both current and former residents.

Conclusion

It is my considered opinion, held to a reasonable degree of medical and scientific certainty, that exposure levels associated with the Bethpage site are associated with a risk level sufficient to cause cancer and non-cancer health outcomes in members of the proposed class in absolute terms, irrespective of community, lifestyle or individual characteristics, and that the outcomes are significant and will require medical attention when they arise.

A medical monitoring program is feasible and advisable for this class. Given the serious nature of the health risks and conditions that may develop as a result of the exposure in this population, it should be instituted as soon as practicable.

Sincerely,

Tee L. Guidotti, MD, MPH, DABT, QEP

Witness Information Under Rule 26

Fees for service: \$600/hour, fixed hourly rate for all services.

Testimony Provided Over Previous Five Years by Tee L. Guidotti. Court testimony and depositions (United States). All are deposition unless otherwise noted. 4 Years previous to October 2021.

- 2021. Obyrne v. Weyerhaeuser. Class action. Columbus OH.
- 2021. Cerro Flow Products. Class action. Sauget IL.
- 2021. Narkin. Workers' compensation, on-line. PA
- 2021. Wiaterowski. Workers' compensation, on-line. PA.
- 2021. Munson. Workers' compensation, on-line. PA.
- 2021. Tratthan. Workers' compensation, on-line. PA.
- 2021. Fischler. Workers' compensation, on-line. PA.
- 2020. Call v. National Science Foundation, on-line. Arlington VA.
- 2020. Markland. Workers' compensation, on-line.PA.
- 2020. Jones. Workers' compensation, on-line. PA.
- 2020. Doss. Workers' compensation, on-line. PA.
- 2019. Kiefer. Workers' compensation, Harrisburg PA.
- 2019. Soulier. Workers' compensation, Harrisburg PA.
- 2019. Custer et al. v Cerro Flow Products. Depo not trial, Washington DC.
- 2019. Claus. Workers' compensation, Harrisburg PA.
- 2019. Tyrrell v. BNSF. Washington DC.
- 2019. Luevano v. Wal-Mart. Uvalde, TX,
- 2018. Custer et al. v. Cerro Flow Products. Class action, Washington DC.
- 2018. Ohlinger. Workers' compensation. Harrisburg PA.

- 2018. Albert. Workers' compensation, Norristown PA
- 2018. Maloney v. Delaware River and Bay Authority, New York NY.
- 2018. Duranti. Workers' compensation, Harrisburg PA.
- 2018. Montgomery County Disabilty Review Panel (hearing), Rockville MD.
- 2017. Custer et al. v. Cerro Flow Products, Washington DC.
- 2017. Simpson v. XTO, Oklahoma City OK.
- 2017. Adams. Workers' compensation, Philadelphia PA.
- 2017. Evans. Workers compensation, Philadelphia PA.
- 2017. Sevanik. Workers' compensation, Johnstown PA.
- 2017. Jackamonis. Workers' compensation, Bristol Towship PA.
- 2017. Yeager. Workers' compensation, Aristes PA.
- 2017. Montgomery County Disabilty Review Panel (hearing), Rockville MD.
- 2016, Davus. Workers' compensation. Oxford PA,
- 2016. Otto v. Newfield. Billings MT.
- 2016. Sassaman. Workers' compensation . Johnstown PA.
- 2016. Wildham v. BNSFD. Denver CO.
- 2016. Thompson. Workers' compensation. Philadelphia PA.

Last modified:	10 November 2020
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Language Training:	English (native), Spanish, French, German
Social Media:	ResearchGate LinkedIn Facebook (reserved for family and friends) Doximity (accessed infrequently)
DUNS Number:	08-051-0273
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Academic and Professional Activities

2015-Current Consultant in occupational and environmental health and medicine, sustainability. Private practice is a direct continuation of practice with Medical Advisory Services. Sometimes does business under name of sole-proprietorship: "Occupational + Environmental Health & Medicine" (O+EH&M).

> Clients have included World Health Organization, US National Institute of Occupational Safety and Health (through ATL International), US Department of Justice, Montgomery County (Maryland), Association de pompiers de Montréal, and legal counsel for both defense and plaintiff.

- 2015-2018 (Part-time, voluntary, unpaid) Presidency of Sigma Xi, the Scientific Research Society (www.sigmaxi.org). Successive leadership roles with one-year term of office: Elected December 2014. President-Elect, beginning 1 July 2015. President, 1 July 2016, then Past President (and final term on Board of Directors) until 1 July 2017. Duties were intensive and involved engagement in pivotal issues in science policy.
- 2015 Fulbright Visiting Chair in Environmental Studies, University of Ottawa (Canada), Institute of Science, Society and Policy. (6 month appointment, January through June 2015. This is a special Fulbright Canada program, similar to the Fulbright Scholars Program, but intended for senior faculty or professionals.
- 2008-2014 Vice President for Health/Safety/Environment and Sustainability for Medical Advisory Services (www.mas.md). Retired from employment from MAS on 31 December 2014, because of Fulbright award. Maintained professional affiliation with MAS with title of "Senior Scientist" for projects of mutual interest thereafter. Note: In Spring 2016, MAS closed its office in Rockville MD and became a networked "virtual" business.

Provided clinical services and supervision of occupational health service of Federal Reserve on a part-time, rotating basis under contract held by Medical Advisory Services.

Titles describes area of emphasis in providing consulting services, not management function. Current work distributed approximately equally among straight consulting (problem solving), medicolegal expert services, clinical services, and publishing and editorial services.

Clients include or have included: Department of Veterans' Affairs (Australia),

World Health Organization, Ministry of Labor of Turkey, Montgomery County (Maryland), Régroupement des Associations de Pompier du Québec (RAPQ), Federal Reserve System (Board of Governors, Washington headquarters), US Department of Justice WTC Victims Compensation Fund, Plasma Protein Therapeutics Association, Chevron, Damian Resources, and legal counsel for both defense and plaintiff.

2008 to 2010 practiced as sole proprietorship, "Occupational + Environmental Health & Medicine". Clients included Saudi Aramco (during 2009, provided onsite consulting services in Saudi Arabia during a restructuring of the occupational health service), agencies of US and Canadian governments, Gulf Coordinating Council Occupational Health Committee, US Agency for Toxic Substances and Disease Registry, Marine Atlantic, Public Health Canada, and legal counsel for both defense and plaintiff. Worked closely with Building Health Sciences and Medical Advisory Services (NMAS Group) on project for US Government. In 2010 merged O+EH&M consulting practice with Medical Advisory Services, based in Rockville, Maryland; started it back up again January 2015.

- 2008-2009 Research Professor, George Washington University, phasing out academic duties while transitioning into early retirement. Duties were to complete and close out active research projects, teaching as needed, transition administrative duties, provide clinical services as required.
- 1999-2008 Professor of Occupational and Environmental Medicine, the George Washington University, Washington DC. Tenured. Cross appointments as Professor of Epidemiology, Department of Epidemiology-Biostatistics, School of Public Health and Health Services; Professor of Pulmonary Medicine, Division of Pulmonary Disease and Allergy, Department of Medicine, School of Medicine and Health Sciences. Early retirement, 30 June 2008.

Dr. Guidotti took sabbatical leave from June 2006 to June 2007 to serve as President of the American College of Occupational and Environmental Medicine, the medical specialty society for occupational physicians; 5,000 members, 32 state- and regional-level component societies, head office in Chicago area, Illinois, taken in Washington DC and Chicago IL from 1 July 2006 to 30 June 2007. During this year, Dr. Guidotti was freed of teaching and administrative duties at GW University and an Acting Chair was appointed in the interim.

Incidental appointments while at GW:

Member, Medical Center Executive Committee, 2006 Member, Academic Advisory Committee, GW Cancer Institute

Member, Communications and Collaboration Team, Medical Center Strategic Planning task force Chair, Council of Chairs, 2003 - 2004 Chair, Faculty Senate Research Committee, 2002 - 2003

Member, Advisory Committee, Center for Emergency Preparedness and its predecessor ASAP (Awareness, Security and Preparedness) Task Force for George Washington University Medical Center and other duties related to homeland security and public health, September 2001 – 2007.

Member, many Medical Center administrative and academic committees, of which most significant have been Medical Center Quadrennial Review Committee, Appointment Promotion & Tenure, and Search Committees for Dean (SPHHS) and Chair, Dept. of Physiology (SMHS)

Liaison and GW coordinator, Army Environmental Policy Institute; GWU is academic host to fellows participating in this program.

1999-2008 Chair, Department of Environmental and Occupational Health, School of Public Health and Health Services, George Washington University. Duties include managing department of nine faculty, teaching, research, university service. Responsible for oversight of affiliated entities including Center for Risk Science and Public Health, Mid-Atlantic Center for Child Health and the Environment. SPHHS Executive Committee, Senate Research Committee, other service within SPHHS and SMHS.

> Director, Division of Occupational Medicine and Toxicology, Department of Medicine, School of Medicine and Health Sciences, George Washington University, Washington DC. Duties include managing clinical services of a group of three physicians, clinical and professional service. Concomitant appointments and duties with George Washington University Hospital, Medical Faculty Associates.

> Director, Occupational and Environmental Medicine Training Program. Duties include managing a residency in occupational medicine associated with a fellowship training program that includes environmental medicine and related fields. Two resident trainees supervised in 2001, one in 2002. Program terminated in 2003.

Director, Center for Risk Science and Public Health, School of Public Health and Health Services. Duties include managing and developing this research institute focused on risk assessment, risk communication and risk anticipation. CRSPH

was established in 1999 as a center of excellence in risk science and to manage research and sponsored projects of faculty in the Department of EOH.

Co-Director, Mid-Atlantic Center for Children's Health and the Environment, School of Public Health and Health Services. Duties include managing Center and coordinating activities of pediatricians, environmental health specialists associated with MACCHE, which is the designated Pediatric Environmental Health Specialty Unit for federal Region 3.

Other University Service in capacity as Chair: Member, Research Project Advisory Committee (development of new research strategy and investment mechanism); Chair, Council of Medical Center Chairs (2003-2004); SPHHS Executive Committee (on-going); SPHHS Practice Advisory Panel. Numerous school and departmental committee memberships.

Teaching: Principles of Environmental and Occupational Toxicology (lecture), Applied Environmental and Occupational Health (lecture/case studies), Occupational Health and Workers' Compensation (new seminar), Bioterrorism and the Civilian Response; also regular lectures in scheduled courses on principles of environmental health, bioterrorism, risk science, environmental health and economic development.

Major professional commitments during this time period:

Co-chair, Scientific Advisory Panel, Western Canada Study on Animal Health Effects Associated with Exposure to Emissions from Oil and Natural Gas Field Facilities; 6-year, C\$17 million, 4-province study completed and released in 2006.

Chair, Committee on Diagnosis of Nonmalignant Asbestos-Related Disease, for revision of diagnostic criteria. American Thoracic Society, delivered 2004.

Adjunct Faculty, Center for Advanced Business Research on Energy and Environment, University of Alberta School of Business, Edmonton, Alberta, Canada.

1984-1998 Professor of Occupational Medicine, Department of Public Health Sciences (formerly Department of Health Services Administration and Community Medicine), University of Alberta Faculty of Medicine, Edmonton, Alberta. Duties divided equally among teaching, research, service, and administration. Tenure granted 1987.

Founder and Head of the Occupational Health Program (OHP) an academic unit

engaged in research, teaching, clinical evaluation, and consultation supported in part by the Tripartite Occupational Health Fund, an endowment created by the joint participation of Alberta labour, corporations, and government. Direct or delegated responsibility for Occupational Medicine Consultation Clinic, Occupational Medicine Residency Program, the Northern Alberta Centre for Work/Health/Environment, Fort McMurray Demonstration Project in Social Marketing, directing residency training in occupational medicine, supervising graduate students and teaching undergraduate medical students.

Member of the Departmental Executive Committee (departmental council for governance). Numerous departmental committees and duties.

Teaching: Occupational Medicine, Toxicology, Inhalation Toxicology, Health Systems, invited lectures, substantial clinical teaching. Also extensive involvement in continuing medical education, including UA Distance Learning Course in Occupational Medicine, ACPM Preventive Medicine Review Course (most years 1988-1995), Continuous Professional Development Program for WCB Medical Advisers (1994-present), Annual Update in Occupational Medicine (1993 – present). Supervised and taught individual residents in occupational medicine, graduate students (PhD and master's level) and undergraduate medical students.

Professor (honorary), Division of Pulmonary Medicine, Department of Medicine, University of Alberta Faculty of Medicine. (Cross-appointment)

Academic Chair, Division of Occupational and Environmental Medicine, Capital Health Authority (Regional Public Health), since 1996.

Honorary Appointment: Killam Annual Professor 1996

June 1993-

July 1994

Chairman (Acting), Department of Public Health Sciences, University of Alberta, Edmonton, Alberta.

Administered Department during 1993-1994 academic year. Department offers a full range of academic programs alone and in collaboration with other departments, with programs in health services administration, community medicine and health promotion, epidemiology, occupational health, and environmental health; also, residency program in occupational medicine. Department has 40 FTE staff (17 academic appointments), university budget of \$1.5 million and additional "soft" money generated annually from contracts and grants of \$1.5 million Canadian grants do not include faculty salaries). During

year of Acting Chair, guided the academic redirection of Department, diversified scope and proposed degree offerings, reorganized governance structure and, decentralized administrative procedures. Also performed normal duties of budgeting, human resources management, faculty performance review and reporting to Dean and central administration. Declined recruitment to permanent position as Chair.

- 1992-1997 Acting Residency Director, Residency in Occupational Medicine. Established residency in 1989 and intermittently served as Residency Director between permanent appointments of faculty to this position. This is Canada's first Royal College-approved specialty residency and currently trains five residents enrolled in a five-year program. Continuous service on Residency Program Committee and associated residency-related duties.
- 1985-1987 Acting Director, University of Alberta Hospitals Occupational Health Service. Responsibilities included medical care, program development, research, supervision of a 4-person hospital unit, and assisting in recruitment of a permanent director who assumed duties in summer 1986.
- Head, Division of Occupational and Environmental Health. Professor,
 Occupational and Environmental Health. The Graduate School of Public Health,
 San Diego State University, San Diego, California. Responsibilities included
 administration, teaching, research, including faculty recruitment and supervision.
 Tenure granted 1983. Related duties and cross-appointment as Associate Clinical
 Professor of Community Medicine at the University of California at San Diego,
 School of Medicine.

Consultant, Occupational/Industrial Medicine Service, The Rees-Stealy Medical Group, San Diego, California. Responsibilities included program development, consultation services for client employers and clinical practice. A major service commitment in this capacity was acting as medical adviser for the Imed Corporation.

Education and Medical Training

- 1979-1981 Postgraduate training in occupational and environmental medicine. The Johns Hopkins School of Hygiene and Public Health, Department of Environmental Health Sciences, Division of Occupational Medicine. Chief: Dr. Edward A. Emmett. Included clinical training in preparation for certification in occupational medicine and public health graduate study leading to the M.P.H. degree.
- 1979-1980 Fellow in pulmonary medicine (concurrently with above).

The Johns Hopkins Hospital, Department of Medicine, Respiratory Division; Baltimore, Maryland. Chief: Dr. Solbert Permutt. Combined program with occupational medicine.

- 1977-1979 Clinical Associate, The National Institutes of Health, National Institute of Arthritis, Metabolism and Digestive Diseases, Bethesda, Maryland. Commissioned Officer in U.S. Public Service. Chief: Dr. Paul A. di Sant'Agnese. Major research interest was cystic fibrosis and pulmonary response to chronic inflammation. This experience counted toward board eligibility in pulmonary medicine.
- 1975-1977 Intern, Resident in internal medicine. The Johns Hopkins Hospital, Department of Medicine. Chief of Service: Dr. Victor A. McKusick. Also Fellow in the Johns Hopkins School of Medicine (nominal appointment).

1971-1975 Medical Student, University of California at San Diego School of Medicine, La Jolla, California. Faculty and Thesis Advisor: Dr. Averill A. Liebow. Concentration area: environmental medicine, inhalation toxicology. Thesis topic: "Toxic inhalation of the higher oxides of nitrogen." Graduated with the M.D. degree.
Special studies while a medical student at: National Cancer Institute, Bethesda, Maryland in occupational epidemiology; Children's Hospital Medical Center, Harvard Medical School, Boston, Massachusetts, pediatric pulmonary diseases; Appalachian Laboratory for Occupational Safety and Health of the National Institute for Occupational Safety and Health, Morgantown, West Virginia, in occupational pulmonary diseases; and the Modoc-Lassen Indian Development Committee, Alturas, California, on the health care needs of a remote Indian community in rural Northern California.

1967-1971 Student, graduating cum laude with B.S. in Biological Sciences University of Southern California, Los Angeles, California.

University honors: Elected to Phi Sigma (Alpha Alpha chapter, national biological research honor society, 1971), winner of Phi Sigma Award for outstanding research in biology by an undergraduate (1971), elected to Phi Eta Sigma (national freshmen honor society, 1968) and Alpha Epsilon Delta (premedical honorary society, 1969). Heavily involved in student environmental issues and organizations from 1969-1971.

1965 – 1967 Senior high school, John Burroughs High School, Burbank California. Various student achievement awards and enrichment activities.

While a high school senior, participated in the weekly Los Angeles County Museum of Natural Science lecture series for high school students and the affiliated Museum Student Association (President, 1966 – 1967), coordinated by Dr. Gretchen Sibley. Committee for Advanced Science Training (Dr. Harry Sobel coordinator) student research (supervised by Dr. Myles Maxfield) at USC, 1965; presented research at the American Junior Academy of Sciences (meets with AAAS), 1965.

Special Training

 Fulbright award. During term of award as Fulbright Visiting Chair, developed special skills through classes, readings, or directed experience in these areas: Science policy ("science for policy" and "policy for science") Historical research (accessing and curating original sources) Community risk perception (wind turbines)
Mandatory security training. US Department of Justice. Includes "Personal Ethics and Conflict of Interest Training". Similar training at Federal Reserve.
How to start a blog. New York Times Learning Network, Epsilen course (on-
Mandatory security training. Federal Reserve Board of Governors. (Updated annually, on-line.)
Institute of Occupational Safety and Health "Working Safely" course, provided by Energy Industries Training Centre, Dhahran, Kingdom of Saudi Arabia. IOSH "Passport" Number WS7781, ID Number 157730.
Workplace Risk Assessment Training, Saudi Aramco Medical Services Organization.
 Business and management training, systematically pursued at level equivalent to MBA preparation: Financial Accounting, MBA course (GWU) Management Accounting, MBA course (GWU) Management science (ACOEM Millennium Series) Entrepreneur "Boot Camp" Seminar (GWU School of Engineering and Applied Sciences) Strategic planning (Various workshops: ACOEM, American Society of Accounting Networkshops: ACOEM

1998	Clinical and Environmental Moulds, Univ. of Alberta, Edmonton.
1997	American Board of Independent Medical Examiners SEAK "IME" course in preparation for examination.
1995	Medical Officer Review Update (ACOEM). Harvard Intensive Review Course in Internal Medicine.
1993	Fleischner Society (see below).
1992	P.A. Douglas Banff Management Course, Banff, Alberta.
1991	Medical Officer Review Course, ACOM, San Francisco, California.
1988	New England Epidemiology Institute, Boston, Massachusetts.
1987	Summer Institute on Quantitative Analysis of Data, Population Research Laboratory, University of Alberta, Edmonton, Alberta.
1987	Symposium on Inhalation Toxicology, Alberta Environment Centre, Vegreville (Faculty Participant), Alberta.
1982-1986	ACPM Preventive Medicine Recognition Award (Continuing Education).
1984	Fleischner Society (Postgraduate advanced course in pulmonary medicine).
1981-1985	AMA Physicians Recognition Award (Continuing Education)
1977	Foundation for Advanced Education in the Sciences, Graduate School of NIH, Bethesda, Maryland. Graduate-level courses for academic credit in immunology, toxicology, research methods, management, and biostatistics.
1977	Radiological Health for Radionuclide Users, FAES, NIH (see above). Two-week full-time course qualifying for license to use radioactive substances in laboratory research.

Adjunct/Voluntary/Honorary Faculty Appointments

2017+ University of Alberta, Department of Medicine, Division of Preventive Medicine. Clinical (adjunct) Professor of Occupational Medicine.

- 2016 +West Virginia University, Department of Environmental and Occupational Health
Sciences. Adjunct Professor.TBDChinese University of Hong Kong, External Examiner
- 1999-2006 University of Alberta. Adjunct faculty appointment in Department of Public Health Sciences, 1999 – 2004. 2004 - 2006, in the University of Alberta School of Business, Centre for Applied Business Research on Energy and the Environment.
- TBD University of Guelph, Faculty of Veterinary Medicine
- 1990 1991 University of British Columbia (sabbatical)
- 1982 1984 University of California at San Diego, Associate Professor (adjunct)

TBD = to be determined (start and end points are not clear from personal records available)

Professional Honors

TOOLIN I TOSTOCIU S AWAIG, CHAION IOI MICHOISINP III OLINI
Fellow, Society for Risk Analysis
Fellow, Sigma Xi, The Scientific Research Honor Society. (Inaugural "class" of fellows.)
Honorary Fellowship, Faculty of Occupational Medicine, Royal College of Physicians of Ireland. Delivered 2019 Smiley Lecture in Dublin.
Fellow, American Association for the Advancement of Science. (Sponsored by Section Y)
Fellow, American Thoracic Society. (Inaugural "class" of fellows.)
Honorary Membership. International Commission on Occupational Health. This is a lifetime membership conferred for service to ICOH and professional achievement.
William S. Knudsen Award for Lifetime Achievement in Occupational and Environmental Medicine, American College of Occupational and Environmental Medicine. This is the highest award in American OEM. (There is no international

counterpart.)

2009	Fellow, The Energy Institute (London). This is an international association of professionals in the energy sector.
2006	Commendation from the International Association of Fire Fighters "in recognition and appreciation of his invaluable scientific contributions," presented at the IAFF Western Canadian Conference (hosted by Edmonton Fire Fighters' Union, Local 209), Edmonton, 23 June, in recognition that work was mostly done there).
2006	Awarded the Jean Spencer Felton Award for Excellence in Scientific Writing in Occupational Medicine (second award). Western Occupational and Environmental Medical Association, presented at Lake Tahoe, 15 September.
2006	ICOH Service Award, International Commission on Occupational Health. Presented at triennial business meeting in Milan, Italy, on occasion of leaving the ICOH Board of Directors.
2006	US Environmental Protection Agency Excellence in Children's Health Recognition Award given to the Mid-Atlantic Center for Children's Health and Environment (Dr. Guidotti was one of three founders and co-Principal Investigator of MACCHE)
2004	Election to Academy of Medicine of Washington DC (area society of medical Scholars)
2004	Elected to membership. Delta Omega (public health honour society).
2003	Research Award named after Dr. Guidotti. University of Alberta Faculty of Medicine.
2002	Meritorious Service Award, Occupational and Environmental Medical Association of Canada, for career achievement
1997	Member through Distinction of the Faculty of Occupational Medicine, Royal College of Physicians of London (UK). Elected honour. Advanced to Fellow through Distinction five years later.
1996	Killam Annual Professor, 1996 - 1997, University of Alberta. This is a University-wide honour given to eight outstanding members of the faculty annually.

1994	Elected to Sigma Xi (Scientific Research Honor Society), University of Alberta chapter.
1992	Safe Community Spirit Award (presented to City of Fort McMurray), recognizing work in collaboration with Northern Alberta Occupational Health and Safety Resource Centre, which Dr. Guidotti directs.
1991	Cunningham Society, invitational society of senior Canadian occupational physicians.
1994	Election to Sigma Xi, scientific research honor society.
1989	Dr. H. Siemens Memorial Award for Outstanding Contribution to Occupational Health in the Province of Alberta, Alberta Occupational Health Society.
1986	Elected a Fellow, American College of Chest Physicians. (Allowed to lapse 2000.)
1984	Resolution of Commendation, California State Assembly, Sacramento, for public service in risk assessment and community environmental health problems.
1982	Elected an Overseas Fellow, Royal Society of Medicine (London), in Section on Occupational Medicine.
1982	Elected a Fellow, American College of Physicians. Installed in Philadelphia on 19 April 1982.
1982	Elected a Fellow, American Occupational Medicine Association (later renamed American College of Occupational and Environmental Medicine).
1981	Awarded the Jean Spencer Felton Award for Excellence in Scientific Writing in Occupational Medicine. Western Occupational Medical Association, Monterey CA, 10 October 1981.
1981	Elected a Fellow, American Academy of Compensation Medicine (no longer exists)
1980	Elected a Fellow, American College of Preventive Medicine.
1974-1975	Writing and research awards (various): Alfred A. Richman Essay Competition of American College of Chest Physicians; Los Angeles College of Obstetrics and Gynecology; UCSD School of Medicine thesis recognition (Hamburger Award

competition).

1965 American Junior Academy of Science, Fellow (recognition of research undertaken in high school). Also, President and Journal Editor (two positions) of the Los Angeles County Museum (of Natural Science) Student Association

Visiting Professor and Invitational Lectureships

2019	Invited Lecturer. The Smiley Lecture. Royal College of Physicians of Ireland, Dublin. (Together with installation as Honorary Fellow of the Faculty of Occupational Medicine.)
2018	Austin College (Sherman, Texas). Visiting Lecturer.
2017	University of Uppsala (Sweden). Visiting Professor.
2017	Mayo Clinic, Rochester MN. Sigma Xi Lecturer and visiting professor.
2015	University of Ottawa, Institute for Science, Society and Policy. Fulbright Visiting Research Professor.
2008	Invited lecturer. Mastromatteo Oration, Occupational and Environmental Medical Association of Canada, Québec City.
2008	Invited lecturer. Morris Katz Memorial Lecture, Centre for Atmospheric Chemistry, York University, Toronto.
2008	Invited lecturer. Kenneth V. Dodson Memorial Lecture, University of Rochester.
2006	Invited lecturer, Peter J. Kilburn Lecture on Sustainability. Center for Advanced Business Research on Energy and Environment, University of Alberta School of Business, Edmonton, Alberta, Canada. Cosponsored with International Institute for Sustainable Development, Winnipeg.
2002	Elected to membership. Ramazzini Society (Invitational society of senior American leaders in occupational medicine.)
2002	Fellow of the Faculty of Occupational Medicine, Royal College of Physicians of London (UK). Elected honour.
2001	Scientific Advisory Committee for Priority Setting in the Development of Alberta Ambient Air Quality Guidelines, member and active participant. This activity has
[Continued]	

	won a prestigious award from the province of Alberta: <i>The Premiere's Award for Excellence</i> as an innovation in public policy
2000	Invited lecturer, The CBOM Memorial Lecture. Canadian Board of Occupational Medicine.
1997	Invited lecturer, The Cunningham Oration. The Cunningham Society (Canada).
1995	Keynote Speaker. Conference on Silica and Elimination of Silicosis, Shanghai, P.R. China. This conference was the initiation of a national effort for the elimination of silicosis in China, beginning with a program for Shanghai and Wuhan. In addition to being features speaker, assisted Dr. Fu Hua in organization and arranged for a speaker on occupational hygiene.
1991	Visiting professor, University of Manitoba Faculty of Medicine, Winnipeg Health Sciences Centre, Dept. of Community and Northern Health

Professional Certification

Medical Provider Identification (US)

National Provider Identifier: 1245319490 Medicare: 000X45M83 DC UPIN: G88542 DC Provider taxonomy: 2083X0100X

Medical Identification Number for Canada (MINC): CAMD-0100-2093

Medical Specialty Certifications

American Board of Internal Medicine.
Specialty certification in internal medicine 1978.
Specialty certification in pulmonary medicine 1980.
American Board of Preventive Medicine.
Specialty certification in occupational medicine 1982.
Canadian Board of Occupational Medicine. Certification (CCBOM) 1984. Upgraded
automatically to Fellow (FCBOM) when this category was introduced in 2005.
Royal College of Physicians (Canada).
Fellowship (specialty certification) in occupational medicine (FRCPC) 1989.
Royal College of Physicians (London)
Member of the Faculty of Occupational Medicine 1997
Fellow of the Faculty of Occupational Medicine (FFOM) 2002

Professional Certifications

Canadian Society of Medical Evaluations Certification 1997 - 2000, not renewed. American Board of Independent Medical Examiners. Certified IME 1997, not renewed. American Board of Toxicology Diplomate 1998, recertified to 2008, now permanently recertified. Institute for Professional Environmental Preparation Qualified Environmental Professional 1998, recertified to present. MRO Certification Council, 1995 - 2000, not renewed.

Registration and Medical Licenses Required to Practice Professionally

Licenciate, Medical Council of Canada, 1987
National Board of Medical Examiners, 1976
Maryland (since 1976, active)
California (since 1977, expired)
District of Columbia (since 1978, active)
Ontario (since 2008, active registration)
British Columbia (2015; obtained for a special purpose, will not be maintained)
Alberta (College of Physicians and Surgeons, 1984-1998, not renewed). Special register for internal medicine and occupational medicine.
Northwest Territories and Nunavut (1998, not renewed in 2001).
Saudi Arabian Health Providers Commission, Kingdom of Saudi Arabia (2009, not renewed)
Qatar Commission on Specialist Medical Practitioners (2009, not renewed)

Narcotics Registration (required for clinical practice)

U.S. Drug Enforcement Administration, Controlled Substances Registration California Controlled Substances Registration, 1980-1984 (gave it up when left state and relocated to Canada)

D.C. Controlled Substances Registration, not current

Special-Purpose Registrations and Qualifications

U.S. Nuclear Regulatory Commission, Radionuclide Investigational User registration, NIH, 1977.

College of Physicians and Surgeons of Alberta

Accreditation to Interpret Pulmonary Function Studies, Level III, 1998 – 1999, not

renewed.

Qualified as an examiner, World Trade Center Victims Compensation Fund, U.S. Department of Justice, 2014
Qualified as expert witness, Expert Witness Unit, U.S. Department of Justice, 2000
Qualified by examination at level of Public Health Medical Officer III – Epidemiology, California Department of Health Services, 1999
DUNS 080510273

Publishing-Related

ORCID 0000-0002-8651-6950

Visiting Faculty Opportunities, Educational Service and Adjunct Faculty Appointments

- 2017 Visiting Professor, University of Uppsala (Sweden), Occupational and Environmental Medicine.
- 2015 Guest speaker, Cochrane Collaboration Network of Cuba and Central America, Havana.
- 2015 Fulbright Visiting Research Professor, Institute for Science, Society, and Policy, University of Ottawa (Canada). Fulbright program "Visiting Research Chair".
- 2013 Epidemiology tutorial, Laurentian University (Canada).
- 2012 External examiner, Chinese University of Hong Kong, for occupational health.
- 2010 Invited Lecturer. University of California at Irvine. Grand Rounds in Internal Medicine.
- 2008 External examiner, Chinese University of Hong Kong, for occupational health.
- 2008 Faculty visitor. University College Dublin, Ireland.
- 2006 Sabbatical year, planned to coincide with term as President of American College of Occupational and Environmental Medicine
- 2004- Adjunct faculty appointment, University of Alberta School of Business,
- 2010 Centre for Applied Business Research on Energy and the Environment.
- 2003 External examiner, Chinese University of Hong Kong, for occupational epidemiology and faculty review.
- 2001 External Examiner and visiting lecturer, National University of Singapore, Department of

Community, Occupational and Family Medicine.

External examiner, Chinese University of Hong Kong, for environmental epidemiology

Chair, Residency Advisory Committee, Occupational Medicine Residency, West Virginia University (2001 - 2004).

Member, Residency Advisory Committee, Occupational Medicine Residency, Uniformed Services University of the Health Sciences.

2000 Visiting Professor, Department of Community Medicine, West Virginia University.

1999- Adjunct Professor, Department of Public Health Sciences, University of Alberta.2004

- 1996 Visiting Professor, Institute de recherche en santé et en sécurité du travail du Québec, Montréal, Québec.
- 1994 Adjunct Professor, University of Guelph, Guelph, Ontario. Ontario Veterinary College, Dept. of Population Medicine. (To assist in supervision of Ph.D candidate.)
- 1993 External Member, dissertation committee for Fu Hua, Shanghai Medical University Department of Occupational Health.
- 1992 Memorial University of Newfoundland. "Wednesday Lecture" presenter.
- 1991 Visiting Professor, University of Manitoba. Occupational Health Program.
- 1989-
- 1993 University of British Columbia, Vancouver. Department of Health Care and Epidemiology. (Sabbatical in residence in fall 1989)
- 1988 University of Hawaii, John A. Burns School of Medicine, Honolulu. Division of General Medicine.
- 1988 Exchange Visit to China: Harbin Medical University, Harbin. Dept. of Occupational Health. Shanghai Medical University, Shanghai. Dept. of Occupational Health. Institute of Occupational Health, Anshan.
- 1987 Visiting Professor, Curtin University, School of Community Health Sciences, Perth, Australia.

National and Regional Conferences or Events (Organized or Leadership Role)

- 2017 Society for Risk Analysis, Annual Meeting, 7 11 December, Arlington VA. Organizing committee. Responsible for track in Occupational Health and Safety.
- 2008 Society for Risk Analysis, Annual Meeting, 10 14 December, Boston. Organizing committee. Responsible for track in Risk Communication (101 abstracts, five symposia).
- 2008 Gordon Research Conference. "Mechanisms of Toxicity: Toxicant-Risk Factor Interactions in Chronic Disease", 27 July – 1 August, at Bates College, Lewiston MN. Organized session on "Global Pediatric Environmental Health".
- 2007 National Conference on Science, Policy and the Environment, "Integrating Environmental and Human Health", sponsored by National Council for Science and the Environment, Washington DC, 1 – 2 February 2007. Planning Committee.
- 2006 Summit on Occupational and Environmental Medicine Training, convened by ACOEM with participation by all major organizations involved in the training and certification of occupational physicians in the United States. Dr. Guidotti initiated the concept of the Summit and played a major role in its development.
- 2005 Symposium on Pandemic Avian Influenza, jointly sponsored between Dept. of EOH and with IRG (Washington-based consultant organization), Marvin Center, 15 November 2005, GWU campus.
- 2004 Public Health Week, "Community-based participatory research: when professionals and communities join forces", panel discussion, 6 April 2004, GWUMC campus.
- 2003 Training Programs for District of Columbia, Department of Health. Prepared instructional programs on "Weapons of Mass Destruction (General Personnel)", and conducted Train the Trainer sessions to prepare seven instructors to deliver the training to departmental personnel. Prepared and delivered "Weapons of Mass Destruction (Physicians)" to medical staff associated with Department and Medical Society of District of Columbia. Presented the public health side in a team-taught program on "Coordinated Investigations" (integrating public health with police investigations) training for senior departmental personnel.
- 2001 Millennium Series coordinator. Advanced curriculum in occupational medicine of the American College of Occupational and Environmental Medicine. Involves supervising eight tracks of lectures, each offered for at least one day at two annual meetings of the College. The "Mil Series" was considered the Colleges premiere advanced continuing medical education offering. Performed this function for two years.

- 2003 Public Health Week. "Biomonitoring". Symposium and panel discussion, GWUMC.
- 2002 Honorary Chair (one of several). Physician's Statement on Climate Change. Statement signed by 2,000 physicians and health scientists and endorsed by 50 medical organizations across Canada.
- 2002 International Congress on Environmental Health: "Healthy Ecosystems, Healthy People" 6-10 June 2002. Washington DC. Member, Program Committee.
- 2002 Children and the Environment: Making a Safe Place to Grow", Public Health Week symposium. 1 April 2002, Washington DC.
- 2002 ASAP Task Force at GWU. "Lessons from 9-11". 28 February 2002, Washington DC. Program committee.
- 2001 Children's Environmental Health II: A Global Forum for Action. 8 11 September 2001. Washington DC. Co-Chair, Scientific Program Committee Co-chair.
- 2000 Public Health Week Symposium: "Bioterrorism and the Civilian Response". 4 April, Washington DC.
- 2000 International Congress on Occupational Health, all sessions on occupational lung disease, 27 August – 1 September, Singapore.
- 1998+ Basic Curriculum, American College of Occupational and Environmental Medicine. Organized entirely new curriculum and course format together with Harold Hoffman. The BC is an introductory course for physicians newly entering occupational medicine, usually from other medical specialties. It is given in three parts, each consisting of a twoday session of lectures, various sessions are offered two to four times per year at College meetings. From 1998 to 2001, served as Co-Course Coordinator. From 2001 on, have served as consultant and remain a lecturer.
- 1997 American Occupational Health Conference, Scientific Session on "Evidence-Based Medical Dispute Resolution." 14 May 1997, Orlando FL.
- 1996 International Congress on Occupational Health, all sessions on occupational lung disease. 15-20 September 1996, Stockholm.
- 1996 Airways Disease and Occupational Exposure to Particulates Not Otherwise Classified/Regulated. 7-8 October 1996, Pittsburgh. Convened by AOEC for NIOSH.

- 1996 International Society for Environmental Epidemiology, Scientific Program Chair. 17-20 August 1996, Edmonton, Alberta.
- 1995 Canadian Association of Physicians for the Environment, First Annual Meeting. 25 November 1995, Edmonton, Alberta.
- 1995 Second Annual Update in Occupational Medicine. 14 October 1995, Edmonton, Alberta.
- 1995 Fourth International Safe Community Conference, Scientific Program Chair. 5-8 June 1995, Fort McMurray, Alberta. Annual meeting of the World Health Organization Safe Community Network.
- 1994 People-to-People Citizen Ambassador Program: Leader of Occupational Health Delegation to China. 13-27 October, Beijing, Harbin, Shanghai.
- 1994 Toxicology for Epidemiologists. 24 September, Como (Italy). Satellite Workshop to Tenth International Symposium on Epidemiology in Occupational Health, 20-23 September.
- 1994- Continuing Professional Development for WCB Medical Advisors and Staff, Workers' Compensation Board of Alberta, quarterly training programs.
- 1993 Diagnosis, Treatment, and Prevention of Silica-Related Diseases. 27 October, San Francisco. Satellite course for the Second International Symposium on Silica, Silicosis, and Cancer, 28-31 October.
- 1993 Prevention '93, Session on Worksite Health Promotion. 18 April, St. Louis.
- 1991 Occupational Medical Association of Canada (Scientific Program). 6-10 October, Edmonton.
- 1990 People-to-People Citizen Ambassador Program: Leader of Occupational Health Delegation to China. 3-19 June, Beijing, Harbin, Shanghai, Hong Kong.
- 1988 Alberta Occupational Health Society Annual Meeting. 18 November, Calgary, Alberta.
- 1988 American Occupational Health Conference (American Occupational Medical Association), session on occupational health care trends in North America). 25-29 April, New Orleans.
- 1986 Canadian Occupational Health Association, Annual Meeting, Member of Program Committee. September, Calgary, Alberta.

- 1984 American Occupational Health Conference (American Occupational Medical Association), three of fifteen sessions. April, Los Angeles, California.
- 1983 Western Occupational Health Conference (Western Occupational Medical Association), complete program. 1-2 October, Newport Beach, California.
- 1982 Annual Meeting, Pacific Coast Council of Latin American Studies, session on health care trends in Baja California, 15 October, Tijuana, Baja California (Mexico).
- 1982 Annual Meeting, American College of Preventive Medicine, complete program (13 sessions concurrent with the American Public Health Association). 14-18 November, Montréal, Québec (Canada).

1981 -

1984 Binational Environmental Health Symposia. Series of regional meetings jointly developed and sponsored by SDSU (San Diego) and Universidad Autónoma de Baja California (Tijuana, México).

Directorships and Senior Offices

Alberta Federation of Labour Occupational Health Clinic (1984 - 1988) Alberta Occupational Health Society (1987 - 1989, President 1988) American College of Occupational and Environmental Medicine (President 2006 – 2007 and offices in succession before and after; Board of Directors 1997-2000 and 2002-2005) American College of Preventive Medicine (Regent for Occupational Medicine 1988 - 1993) American Lung Association of San Diego and Imperial Counties (ALASDIC) Board of Directors (1982-1984) Association of Occupational and Environmental Clinics (Board of Directors, Vice-President 1998 – 1999 and President 1999 - 2000) Canadian Association of Physicians for the Environment (Founding President, subsequently Honorary President) Canadian Occupational Health Association (1991 - 1994) International Commission on Occupational Health (Board of Directors 2000 – 2006; Chair, Finance Committee) International Society of Doctors for the Environment (Directing Committee 1994-1998; Vice-President for North America 1997 – 1998) International Society for Ecosystem Health (Board of Directors, Vice-President; 1999 - 2003) Medichem (international organization for occupational health in the chemical industry) Board of Directors

Occupational and Environmental Medical Association of Canada (Board of Directors1991-1998) Sigma Xi, the Scientific Research Society (President) Board of Directors **Executive Committee Development Committee** Ex-officio membership on Finance Committee and other standing committees Society for Risk Analysis National Capital Area Chapter (Board 2003 – 2009 and present, Vice President/Program Director, President in 2006) Chair, Risk Communication Specialty Group (2007-2008) Chair, Risk Policy and Law Specialty Group (2010 – 2011) Chair, Occupational Health Specialty Group (2016 – 1017) Western Occupational Medical Association (WOMA), Board of Directors (1983-1984) **Grant Review Services** Alberta Occupational Health and Safety Heritage Grant Program Association of Occupational and Environmental Clinics Case Studies in Environmental Medicine British Columbia Cancer Control Agency British Columbia Health Care Research Agency Cancer Research UK (Population and Behavioural Sciences) Environmental Protection Agency (US) Office of International Affairs Health Research Council of New Zealand Hong Kong Research Grants Council

National Health Research Development Program (Canada), study section and reviewer

US Civilian Research & Development Foundation for the Independent States of the Former

New Zealand Medical Research Council

National Institute for Occupational Safety and Health (U.S.) Safety and Occupational Health Study Section National Occupational Research Agenda (NORA)

Natural Sciences and Engineering Research Council (Canada)

Shota Rustaveli Foundation (Republic of Georgia), registered

Workplace Safety Insurance Board of Ontario, Research Advisory Council

World Trade Center Special Competition

Norwegian Research Council (PETROMAKS)

Soviet Union (U.S. Dept. of State) Workers' Compensation Board of British Columbia

Medical Research Council (Canada)

Manitoba Research Council

National Science Foundation

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Editorial Services and Manuscript Review for Periodicals

(Reviewer unless other stated)

Alberta Studies in Occupational Health (Editor, in-house vehicle) Allergologia et Immunopathologia American Family Physician (Editorial Board, 1983-1989) American Journal of Industrial Medicine American Journal of Preventive Medicine American Journal of Public Health American Journal of Respiratory and Critical Care Medicine American Public Health Association, Preventing Occupational Disease and Injury (physical hazards) Annals of Epidemiology Annals of Occupational and Environmental Health Annals of the Royal College of Physicians and Surgeons of Canada Archives of Environmental and Occupational Health (Editor-in-Chief) BMC Health Research (BioMedical Communications) BMJ Open (British Medical Journal) Bulletin of the Pan American Health Organization Canadian Journal of Public Health Canadian Journal of Rehabilitation (Editorial Board, 1986-1990) Canadian Medical Association Journal (Ms. Review, Book Reviewer) Cancer Prevention International (Editorial Board) Chest (American College of Chest Physicians) Chronicle of the New Researcher (Sigma Xi, a journal for student investigators) **Clinical Biomechanics** Clinical Journal of Sports Medicine **Conservation Ecology** Critical Reviews in Toxicology EcoHealth Ecosystem Health (Editorial Board) Ecosystem and Human Health Environment Environmental Health: A Global Access Science Service (on line) Environmental Medicine (on-line) **Environmental Research European Respiratory Journal** Food and Chemical Toxicology Global Change and Human Health (Editorial Board) Health Policy Health Promotion Practice

Health Psychology Indian Journal of Medical Sciences Industrial Health (Japanese National Institute of Occupational Health) **Injury Prevention** International Journal of Cancer International Journal of Environment and Pollution International Journal of Environmental Health Research International Journal of Epidemiology International Journal of Occupational and Environmental Health (past Editorial Board) International Journal of Occupational Medicine and Environmental Health (Nofer Institute) International Journal of Risk Assessment and Management (Editorial board) Israel Journal of Medical Sciences Journal of Agricultural and Food Chemistry Journal of Agricultural Safety and Health (Editorial Board) Journal of the American Medical Association (Book Reviewer) Journal of Emergency Management (Editorial Board) Journal of Epidemiology and Community Health Journal of Hazardous Waste Management Journal of Hazardous Materials Journal of Health Communication Journal of Healthcare Safety (Editorial Advisory Board) Journal of Homeland Security and Emergency Management Journal of Occupational and Environmental Medicine Journal of Public Health Management and Practice MEDICC Review (Medical Cooperation with Cuba; on-line journal) Neurotoxicology Occupational and Environmental Medicine (formerly British Journal of Industrial Medicine) Occupational and Environmental Medicine Report (Editorial Board) Occupational Medicine (London), formerly Journal of the Society of Occupational Medicine (Editorial Board 1992-2000) Public Health Reports Public Health Reviews (Editorial Advisor) Public Library of Science (PLoS One) Revista Brasileira de Medicina do Trabalho, Brazilian Journal of Occupational Medicine (Editorial Board) **Risk Analysis** Royal Society of Chemistry (UK), books commissioning division Safety and Health at Work (SHAW, Korean Occupational Safety and Health Agency) Saudi Medical Journal Social Sciences in Medicine **Toxicological Sciences**

<u>Testimony and/or Service to Governments, Non-Governmental Organizations, and Public</u> <u>Agencies</u>

Alberta Agriculture Alberta Energy Resources Conservation Board (later Alberta Energy and Utilities Board) Alberta Environmental Protection Alberta Health, Population (previously Environmental) Health Branch Alberta Health Care Insurance Plan, Supplemental Assistance Committee Alberta Human Rights Commission Alberta Labour, Occupational Health and Safety Division Alberta Municipal Affairs, Housing and Consumer Affairs Division Alberta Premiere's Commission on Future Health Care for Albertans Alberta Task Force on the Workers' Compensation Board Alberta Workers' Compensation Board Alberta Workers' Health Centre (not for profit) American College of Occupational and Environmental Medicine Chair, Government Affairs Committee (2008-2009) American Association of Medical Colleges American Association on Mental Retardation, Environmental Health Project Committee on Research and Science American Board of Internal Medicine (examination question author) Bioterrorism and Biosecurity (Univ. of Pittsburgh) Bureau of Chemical Hazards, Health Canada California Air Quality Advisory Committee California Assemblyman Larry Stirling California Senate Select Committee on Children and Youth Canada (Federal Government) Dept. of External Affairs Health Canada Federal-Provincial Committee on Population Health National Defence (Advisory Committee on Gulf War Illness) Canadian Global Change Program (Member, Health Issues Panel) Canadian Institute of Child Health Steering Committee, Changing Habits, Changing Climate Canadian Public Health Association Task Force on Global Ecological Change (Chair, 1991) Capital Health Authority, Women's Health Program Council (Member, Occupational Health Task Force) Central Alberta Waste Management District Clean Air Strategy for Alberta (now Clean Air Strategic Alliance) Task Force on Definitions (co-Chair)

Clean Air Strategic Alliance of Alberta Task Force on Air Toxics (advisor) Trace Metals and Air Contaminants Working Group (reviewer) Scientific Advisory Committee for Priority Setting in the Development of Alberta Ambient Air Quality Guidelines (member; it won The Premiere's Award for Excellence in 2001) Concordia University College of Edmonton Environmental Health After-Degree Program Advisory Committee District of Columbia Office of the Mayor, Washington, D.C. Mayor's Environmental Advisory Council Mayor's Health Policy Council, Environmental Health Committee Spring Valley Scientific Advisory Panel Asthma "State Plan" Initiative, Environmental and Occupational Health Committee Water and Sewage Authority (consultant on lead in drinking water issues) Edmonton Board of Health Edmonton, City of Forum for Action (on Occupational Health and Safety in Alberta) Foundation for Biomedical Research Judge, Michael DeBakey Science Journalism Awards Gulf Coordination Council Occupational Health Committee Healthcare Sector Coordinating Council (associated with US Dept. of Homeland Security) Occupational Health Subcouncil International Joint Commission [on the Canada - U.S. boundary] Health Professionals Task Force International Labour Organization Los Angeles City Council, full Council and Planning Committee Los Angeles City Planning Commission Manitoba Workers' Compensation Board National Academy of Sciences (U.S.), Institute of Medicine Committee to Review the Health Effects on Vietnam Veterans of Exposure to Herbicides (Third Biennial Update) [Member, participated in two reports] (Fourth Biennial Update) [Member, participated in two reports] Panel on Musculoskeletal Disorders [testimony only] Committee on Disposition of the Air Force Health Study [reviewer] National Institute for Health Research (Canada) National Forum to Identify Research Priorities for the Environmental Influences on Health Ontario Medical Association Round Table Project on Safe and Timely Return to Function and Work PanAmerican Health Organization

San Diego County Department of Health Services Strathcona County (Alberta) United Nations Environmental Program, Secretariat to the Basel Convention United States Centers for Disease Control and Prevention Agency for Toxic Substances and Disease Registry United States Army Environmental Policy Institute (faculty mentor for fellows) Cancer Institute, Epidemiology Advisory Group United States Commission on Civil Rights United States Department of Commerce (on anthrax risk) United States Department of Defense (Anthrax Vaccine Immunization Program) United States Department of Homeland Security, Infrastructure Expert Team United States Environmental Protection Agency United States Environmental Study Council United States House of Representatives Subcommittee on Water Assets and Resources (on trace organics) United States Military Cancer Institute External Advisory Board United States National Institute for Occupational Safety and Health NORA Liaison Committee United States Occupational Health and Safety Administration Medical record Silica proposed rule - Hearings United States Office of Management and Budget United States Senate Interior and Insular Affairs Committee Judiciary Committee United States Senate Subcommittee on Education United States Federal Trade Commission Vermont State Legislature (Committee on Economic Development) Victoria Parliament (Australia) Environment, Natural Resources, and Regional Development Committee Virginia State Legislature Workers' Compensation Board of Alberta World Bank Environmental Health Program, Environmental Section Latin American and Caribbean Section Mission to evaluate environmental liabilities, 2002: Zambia, ZCCM-IH World Health Organization YWCA (Edmonton) "Tribute to Women" Awards Jury Panel (for Health Professionals)

Medical and Professional Services Panels

American Red Cross Disability evaluation reviews (under contract) American Thoracic Society Task force on diagnostic criteria for asbestos-related disease (Chair) Association of American Medical Colleges (on bioterrorism and medical curriculum) Australasian Faculty of Occupational Medicine Working Party on Occupational Cancer (Reviewer) **Council of Canadian Academies** Expert Panel on Wind Turbine Noise and Health, Chair Healthy House Institute Member, Advisory Panel Montgomery County (Maryland) Disability Review Panel, Member Occupational Health Disaster Expert Network (OH Advisory Committee), a subcouncil of the Healthcare and Public Health Sector Coordinating Council, an ISAC (Information Sharing and Coordination group). This is a sector organization that reported to Department of Homeland Security. It was sponsored federally by the Assistant Secretary for Public Health Preparedness, Department of Health and Human Services and is sponsored within the sector by the American College of Occupational and Environmental Medicine, with operational support from the MITRE Corporation. No longer active. Strategy Committee US Centers for Disease Control and Prevention (on emergency preparedness and bioterrorism) US Department of Energy, Office of Worker Advocacy Physician panels for evaluating eligibility of DOE workers for workers' compensation benefits US Department of Homeland Security, Infrastructure Expert Team. Managed by Oak Ridge Associated Universities. US Department of Justice. World Trade Center Victims Compensation Fund (reviewer) UCLA Center for Public Health and Disasters, Core Competencies Questionnaire panel Western Interprovincial Scientific Studies Association (1999 – 2006) Western Canada Study on Animal Health Effects Associated with Exposure to Emissions from Oil and Natural Gas Field Facilities (Co-Chair, Scientific Advisory Panel) World Trade Center Victim's Compensation Fund, evaluating physician **Guidelines and Standards Setting**

Alberta Occupational Health and Safety

Occupational Exposure Level Committee (exposure standards-proposing panel) American College of Occupational and Environmental Medicine: ACOEM Practice Guidelines Participant, Respiratory panel (Airways and Interstitial groups) American Thoracic Society

Chair, ad hoc Committee on Evaluation of Nonmalignant Asbestos-Related Disease
[developed revised criteria, 2004]

California Commission on Peace Officer Standards and Training

POST Medical Screening Manual (Respiratory)

New York [City] Transit Authority (Chair, respiratory panel)

Relevant Professional Affiliations

Academy of Medicine of Washington, DC Chair, Committee on Constitution and By-Laws Member, Committee on Audit Air and Waste Management Association (not current) Alberta Medical Association (not current) Alberta Occupational Health Society (not current) Alberta Public Health Association (not current) American Association for the Advancement of Science Fellowship Selection Committee Science and Human Rights Coalition Section N – Medicine, representative Section Y – member (this section sponsored elevation to Fellow) Washington (DC) Academy of Sciences [affiliate] American College of Chest Physicians (resigned Fellowship on point of principle) American College of Occupational and Environmental Medicine (Fellow) President (2006 – 2007), President- Elect (2005 – 2006), Vice-President (2004 – 2005) Board of Directors (1997 – 2000, 2002-2005) Chair, Board Committee on Policy, Procedures and Public Positions (2004-2005) Chair, Personnel Committee (2004 – 2005) Chair, Committee on Policies, Procedures and Public Positions (2004 – 2005) Finance Committee (2004 - 2006)Board Strategic Planning Committee (1997 - 2000), Chair (2005 – 2006) Board Committee on Governmental Affairs (2008-2009) House of Delegates (1996 - 2000)Chair, Council on Special Occupational Health Interests (1999 – 2000) Council on Education (2002 - 2005), Chair (2003 – 2004) Council on Science and Policy (2017 +) Publications Committee (1993 - 2005) Committee on Enduring Materials (1996 – 1999) Committee on Epidemiology (Chair, 2000 - 2002) Committee on the Basic Curriculum (1990 – 1992) Committee on Conferences (1997 - 2003) History and Archives Section (Secretary, 20010-2015)

Private Practitioners Section (1994 - current) International Section (1994 - current) Committee on Emergency Preparedness (2004 – current) Occupational Health Disaster Expert Network (2004 – 2010) Underserved Populations Section (2004 – current) Committee on Occupational Lung Diseases (2001 - current) American College of Physicians (Fellow) Task Force on Bioterrorism American College of Preventive Medicine (not current) Regent for Occupational Medicine (1988 – 1993) Chair, Committee on Education Committees: Policy, Science, Environmental Health (2006 - current) Task force on Bioterrorism (2003 – current) American Public Health Association Environmental Health Section Occupational Health Section American Thoracic Society (Fellow) Environmental Health Policy Committee Scientific Assembly on Environmental and Occupational Health Association for Environmental Studies and Sciences Association of Occupational and Environmental Clinics (Board of Directors, President) Numerous committee and task force assignments Canadian Association of Physicians for the Environment (Founding President; former Chairman, Board of Directors; Treasurer) Canadian Public Health Association (not current) Committee on Publication Ethics (representing Archives of Environmental and Occupational *Health*, Taylor & Francis, publishers) Cosmos Club (primarily social but with some professional aspects of membership) Energy Institute (Fellow) Fulbright Academy (also, former Fulbright Academy of Science and Technology) Fulbright Alumni Association, Fulbright Minds, and International Exchange Alumni (US State Department) Gulf Occupational Medicine Group (not current) International Commission on Occupational Health (Member, Board of Directors) (Board) Committee on Newsletter and Communications (Board) Task Force on "Ban Asbestos" movement (Board) Working Group on Women, Health and Occupation (for gender diversity) ICOH-WHO Task Force on Elimination of Silicosis Scientific Committee on Epidemiology Medichem (Executive Board) Scientific Committee on OH and Economic Development Scientific Committee on Respiratory Disorders (Former Chair)

International Society for Ecosystem Health (Vice-President) - organization now defunct International Society for Sustainability Professionals MEDICC (Medical Cooperation with Cuba) Occupational and Environmental Medical Association of Canada (Board of Directors) Ramazzini Society Royal Society of Medicine (Overseas Fellow) Section on Occupational Medicine Section on History of Medicine Section on Forensic Medicine Sigma Xi President 2016 - 2017, ex officio member of most internal bodies Board of Directors (2015 - 2018)Committee on Finance University of Alberta Chapter George Washington University Chapter Society for Epidemiologic Research (not current) Society of Occupational Medicine (UK) Society for Risk Analysis National Capital Area Chapter (President) Chair, Risk Communication Specialty Group Chair, Law and Policy Specialty Group Chair Elect for 2016, Occupational Health Specialty Group Delegate to AAAS Section on Medical Sciences Society of Toxicology (not current) Society of Toxicology of Canada (not current) Washington (DC) Academy of Sciences

Membership in various organizations may have been started or terminated for professional reasons or after relocation. Please inquire regarding current status if membership or an affiliation to a particular organization is of interest.

Commercial and Business-Related Interests (Current)

- 2021 Dymedso. Member, Scientific Advisory Board. Dymedso is a company registered in Quebec to develop and produce a patented medical device for clearing airways in cases of chronic bronchitis, cystic fibrosis, and mucus plugging in asthma.
- 2020 Risk Science International, Ottawa, Ontario. RSI is a consulting firm specializing in risk assessment. Arrangement is for shared office space when needed, support services in Canada, and professional support services. This is a renewal and formalization of an arrangement that began about 2015.

- 2018 ATL International, Gaithersburg MD. ATL is a consulting firm specializing in occupational exposure assessment and project support. Arrangement is for shared office space as needed, support services (including receiving and logging in cases), project management, and professional support. ATL serves as the main office and contact point for Dr. Guidotti and Occupational + Environmental Health & Medicine.
- 2009 Occupational + Environmental Health & Medicine, Gaithersburg, Maryland (see above). O+EH&M is a sole proprietorship through which Dr. Guidotti provides consulting services. O+EH&M mostly operates virtually from shared office and support services using facilities of other companies.

Research Interests

Active/Current

Ecosystem and human health. (Special interest in consequences of global change, urbanization.)

Energy industries and their occupational and environmental health risks (Special interest in oil and gas, oilsands, coal, oil shale, shale gas, and oil sands.)

Environmental quality, ecosystem health, and relation to human health. (Special interest in risk perception, global ecological change, implications for human health of changing ecosystems)

Evidence-based medical dispute resolution. (Special interest in use of scientific information to resolve issues in tort litigation and adjudication proceedings.)

Firefighters and occupational risk. (Special interest in cancer risk and pulmonary disease.)

Social history of occupational medicine. (Special interest in development of field in North America.)

Sustainability and health issues. (Special interest in how health outcomes are key to supporting sustainability; sustainability, health, and economic development; health issues associated with climate change.)

Past/Continuing Interest

Air pollution effects and community risk. (Special interest in photochemical oxidants and air toxics, especially hydrogen sulphide.)

Inhalation toxicology and occupational lung diseases. (Special interest in sulfides, oxidant lung

injury, trace metals, silicosis.)

Occupational cancer. (Special interest in lung cancer associated with silica exposure.)

Pulmonary injury from and response to inhaled particles. (Special interest in pneumoconioses including silica and asbestos, PM_{2.5}, PNOC, and prevention.)

Past/Inactive (No continuing interest)

Emergency management. (Special interest in the role of occupational health services, bioterrorism, and homeland security.)

Social marketing and health promotion. (Special interest in "safe community" activities relating public and worksite health promotion, and in population health issues arising from development in boreal forest communities.)

Water quality and contaminant management (Special interest in lead in drinking water.)

Workers' compensation policy, apportionment, and adjudication. (Special interest in presumption and impairment evaluation. 27 states and 8 Canadian provinces have adopted presumptions for occupational cancers for firefighters based largely on our work)

Significant Research Affiliations, Research Advisory Panels

Western Interprovincial Scientific Studies Association, Scientific Advisory Panel. Co-chair 1999 - 2007.
WISSA managed the initiation, design, implementation, and presentation of a major study (6 years, \$15 million) of the health effects on cattle and wildlife downwind of emissions from natural gas wells and facilities, with an emphasis on reproductive health outcomes and immune effects.

- American Water Works Association Research Foundation Project #2851 Advancing collaborations for water-related health risk communication. Designated Quality Assurance Officer
- District of Columbia Asthma Coalition, through Mid-Atlantic Center for Children's Health and Environment, and related activities. Designing asthma prevention and housing intervention programs Assistance in development of "Statewide Asthma Plan" for DC
- Human Health Effects of Controlled Exposure to Hydrogen Sulfide. Science and Ethics Advisory Panel, 2002 2007.

Environmental and Occupational Health Sciences Institute, Univ. Medicine & Dentistry of New Jersey.

International Labour Organization, Global Program for the Elimination of Silicosis Technical assistance

Interrelated activities involving child health and the environment: MidAtlantic Center for Child Health and the Environment (Pediatric Environmental Health Specialty Unit, Region 3) INCHES (International Network for Child Health, Environment and Safety) Paediatric Environmental Health Clinic, University of Alberta

Mission to Zambia under sponsorship of the World Bank and ZCCM-IH. Team member (with economist) in the assessment of hazards and legacy environmental issues in two regions of Zambia:

- 1. De-nationalized properties associated with copper and cobalt mining in Copperbelt Province (several sites).
- 2. De-nationalized property (mine and smelter complex) and local environmetal contamination associated with lead mining and smelting in Kabwe, Central Province.
- Network for Environmental Risk Assessment and Management (NERAM) [Canada] Collaborator on air quality issues, 1997-1998.

Network of Centres of Excellence in Sustainable Forestry Management. Collaborator since 1999, formerly coordinator of Health Component of Socioeconomic Theme (1995 - 1999).

Tricouncil EcoResearch Chair in Environmental Risk Management, Univ. of Alberta, 1993-1998.

Collaborator. Principal role in air quality studies, risk comparison, and role of physicians in risk communication.

- University of Ottawa, Institute for Society and Science Policy. Fulbright Visiting Chair in Environmental Studies, 2015.
- Vietnam Veterans and Agent Orange. Committee on Update [2000, 2002], 1999-2001, 2001 2003. Institute of Medicine.

Current and Recent Student Supervision (since 1990)

Students at the Chinese University of Hong Kong (JC School of Public Health and Primary Care):

Chen Minghui, PhD Candidate Prediction models for optimizing interval time for chest radiographs for workers exposed to silica, and cost-benefit analysis

- Tse Lap Ah, PhD candidate Silica, silicosis, smoking interactions, and lung cancer risk
- Students at The George Washington University Medical Center: SPHHS = School of Public Health and Health Services SMHS = School of Medicine and Health Sciences Law = Law School
- Kathy Kirkland, DrPH Candidate, SPHHS Topic: Safe work performance among nurses
- Bryn Bird, MPH Candidate, SPHHS Topic: Risk anticipation and the prediction of public issues
- Rumi Chia, MPH Candidate SPHHS Topic: Water color as a risk indicator
- Michael Ardaiz, MD, MPH Candidate, SPHHS Topic: Standards for public safety employees
- Jennifer Breedlove, MPH Candidate, SPHHS Topic: Surveillance bias in reporting occupational asthma in Washington DC
- Amy O'Connor, MPH Candidate, SPHHS Topic: Persistent organic pollutant exposure in an aboriginal population in Canada
- Jessica Pulz, MPH Candidate, SPHHS Topic: Case studies of response to anthrax threat: Trenton, Brentwood
- Hope Dishman, MPH Candidate, SPHHS Topic: Mercury content in common seafoods
- Monica Gagnon, MPH Candidate, SPHHS Topic: Pesticide exposure and low birth weight

- Duane Foster, M.Sc. Candidate , SPHHS Topic: Health effects of exposure to trona dust
- Ball, Stephanie, MPH Candidate, SPHHS Topic: Use of antibiotics in animal feed and emergence of drug resistance
- Brandi Karasiewicz, MPH Candidate, SPHHS Topic: Mapping lead exposure risk in a contaminated urban area
- Ida Rosenblum, MPH Candidate, SPHHS Topic: Rates of *Salmonella* contamination in raw meat and poultry, by serotype
- Pushya Potnis, MD, MPH Candidate Topic: Kidney weight increase as an LOAEL
- Adebola Laditan, MPH Candidate, SPHHS. Topic: Carbon monoxide intoxication, case surveillance
- Hans Kwafu, MSc Candidate (Epidemiology), SPHHS. Topic: Trace element analysis.
- Sylvie Cohen, MD, MPH Candidate, SPHHS and OEM Fellow, SMHS. Topic: Occupational medicine and child health.
- Josh Penrod, JD, MPH Candidate, SPHHS, Law. Topic: MTBE case study under NAFTA.
- Fred Hendricks, MD, MPH Candidate, SPHHS. Topic: Peritoneal mesothelioma and asbestos exposure.
- Brian Maguire, MPH Candidate, PA, Dr.P.H. SPHHS Topic: Occupational hazards of emergency medical response personnel
- John McNamara, MD, MPH, OEM Fellow, SMHS. Retired Air Force. Special interest in civilian emergency management and preparedness.
- Daniel Becker, JD, MPH Candidate, SPHHS and Law joint MD-JD program Topic: An analysis of the intersection of the rules of evidence, case law and epidemiology [including a legal analysis of *Daubert* decision]
- William C. Herz, MPH Candidate, SPHHS Topic: MTBE occurrence in groundwater and public water supplies in Virginia

Students at the University of Alberta, Faculty of Medicine:

- Justin Klaver, MSc. Candidate. Department of Public Health Sciences, external examiner. Topic: Implications of climate change for Alberta
- Komali Naidoo, B.Sc. (MSc candidate). Department of Human Ecology. Topic: Boreal forest management, ecosystem disturbance, and hantavirus risk
- Chris Martin, M.D. (MSc candidate and Occupational Medicine Resident) Topic: Trace element analysis, light metal toxicity, metal fume fever.
- Niels Koehncke, M.D. (MSc candidate and Occupational Medicine Resident) Topic: Noise exposure in Alberta sawmills.
- Michael Yamanaka, M.D. (MSc candidate and Occupational Medicine Resident) Topic: Wood dust exposure in Alberta sawmills.
- Molly Turnbull, Ph.D. Candidate, Department of Public Health Sciences Topic: Ecology, economic development, and traditional culture in the boreal forest
- Morgan Scott, Ph.D. Candidate, University of Guelph, Ontario Veterinary College, Dept. of Population Medicine. (Joint supervision at University of Alberta.)
 Topic: Effects of sour gas emissions on health and productivity in Alberta beef and dairy herds.
- Verona Goodwin, M.Sc. Candidate, Dept. of Public Health Sciences. Topic: Validating monitoring methods for airborne sulfides in rural Alberta.
- Harold Hoffman, M.D. (Occupational Medicine Resident) Topic: Occupational hazards of natural gas workers.
- Imad Al-Jahdali, M.D. (Occupational Medicine Resident) Topic: Sensitivity and specificity of a screening test for HIV positivity.
- Mark Harcourt, Ph.D. Candidate (Business) Faculty of Business. Topic: The right to refuse unsafe work v. the right to manage.
- Javier Mignone, M.H.S.A. (Health Services) Graduate Program in Health Services Administration, Dept. of Public Health Sciences. Topic: Self-help support groups for injured workers.

- Phil Karpluk, MD (Occupational Medicine Resident) Topic: Welders and trace metal accumulation.
- Verona Goodwin, BS. Candidate (Medical Laboratory Science) Program in Medical Laboratory Science. Topic: Indoor air quality and evolved formaldehyde from humidifier disinfectant usage.
- Vernon G. Lappi, M.D. (Occupational Medicine Resident) Topic: Injury prevention in agriculture.
- Stephanie Mah, M.D. (Special Clinical Trainee), Alberta Occupational Health and Safety. Structured clinical experience.
- Maureen Simmons, Ph.D. Candidate, University of Alberta Faculty of Rehabilitation. Topic: Assessment of disability in low back pain.
- Fu Hua, Ph.D. Candidate (Epidemiology) Dept. of Preventive Medicine, Shanghai Medical University. (Served as external member of dissertation committee).Topic: Silica and lung cancer.
- Sze Lap Lee, M.D. (Honours), Medical student honours program. Topic: Occupational health surveillance and "sentinel event" case monitoring.
- Catherine M.P. Lafferty, M.H.S.A. (Health Services) Health Services Administration Program. Topic: Occupational health services and description of clinic experience.
- Peggy Szumlas, M.Sc. Candidate (Nursing) Faculty of Nursing. Topic: Occupational hazards of cancer chemotherapeutic agents.
- Seet Lin Tan, M.Sc. Candidate, Faculty of Engineering. Topic: Combustion products from laser cutting of wood.
- Karen Clinker, M.Sc. Candidate (Education) Faculty of Graduate Studies, Dept. of Adult and Higher Education (adviser).Topic: Effectiveness of a back injury prevention program.

No listing available of students before 1990. Estimate that there were about one dozen, distributed among PhD, MPH and other master's degrees.

Testimony Provided Over Previous Five Years by Tee L. Guidotti

Court testimony and depositions (United States). All are deposition unless otherwise noted.

- 4 Years previous to October 2021.
- 2021. Cerro Flow Products. Class action. Sauget IL.
- 2021. Narkin. Workers' compensation, on-line. PA
- 2021. Wiaterowski. Workers' compensation, on-line. PA.
- 2021. Munson. Workers' compensation, on-line. PA.
- 2021. Tratthan. Workers' compensation, on-line. PA.
- 2021. Fischler. Workers' compensation, on-line. PA.
- 2020. Call v. National Science Foundation, on-line. Arlington VA.
- 2020. Markland. Workers' compensation, on-line.PA.
- 2020. Jones. Workers' compensation, on-line. PA.
- 2020. Doss. Workers' compensation, on-line. PA.
- 2019. Kiefer. Workers' compensation, Harrisburg PA.
- 2019. Soulier. Workers' compensation, Harrisburg PA.
- 2019. Custer et al. v Cerro Flow Products. Depo not trial, Washington DC.
- 2019. Claus. Workers' compensation, Harrisburg PA.
- 2019. Tyrrell v. BNSF. Washington DC.
- 2019. Luevano v. Wal-Mart. Uvalde, TX,
- 2018. Custer et al. v. Cerro Flow Products. Class action, Washington DC.
- 2018. Ohlinger. Workers' compensation. Harrisburg PA.
- 2018. Albert. Workers' compensation, Norristown PA
- 2018. Maloney v. Delaware River and Bay Authority, New York NY.

- 2018. Duranti. Workers' compensation, Harrisburg PA.
- 2018. Montgomery County Disability Review Panel (hearing), Rockville MD.
- 2017. Custer et al. v. Cerro Flow Products, Washington DC.
- 2017. Simpson v. XTO, Oklahoma City OK.
- 2017. Adams. Workers' compensation, Philadelphia PA.
- 2017. Evans. Workers compensation, Philadelphia PA.
- 2017. Sevanik. Workers' compensation, Johnstown PA.
- 2017. Jackamonis. Workers' compensation, Bristol Towship PA.
- 2017. Yeager. Workers' compensation, Aristes PA.
- 2017. Montgomery County Disability Review Panel (hearing), Rockville MD.
- 2016, Davus. Workers' compensation. Oxford PA,
- 2016. Otto v. Newfield. Billings MT.
- 2016. Sassaman. Workers' compensation . Johnstown PA.
- 2016. Wildham v. BNSFD. Denver CO.
- 2016. Thompson. Workers' compensation. Philadelphia PA.

Significant Publications ACADEMIC FORMAT Last modified: 1 July 2020

1. Original Research Reports Appearing in Peer-Reviewed Journals

Risk anticipation: an emerging concept. Guidotti TL. J Wash Acad Sci. 2021;107(1):35 – 50. (Preliminary report on work in progress.)

Evaluating Risk After a Hazardous Waste Treatment Plant Released Persistent Organic Pollutants: Part 1, Background and Policy Issues. Part 2, Ecotoxicology and Human Health Risk. Part 3, Aboriginal Health Risk and Impact. Guidotti TL. Case Studies in the Environment (University of California Press), 2018;2(1):1 - 13. [Parts 1 and 2 are narrative case reports. Part 3 contains previously unpublished data and is also listed under research reports.] (Part 3 contains previously unpublished data.)

International member survey on climate change and health. Sarfaty M, Kreslake J, Ewart G, Guidotti TL, Thurston GD, Balmes JR, Maibach EW. Ann American Thoracic Society. 2016;10:1808 - 1813.

American Thoracic Society member survey on climate change and health. Sarfaty M, Bloodhart B, Ewart G, Thurston GD, Balmes J, Guidotti TL, Maibach E. Ann American Thoracic Society. 2015; 12(2): 274-278.

Workplace violence in the health sector in Turkey: A national study. Pinar T, Acikel C, Pinar G, Karabulut E, Saygun M, Bariskin E, Guidotti TL, Akdur R, Sabuncu H, Bodur S, Egri M, Bakir B, Acikgoz EM, Atceken I, Cengiz M. J Interpers Violence. 2015 Jun 28. pii: 0886260515591976. [Epub ahead of print]

Indoor environmental and air quality characteristics, building-related symptoms, and worker productivity in a federal government building complex. Lukcso DF, Guidotti TL, Franklin DE, Burt A. Arch Environ Occup Health 2016;85 – 101.

Communication models in environmental health. Guidotti TL. J Health Communication 2013;18(10):1166 – 1179.

The Fort McMurray Demonstration Project in Social Marketing: Self-reported safety-related health behaviours following a combined community and workplace intervention. Guidotti TL, Abroms L, Ford L, Jhangri G. Int J Health Promot Edu 2011;49(1):16 – 20.

Wood dust levels in Alberta sawmills. Yamanaka MW, Guidotti TL, Koehncke N, Taylor FM,

Taylor C, Harman L. Arch Environ Occup Health 2009;64(4):270 - 277.

The Fort McMurray Demonstration Project in Social Marketing: No change in injury rates following intensive community and workplace intervention. Guidotti TL, Pooja D, Bertera R, Ford L. J Comm Health 2009;34:392 - 399.

Mechanism and treatment of sulfide-induced coma: a rat model. Almeida A, Nation P, Guidotti TL. Int J Toxicol 2008;27:287-293.

Community Ready! Assessing and meeting the needs of parents in Arlington County VA. Moses M, Caruso DS, Otten TG, Simmens S, Guidotti TL. J Emerg Management Nov/Dec 2007;5(6):53 - 60.

Occupational physicians in the United States: demographics and core competencies. Baker B, Dodd K, Greaves I, Zheng CJ, Brosseau L, Guidotti TL. J Occup Environ Med 2007;49(4):388-400.

Elevated lead in drinking water in Washington, DC, 2003–2004: The public health response. Guidotti TL, Calhoun T, Davies-Cole JO, Knuckles ME, Stokes L, Glymph C, Lum G, Moses MS, Goldsmith DF, Ragain L. Environ Health Persp 2007;115:695-701. (Also published online.)

Occupational injuries among emergency medical services personnel. Maguire BJ, Hunting KL, Guidotti TL, Smith GS. Prehospital Emergency Care 2005;9(4):404-411.

Toxicological evaluation for the hazard assessment of tire crumb for use in public playgrounds. Birkholz DA, Belton K, Guidotti T. J Air Waste Management Assn 2003;53:903-907.

Associations between air emissions from sour gas processing plants and indices of cow retainment and survival in dairy herds in Alberta. Scott HM, Soskolne CL, Lissemore KD, Martin SW, Shoukri MM, Coppock RW, Guidotti TL. Can J Vet Res 2003;67:1-11.

Air emissions from sour-gas processing plants and dairy-cattle reproduction in Alberta, Canada. Scott HM, Soskolne CL, Martin SW, Shoukri MM, Lissemore KD, Coppock RW, Guidotti TL. Prev Vet Med 2003;57(1-2):69-95.

Lack of associations between air emissions from sour-gas processing plants and beef cow-calf herd health and productivity in Alberta, Canada. Scott HM, Soskolne CL, Martin SW, Basarab JA, Coppock RW, Guidotti TL, Lissemore KD. Prev Vet Med 2003;57(1-2):35-68.

Comparison of two atmospheric-dispersion models to assess farm-site exposure to sour-gas processing-plant emissions. Scott HM, Soskolne CL, Martin SW, Ellehoj EA, Coppock RW, Guidotti TL, Lissemore KD. Prev Vet Med 2003;57(1-2):15-34.

An investigation of noise levels in Alberta sawmills. Koehncke N, Taylor M, Taylor C, Harman L, Hessel PA, Beulne P, Guidotti TL. Am J Indust Med 2002; 156-164.

Permanent respiratory impairment and upper airways symptoms despite clinical improvement in patients with reactive airways dysfunction syndrome. Demeter SL, Cordasco EM, Guidotti TL. Sci Tot Env 2001; 270(1-3):49-55. (Peer-reviewed papers from the Second International Symposium on Occupational and Environmental Allergy and Immune Diseases, 1999, Chieti, Italy.)

The Fort McMurray Demonstration Project in Social Marketing: Theory, design and evaluation. Guidotti TL, Ford L, Wheeler M. Am J Prev Med 2000;18(2):163-169.

Support groups for injured workers: process and outcomes. Mignone J, Guidotti TL. J Occ Env Med 1999; 41(12):1059-1064.

Indicators of cardiovascular risk among workers exposed to high intermittent levels of carbon disulfide. Guidotti TL, Hoffman H. Occ Med (London) 1999;49(8):507-515.

Differential sensitivity of lung and brain to sulfide exposure: a peripheral mechanism for apnea. Almeida AF, Guidotti TL. Toxicol Sci 1999;50:287-293.

Variability in the classification of radiographs using the 1980 International Labour Organization Classification for Pneumoconioses. Welch LS, Hunting KL, Balmes J, Bresnitz E, Guidotti TL, Lockey JE, Myo-Lin T. Chest 1998;114:1740-1748.

Health impact assessment of PBCs, PCDDs and PCDFs in relation to a special waste treatment center incident in Alberta, Canada. Guidotti TL, Gabos S, Schopflocher D, Waters J, Grimsrud K, Muir DG, Schindler D, Forese KL, Blais JM, Ramamoorthy S, Chan S, Chen W. Organohalogen Compounds 1998;39:165-167.

Levels of PCBs, PCDDs and PCDFs in deer and moose in Alberta, Canada, following accidental release from a special waste treatment center. Gabos S, Schopflocher D, Muir DG, Schindler D, Guidotti TL, Schechter A, Pond P, Ramamoorthy S, Chan S, Waters J, Grimsrud K, Shaw S, Chen W. Organohalogen Compounds 1998;39:169-172.

Levels of PCBs, PCDDs and PCDFs in fish in Alberta, Canada, following accidental release from a special waste treatment center. Gabos S, Schopflocher D, Muir DG, Schindler D, Guidotti TL, Schechter A, Lastoria C, Ramamoorthy S, Waters J, Grimsrud K, Shaw S, Chen W. Organohalogen Compounds 1998;39:173-176.

Preliminary analysis of levels of PCBs, PCDDs and PCDFs in blood in residents of Swan Hills and surrounding communities, Alberta, Canada. Chen W, Schopflocher D, Guidotti TL, Muir

DG, Lastoria C, Pond P, Ramamoorthy S, Waters J, Grimsrud K, Shaw S, Gabos S. Organohalogen Compounds 1998;39:177-180.

Development of food consumption advisories following accidental release of PCBs, PCDDs and PCDFs from a special waste treatment center. Chen W, Waters J, Grimsrud K, Arnold A, Guidotti TL, Schopflocher D, Schindler D, Muir DG, Gabos S. Organohalogen Compounds 1998;39:181-184.

Comparing environmental risks in a county in Alberta. Guidotti TL, Jhangri GS, Ford L. Environ Health Rev (J Can Instit Public Health Inspectors) 1997; 41:84-90.

Geographical information systems for integrating air pollution modelling with outcomes and confounders: effects of sour gas processing plant emissions on the health and productivity of cattle. Scott HM, Ellahoj E, Martin SW, Soskolne CL, Coppock RW, Guidotti TL, Hrudey SE, Lissemore KD. Epidemiologie et santé animale 1997;n. 31-32:12.14.1 – 12.14.3.

The Fort McMurray Demonstration Project in Social Marketing: health- and safety-related behaviour in a prosperous industrial community. Guidotti TL, Watson L, Wheeler M, Jhangri GS. Int J Consumer Safety 1997;4:53-65.

Sulphide-induced apnoea: peripheral or central mechanism and its prevention. Almeida AF, Guidotti TL. Br J Pharmacol 1996;119:Abs. 49P. (Presented at British Pharmacological Society, Bath, 1996.)

The Fort McMurray Demonstration Program in Social Marketing: health- and safety-related behaviour among oil sands workers. Guidotti TL, Watson L, Wheeler M, Jhangri GS. Occ Med (London) 1996;46:265-274.

An international registry for toxic inhalation and pulmonary edema: notes from work in progress. Guidotti TL. Int Arch Occup Environ Health 1996;68:380-386.

Trends in mortality from COPD in Alberta: back to the future? Guidotti TL. Can Resp J 1995; 2:97-103.

Silica exposure and risk of lung cancer: pathophysiological hypotheses in research amenable to testing by epidemiological methods. Guidotti TL. Appl Occ Envir Hyg 1995;10:1075-1080.

Field performance of dermal patches in pesticide exposure determination. Clough V, Yoshida K, Guidotti TL. Chapter 2.20, in: McDuffie H et al., eds. Human Sustainability in Agriculture: Health, Safety, Environment. (Proceeding of the Third International Symposium: Issues in Health, Safety, and Agriculture. Boca Raton, CRC Press, 1995, pp. 241-245.

Personal exposure to pesticide among workers engaged in pesticide container recycling

operations. Guidotti TL, Yoshida K, Clough V. Am Ind Hyg Ass J 1994; 55:1154-1163.

Mortality from airways disorders in Alberta, 1927-1987: An expanding epidemic of COPD, but asthma shows little change. Guidotti TL. J Asthma 1994;31:277-290.

Lung cancer among tin miners in southeast China: Silica exposure, silicosis, and cigarette smoking. Fu Hua, Gu Xueqi, Jin Xipeng, Yu Shunzhang, Wu Kaiguo, Guidotti TL. Am J Ind Med 1993: 1994: 26:373-381.

Mortality of urban firefighters in Alberta, 1927-1987. Guidotti TL. Am J Ind Med 1993; 23:921-940.

Implications of an epidemiologic mistake: a community's response to a perceived excess cancer risk. Guidotti TL, Jacobs P. Am J Public Health 1992; 83:233-239.

Mortality of urban transit workers: Indications of an excess of deaths by suicide using gas. Guidotti TL. Occ Med (formerly J Soc Occ Med) 1992; 42:125-128.

Absence experience of career firefighters reaching mandatory retirement age. Guidotti TL. J Occup Med 1992; 34:1018-1022.

Return to work after occupation-related burns: An exploratory study. Inancsi W, Guidotti TL. Canadian Journal of Rehabilitation 1989; 2:169-174.

Recall bias in exposed subjects following a toxic exposure incident. Hopwood DG, Guidotti TL. Arch Environ Health 1988; 43:234-237.

Quantitative risk assessment of exposure to airborne asbestos in an office building. Guidotti TL. Can J Public Health 1988; 79:249-254.

Occupational hazards of domestic workers providing home care. Zechter JF, Guidotti TL. Public Health 1987; 101:283-291.

Epidemiologic features that may distinguish between building-associated illness outbreaks due to chemical exposure or psychogenic origin. Guidotti TL, Alexander RW, Fedoruk MJ. J Occ Med 1987; 29:148-150.

Occupation-related burns: Five year experience of an urban burn center. Inansci W, Guidotti TL. J Occup Med 1987; 29:730-733.

Degree of objectively measured impairment and perceived shortness of breath with activities of daily living in patients with chronic obstructive pulmonary disease. Archibald CJ, Guidotti TL. Canadian Journal of Rehabilitation 1987; 1:45-54.

Oxidant gas injury to the lung: a discussion on the functional implications. Guidotti TL. J Appl Toxicol 1985;5(5):320 - 326.

Competition and despecialization: An analytical study of occupational health services in San Diego, 1974-1984. Guidotti TL, Kuetzing BH. Am J Ind Med 1985; 8:155-65.

Cystic-fibrosis-related lung disease in young adults with minimal impairment. Guidotti TL, Line BR, Luetzeler J. Respiration 1983; 44:351-9.

Toxic inhalation of nitrogen dioxide: Morphologic and functional changes. Guidotti TL. Exp Mol Pathol 1980; 33:90-103.

Health risks associated with residence near a primary copper smelter. Mattson ME, Guidotti TL. Am J Ind Med 1980; 1:365-74.

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5. Books and Book Chapters

*Asterisks indicate complete books, either monographs edited by, complete books coauthored by or solo works written entirely by Dr. Guidotti. Lack of asterisk indicates that item is a book chapter(s). + Plus sign indicates that Dr. Guidotti was part of a team effort but not the lead or editor.

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**The Handbook of Occupational and Environmental Medicine: Principles, Practice, Populations, and Problem-Solving.* Guidotti TL. Santa Barbara CA, Praeger ABC-CLIO, 2020, in 2 volumes, 2/ed., 1600 pp. [Single-authored, advanced textbook and reference. Second edition of the 2010 book, extensively revised, slightly shortened and renamed.]

**Health Risks and Fair Compensation in the Fire Service*. Tee L. Guidotti, Editor; Alex Forrest, Nancy Lightfoot, Sara Jahnke, Michel Lariviére, with contributions from other coauthors; forward by Gary Doer. New York, Springer, 2016. ISBN 978-3-319-23068-9. Chapters written by Dr. Guidotti:

Chapter 1. Orientation (with coauthors) Chapter 4. Interpreting the literature Chapter 5. Toxic hazards (with Appendix) Chapter 6. Cancer (with Appendix) Chapter 7. Systemic disorders and other medical conditions Chapter 9. Respiratory disorders.

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Pollution from oil drilling and production operations (Volume II, Chapter 25, pp. 513 - 530) Mortality from air pollution (Volume III, Chapter 19, pp. 403 – 417) Urban ecosystems (Volume IV, Chapter 16, pp. 353 - 370)

**Global Occupational Health.* Guidotti TL, editor; Rantanen J, Lehtinen S, Takahashi K, Koh D, Mendes R, Fu H, Rodríguez Guzmán J, assistant editors; Rose SG, managing editor. New York, Oxford University Press, 2011, 600 pp. [34 authors. Dr. Guidotti edited the book and contributed text throughout, including several "boxes" presented case studies and special topics.] Chapters written by Dr. Guidotti as lead author:

Safety (Chapter 6, pp. 107 – 130) Physical Hazards (Chapter 8, pp. 142 – 157) Occupational Injuries (Chapter 14, pp. 265 – 276) Health-Care Workers (Chapter 20, pp. 397 – 414) The Worker (Chapter 23, pp. 444 – 458) Common Occupations (Fu Hua, TL Guidotti, Kari Lindström, Chapter 24, pp. 459 - 485) Occupational Health and Economic Development (Chapter 25, pp. 486 – 503) Occupational Health Services (Chapter 27, pp. 512 – 525) Delivering Health Care (Chapter 28, pp. 526 – 535)

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