

Uploaded to the VFC Website

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

Veterans-For-Change

Veterans-For-Change is a A 501(c)(3) Non-Profit Organizaton Tax ID #27-3820181 CA Incorporation ID #3340400 CA Dept. of Charities ID #: CT-0190794

If Veterans don't help Veterans, who will?

We appreciate all donations to continue to provide information and services to Veterans and their families.

https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78

Note: VFC is not liable for source information in this document, it is merely provided as a courtesy to our members & subscribers.



"GUAM.... THE LAND OF THE ROSARIES "

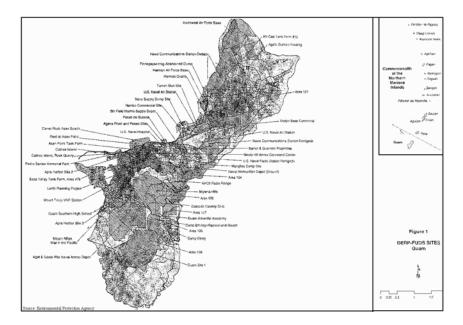
IT IS A VERY SAD & DRAMATIC SITUATION, THE UNIVERSITY OF GUAM HAS BEEN CONDUCTING STUDIES FOR MORE THAN 30 YEARS, INVOLVING MORE THAT 20 PEOFESSORS.

ALL THE THESE STUDIES PROVE THAT THE ENVIRONMENT OF GUAM IS HEAVILY CONTAMINATED WITH VERY TOXIC CHEMICALS, AND THEIR ASSOCIATION WITH VERY SEVERE DISEASES AND/OR DEATH.

BUT

INSTEAD OF INFORMING THEIR OWN STUDENTS (MORE THAN 3.000) THEIR FAMILIES, AND THE COMMUNITY HOW TO PREVENT AND TREAT THE CONSTANT ACCUMULATION OF THESE DEADLY POISONS IN THEIR BODIES....UOG PUBLISHED AN EDITORIAL IN THE NEWSPAPER (M. VARIETY) DENYING ANY CONTAMINATION OF THE FOOD THEY EAT, AND THE WATER THEY DRINK

MAP OF THE AREAS CONTAMINATED WITH DEADLY TOXIC CHEMICALS IN GUAM.....' ALL GUAM "



EXAMPLE OF THE CONCENTRATIONS, DISPERSION, AND ASSOCIATED DISEASES OF A TOXIC CHEMICAL IN GUAM

DIOXINS, TCDD, AGENT ORANGE

Federal Agency for Toxic Substances & Disease Registry (ATSDR) TCDD: sites, dates, and concentrations/comparison values (CVs).

One of the most toxic manmade substances known.

Three ounces of dioxin can kill in excess of one million people. The toxicity of TCDD is 1,000 times more lethal than potassium cyanide.

Shallow Subsurface Soil

GUAM, YIGO – (SITE NO. 26)

Fire Training Area No.2-Operable Unit. Main Base: used between 1958 and 1988.

TCDD: concentrations "above" CVs ---- up to 19,000 ppm

 $\Box \quad \textbf{GUAM, YIGO} - (SITE NO. 35)$

Waste Pile No.1-Operable Unit. Main Base:

Several thousand deteriorated drums of asphaltic tar from unknown dates are at this site.

TCDD: concentrations "above" CVs ---- up to 87 ppm

GUAM, MARBO – (SITE NO. 37) War Dog Borrow Pit-Operable Unit. MARBO Annex.

Its contents and dates of operation are unknown.

TCDD: concentrations "above" CVs ---- up to 94 ppm

GUAM, NORTHWEST FIELD – (SITE NO. 31)

Chemical Storage Area No. 4. Operable Unit. Northwest Field: waste oils and solvents were stored at this site.

TCDD: concentrations "above" CVs ---- up to 130 ppm

GUAM, YIGO – (SITE NO. 2)

Landfills No.2/Landfill No.4/Landfill No.5 (4 & 5 are contained within 2)-Operable Units. Main Base: used from 1947 to 1975, with a small area remaining active until 1982.. Materials disposed of at this site include, petroleum, oil, lubricants, solvents, pesticides, ferrous metal, construction debris, and unexploded ordinance.

TCDD: present/concentration not-specified

GUAM, HARMON - (SITE NO. 19)

Landfill No.24-Operable Unit. Harmon: holds sanitary trash and possibly other types of debris from the 1950s.

TCDD: present/concentration not-specified

GUAM, NORTHWEST FIELD – (SITE NO. 21)

Landfill No.26-Operable Unit. Northwest Field: is filled with sanitary trash and construction debris from 1966.

TCDD: present/concentration not-specified

GUAM, YIGO – (SITE NO. 5) Landfill No.7-Operable Unit. Main Base.

EXPOSURE

- ? 2, 4-D is an herbicide, that was a component of the **Agent Orange** defoliant used during the Vietnam war and it frequently is contaminated with traces of **TCDD/Dioxin**, *which is one of the most toxic manmade substances known*.
- ? A major route of current and past exposures is from the movement of dioxin from soil into water sediment, then into fish, and from fish consumption...into people.
- ? Dioxin released into the atmosphere contaminates the rivers and soil. Because dioxin compounds do not break down easily, they eventually find their way into the food chain in fish, crops, and other produce.
- ? Dioxin is lipophilic, which means that when it is assimilated into the human body, the heaviest deposits are to be found in body fat, or in the case of lactating women, in their milk.

HEALTH EFFECTS

NOTE: The information presented here about the effects of TCDD on human heath, was obtained from a large-scale study sponsored by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. (10)

Background Information

• In 1991, because of continuing uncertainty about the long-term health effects on Vietnam veterans of the herbicides sprayed, Congress passed Public Law 102-4 (PL 102-4), the Agent Orange Act of 1991. That legislation directed the Secretary of Veterans Affairs to ask the National Academy of Sciences (NAS) to perform a comprehensive evaluation of scientific and medical information regarding the health effects of exposure to Agent Orange, other herbicides used in Vietnam, and the various components of those herbicides, including TCDD.

Human Studies: evaluation of evidence

1. Objective:

To fulfill its charge of assessing whether specific human health effects are associated with exposure to at least one of the herbicides or TCDD, the committee concentrated its review on epidemiologic studies.

2. Methodology:

The committee reviewed studies of cohorts of populations that resided near sites of environmental contamination, or areas used to dispose of toxic waste. More than 3,000 relevant studies were identified in those searches, and more than 550 were reviewed.

3. Evaluation of the health effects of Agent Orange:

Was studied in individuals, general population, or groups of veterans were evaluated in terms of disease or medical outcome. Pathologists, clinicians, and epidemiologists use several classification systems. For a patient to be correctly diagnosed, careful staging of the extent of disease is necessary and a biopsy of the tissue must be analyzed by microscopy, often with special immunohistochemical stains, to confirm a clinical impression.

4. Committee's Conclusions about Health Outcomes

The present committee weighed the strengths and limitations of the epidemiological evidence reviewed in this report and in previous Agent Orange studies. Its conclusions were drawn from the new evidence in the context of the entire body of literature. It assigned each health outcome to one of four categories based on the evidence. Table 1 defines these categories and gives criteria for assigning a health outcome to each of them. Based on the committee's evaluation of occupational, environmental, and veteran's studies, this table also lists the relative weight of evidence for association between particular health outcomes and exposure to the herbicides. The conclusions are related to associations between exposure to Agent Orange and outcomes in human populations, not to the likelihood that any individual's health problem is associated with or caused by the herbicides in question.

TABLE-1

Summary of Findings of the association between Exposure of the Population to Agent Orange and Specific Diseases.

- A. Sufficient evidence of an association
 - 1. Hodgkin's disease
 - 2. Non-Hodgkin's lymphoma
 - 3. Soft-tissue sarcoma
 - 4. Chronic lymphocytic leukemia (CLL)
 - 5. Chloracne
- **B.** Suggestive evidence of an association
 - 6. Respiratory cancer (lung and bronchus, larynx, and trachea)
 - 7. Prostate cancer
 - 8. Multiple myeloma
 - 9. Type 2 diabetes (mellitus)
 - 10. Early-onset transient peripheral neuropathy
 - 11. Spina bifida in offspring of exposed individuals
 - 12. Porphyria cutanea tarda
- C. More evidence needed to determine whether an association exists
 - 13. Hepatobiliary cancer
 - 14. Oral, nasal, and pharyngeal cancer
 - 15. Bone and joint cancer
 - 16. Skin cancers (melanoma, basal cell, and squamous cell)
 - 17. Breast cancer
 - 18. Female reproductive cancer (cervix, uterus, ovary)
 - 19. Testicular cancer
 - 20. Urinary bladder cancer

- 21. Renal cancer
- 22. Leukemia (other than CLL)
- 23. Abnormal sperm characteristics and infertility
- 24. Spontaneous abortion
- 25. Neonatal or infant death and stillbirth in offspring of exposed individuals
- 26. Low birth weight in offspring of exposed individuals
- 27. Birth defects (other than spina bifida) in offspring of exposed individuals
- 28. Childhood cancer (including acute myelogenous leukemia) in offspring of exposed individuals
- 29. Neurobehavioral disorders (cognitive and neuropsychiatric)
- 30. Movement disorders, including Parkinson's disease and amyotrophic lateral sclerosis (ALS)
- 31. Chronic peripheral nervous system disorders
- 32. Respiratory disorders
- 33. Gastrointestinal, metabolic, and digestive disorders (changes in liver enzymes, lipid abnormalities, ulcers)
- 34. Immune system disorders (immune suppression, autoimmunity)
- 35. Circulatory disorders
- 36. Amyloidosis
- 37. Endometriosis
- 38. Effects on thyroid homeostasis

TCDD & HEALTH EFFECTS IN THE POPULATION: WHO KNEW WHAT, & WHEN?

A. U.S. OFFICIAL STUDIES

1986: a study by the National Cancer Institute of Kansas revealed that farmers exposed to 2,4-D, an ingredient of Agent Orange, had six times more non-Hodgkin's lymphomas than farmers not exposed did.

1987: a VA study showed that Marines who served in areas of Vietnam that had been heavily sprayed with Agent Orange had a 110 percent higher rate of non-Hodgkin's lymphomas. The study also showed these Marines had a 58 percent higher rate of lung cancers.

1987: a study in the state of Washington showed veterans who had been exposed to Agent Orange had significant increases in soft tissue sarcomas and non-Hodgkin's lymphomas.

1987: a VA study showed veterans who were most likely exposed to Agent Orange had eight times more soft tissue sarcoma than other veterans did.

B. MAKERS/CHEMICAL CORPORATIONS

? 1965: Dow Chemical convened a meeting of executives of Monsanto, Hooker Chemical, Diamond Alkali/Diamond Shamrock Corp., and the Hercules Powder Co. The purpose of this meeting was "to discuss the toxicological problems caused by the presence of certain highly toxic impurities" in samples of 2, 4, 5-T. The primary "highly toxic impurity" was 2,3,7,8

TCDD, one of 75 dioxin compounds. Three months later, Dow Chemical sent an internal memo informing him that dioxin "is exceptionally toxic, it has a tremendous potential for producing chloracne and systemic injury."

? 1982: veterans filed a class action lawsuit in 1982 against the chemical companies that had made Agent Orange. Among the companies named were Dow Chemical Co. of Midland, Michigan; Monsanto Co. of St. Louis, Missouri; Diamond Shamrock Corp. of Dallas, Texas; Hercules Inc. of Wilmington, Delaware; Uniroyal Inc. of Middlebury, Connecticut; Thompson Chemical Corp. of Newark, New Jersey and the T.H. Agriculture and Nutrition Co. of Kansas City, Missouri.

? 1984: the Agent Orange lawsuit was settled. Prodded by a U.S. District Judge, attorneys for the veterans and the chemical companies reached an agreement. At that time, 15,000 veterans and their relatives were involved in the suit, but about 250,000 subsequently filed claims. Under the terms of the settlement, the veterans received \$180 million from the chemical companies.

C. US MILITARY

1967: documents uncovered in the National Archives show that the military officials aware as early as 1967 of potential long-term health risks of frequent spraying.

1969: a message went out from Joint Chiefs of Staff to Commander in Chief Pacific, stating that "A report prepared for the National Institute of Health presents evidence that 2, 4, 5-T can cause malformation of offspring and stillbirths in mice, when given in relatively high doses. This material is present in the defoliant (Agent) Orange.

1971: the U.S. Surgeon General prohibited the use of Agent Orange for home use because of possible harmful effects on humans, all United States defoliation operations in Vietnam were brought to an end.

1988: an Air Force scientist wrote a letter to Congress, "we were aware of the potential for damage due to dioxin contamination in the herbicide. We were even aware that the `military' formulation had a higher dioxin concentration than the `civilian' version, due to the lower cost and speed of manufacture"

D. US ENVIRONMENTAL PROTECTION AGENCY (EPA)

1979: EPA banned the use of Agent Orange in the United States when a large number of stillbirths were reported among mothers in Oregon, where the chemical had been heavily used.

1983: EPA announced a nationwide plan to clean up more than 200 dioxin-contaminated sites, including 50 plants where 2, 4, 5-T had been manufactured. The cost of the cleanup was put at \$250 million and was expected to take four years.

E. US.DEPARTMENT OF HEALTH & HUMAN SERVICES (DHHS)

1983: DHHS released a report citing an association between dioxin exposure and incidence of soft tissue sarcoma.

F: US. CENTERS FOR DISEASE CONTROL & PREVENTION (CDC)

1986: the CDC released a report that showed that the residents of a mobile home park near St. Louis were suffering from liver and immune system damage because of their exposure to dioxin laced chemicals. 154 residents of Quail Run Mobile Home Park in Gray Summit, Missouri, near Times Beach southwest of St. Louis, showed depressed liver function and deficiencies in their

immune systems. The dirt roads in the mobile home park had been sprayed in 1971 with dioxinlaced oil to keep down the dust.

G.US. CONGRESS

1979: a National Veterans Task Force on Agent Orange was formed and legislation was passed by Congress to commission a large-scale epidemiological study of veterans who had been exposed to the herbicide.

1984: Congress passed Public Law 98-542, designed to provide compensation for soft tissue sarcoma, and required the VA to establish standards for general Agent Orange and atomic radiation compensation.

H. WHITE HOUSE

1986: the House Energy and Commerce Committee learned that the White House's Office of Management and Budget (OMB) was trying to stop all dioxin research, claiming that enough research had been done.

GUAM:

Unknown to 165.000 civilians who live, breath, eat, drink water, and bath in a virtual omnipresent mist of the rainbow herbicides. To the present, no action has been taken by the government.

LEAD

Federal Agency for Toxic Substances & Disease Registry (ATSDR) Lead: sites, dates, and concentrations/comparison values (CVs).

A. Shallow Subsurface Soil

EPA: Uncontaminated soil-concentrations of less than **50 ppm**. Soil cleanup level-**400**

ppm

□ **GUAM, YIGO** – (SITE NO. 10). Landfill No.14. Main base: contains concrete debris and construction debris.

Lead: concentrations "above" CVs----up to 40,000 ppm

 $\Box \quad \textbf{GUAM, MARBO} - (SITE NO. 22)$

Waste Pile No. 6 (formerly known as Landfill No. 27). MARBO Annex: contains construction debris.

Dates of operation are unknown.

Lead : concentrations "above" CVs ---- up to 6,500 ppm

GUAM, MARBO – (SITE NO. 24) Landfill No.29. MARBO Annex: is littered with household debris and garbage.

Dates of operation are unknown.

Lead: concentrations "above" CVs ---- up to 1,100 ppm

$\Box \quad \textbf{GUAM, YIGO} - (SITE NO. 28)$

Chemical Storage Area No. 1. Main Base: in the early 1970s, the site was used for the disposal of waste petroleum, oils, lubricants, and chlorinated solvents.

About 70% of the site is filled material covered with vegetative cover.

Lead: concentrations "above" CVs ---- up to 770 ppm

GUAM, NORTHWEST FIELD – (SITE NO. 31).

Chemical Storage Area No. 4. Northwest Field: waste oils and solvents were stored at this site.

Lead: concentrations "above" CVs --- up to 3,100 ppm

GUAM, YIGO – (SITE NO. 27).

Hazardous Waste Storage Area No. 1. Main Base: beginning in 1950 and continuing through the 1970s, petroleum, oil, lubricants, and solvents were stored. From the late 1970s to 1983 was used to store hazardous wastes.

Lead : concentration "above" CVs----up to 8,600 ppm

□ **GUAM: NORTHWEST FIELD** - (SITE NO. 16). Landfill No. 21. Northwest Field: operated as a sanitary trash disposal site.

Lead: concentrations "above" CVs----up to 16,000 ppm

GUAM, YIGO – (SITE NO. 5). Landfill No. 7. Main Base.

Lead: concentrations "above" CVs

GUAM, MARBO – (SITE NO. 38) MARBO Laundry Facility. MARBO Annex.

Lead: concentrations "above" CVs ---- up to 15,700 ppm

B. Groundwater from Downgradient Wells of Each Site

$\Box \quad \textbf{GUAM, YIGO} - (\text{SITE NO. 1})$

Landfill No. 1. Operable Unit. Main Base: opened in 1945 and continues to be used today. Materials disposed of include waste petroleum, oil, lubricants (POL), solvents, ferrous metal, construction debris, and pesticides

Lead: concentration"above" drinking water comparison values (CVs)

\Box **GUAM, MARBO** – (SITE NO. 24)

Landfill No. 29 (LF-29). OU: MARBO Annex. LF-29 is littered with household debris and garbage.

Dates of operation are unknown.

Lead: present/concentration not-specified

EXPOSURE

A common source of lead contamination are landfills that contain waste of lead-containing products (i.e. ammunition in military bases, or waste and debris of certain activities)

A. Contamination of the Environment

- 1. Once lead falls onto soil, it sticks strongly to soil particles and remains in the upper layer of soil, and part of it may enter rivers, lakes, and streams when soil particles are moved by rainwater.
- 2. Sources of lead in dust, soil, and groundwater include lead that falls to the ground from the air. Once lead that gets into the atmosphere, may travel long distances if the lead particles are very small
- 3. Lead may remain stuck to soil particles or sediment in water for many years.
- 4. The levels of lead may build up in plants and animals from areas where air, water, or soil are contaminated with lead.
- 5. If animals eat contaminated plants or animals, most of the lead that they eat will pass through their bodies.

B. Exposure of the population to lead

- a) People living near hazardous waste sites are exposed to lead and chemicals that contain lead by breathing air, drinking water, eating foods, or swallowing dust or dirt that contain lead.
- b) People may be exposed to lead by eating food, drinking water, or breathing in or swallowing airborne dust and dirt.
- c) Leafy fresh vegetables may have lead-containing dust on them. Children may be exposed to lead by hand-to-mouth contact after exposure to lead-containing soil or dust.
- d) Some of the lead that enters the human body comes from breathing in dust or chemicals that contain lead. Once this lead gets into the lungs, it goes quickly to other parts of the body in the blood.
- e) Lead can also enter the body by swallowing food or drinking liquids that contain it.
- f) Dust and soil that contain lead may get on the skin.
- g) Shortly after lead gets into the body, it travels in the blood to the "soft tissues" and organs (such as the liver, kidneys, lungs, brain, spleen, muscles, and heart).
- h) After several weeks, most of the lead moves into the bones and teeth. Some of the lead can stay in the bones for decades; however, some lead can leave the bones and reenter the blood and organs under certain circumstances (e.g., during pregnancy and periods of breast-feeding, after a bone is broken, and during advancing age).

HEALTH EFFECTS

- An enormous amount of information is available on the health effects of lead on human health. In fact, the toxic effects of lead have been known for centuries, but the discovery in the past few decades that levels of exposure resulting in relatively low levels of lead in blood associated with adverse effects in the developing organism is a matter of great concern.
- The most sensitive targets for lead toxicity are the developing nervous system, the hematological and cardiovascular systems, and the kidney. However, due to the multi-modes of action of lead in biological systems may affect any organ in the body, including:

1. Encephalitis, Parkinson's Disease, Multiple Sclerosis, Myelopathy (spinal cord pathology), Epilepsy, Peripheral Neuropathies, Seizures.

- 2. Memory Loss (long term), Attention Deficit Disorder, Autism, Schizophrenia, Concentration Loss, Emotional Instability, Hallucinations, Depression, Dyslexia, Behavioral Disorders, Hyperactivity, Learning Disability.
- 3. Arthritis (rheumatoid and osteo), Gout, Muscular Dystrophy, Joint Pain, Cartilage Destruction.
- 4. Nephritis, Renal Dysfunction
- 5. Cardiovascular Disease, Anemia, Hypertension.
- 6. Adrenal Insufficiency, Hypothyroidism.
- 7. Stillbirths, Sterility, Infertility, Sudden Infant Death Syndrome.
- 8. Liver Dysfunction.
- 9. Deafness, Blindness.
- 10. Immune Suppression.

Recommendations of the federal government to protect the health of the community:

• CDC:

Recommends that states develop a plan to find children who may be exposed to lead and have their blood tested for lead. CDC recommends that the states test children: at ages 1 and 2 years; at ages 3-6 years if they have never been tested for lead; and if they receive services from public assistance programs for the poor.

• EPA :

Developed regulations limiting lead in drinking water to 0.015 milligrams per liter (mg/L), although the goal is that drinking water be free of lead.

• The 1988 Lead Contamination Control Act:

The Control Act requires the Consumer Product Safety Commission, EPA, and the states:

That drinking water in schools must be tested for lead, and the sources of lead in this water must be removed.



FROM THE DESK OF: LUIS SZYFRES, M.D., M.P.H.

CLINICAL EPIDEMIOLOGY; CLINICAL PATHOLOGY; CLINICAL RESEARCH; CLINICAL BEHAVIORAL SC., & BIOTECHNOLOGY/GENETIC ENGINEERING.

- Training: Two Degrees (MD and MPH), Two Post Doctoral Fellowships, Three Accredited Medical Residency Training Programs.
- Experience: Twenty-six years (last sixteen years in managerial positions) in private, public, academic, and international organizations, including: The Johns Hopkins University/Medical Center and SPH (Baltimore, Maryland), BIMC and Mount Sinai Medical Center/City University of New York (Manhattan, NY), IT&E International Corporation (San Jose, CA), US Department of Health and Human Services, DHHS/OMH (Washington, DC), World Health Organization (WHO) *specialized agency of the* United Nations (UN), Washington, DC.

Director, World Health Organization (WHO) / United Nations (UN), Strategic Center for Bioinformatics & Publications, for the United States & its territories

AND Member Guam's Legislature: Guam Right to Know Commission. Hagatna, Guam

AND

A. Professor, College of Natural & Applied Sciences. University of Guam (UOG)

Phone: (671) 735-2988, Fax: (671) 734-2990, Email: <u>szyfres@guam.uog.edu</u> Dean's Circle #7. UOG Station. Mangilao, Guam 96923. Website: <u>http://iteinternational.com/html/press.html</u>

MEMORANDUM

To:Dr. Lee YudinFrom:Luis Szyfres, MD, MPHRe:Dr. Yudin's letter of warningDate:January 14, 2007

Dear Dr. Yudin:

We had two meetings about my research on the contamination of Guam with toxic chemicals and its effects in the health of the population. In the first meeting, I informed you that after presenting the issue to the Legislature of Guam, the senators decided to create the Guam Right to Know Commission, to which I was appointed by the speaker of the house. (Annex 1)

In hour second, and long meeting, I presented to you all the facts about the environmental contamination with toxic chemicals not only of Guam, but of the Guamanians as well.

About the statement in your letter: "..This memorandum constitutes a written warning with respect to inaccurate and false statements made by you to the Marianas Variety...", I would like to present the following facts:

 ABOUT THE CONTAMINATION OF GUAM'S ENVIRONMENT, ACCORDING TO THE UNIVERSITY OF GUAM, OF WICH YOU ARE A DEAN..... "AN IRONY": The University of Guam, of which you are a Dean, published in response to my interview by the Marianas Variety about Guam's contamination with toxic chemicals, the next day, and in the same newspaper the following statement: "Also, the U.S. Geological Survey, at our request, tested soil and water samples throughout Guam in 2002 and found no evidence for potentially toxic amounts of metals"....IRONICALLY, A SIGNIFICANT AMOUNT OF THE EVIDENCE OF GUAMS' CONTAMINATION WITH TOXIC CHEMICAS IS FROM....THE UNIVERSITY OF GUAM, IN WHICH YOU ARE A DEAN!.

a. Guam Environmental Protection Agency. Gov. of Guam. Sediment Contamination Study. 2000

Agana Boat Basin had high levels of COPPER, LEAD, and ZINC. The shallow waters close to shore at the Merizo Pier had HEAVY COPPER, LEAD, TIN, and ZINC concentrations. The highest levels of contaminants were at Apra Harbor, where moderate to heavy enrichment of COPPER, LEAD, MERCURY, TIN, ZINC, PCB'S and PAH'S were identified in sediments collected near Hotel Wharf, Commercial Port and Dry Dock Island. The recently constructed Agat Marina had

lowest contaminant levels, showing CHROMIUM contamination (<u>UNIVERITY OF GUAM,</u> <u>PROFESSORS: GARY DENTON, H.R. WOOD, L.P. CONCEPCION, H.G. SIEGRIST, V.S. EFLIN, D.K.</u> NARCIS, and G.T. PANGELINAN, 1997).

>Inner Apra Harbor may have the highest levels of sediment contamination on Guam, based on limited sampling for the Navy which showed, for example, elevated levels of TIN. These tin levels rank among the highest concentrations ever recorded in harbor sediments world-wide (UNIVERITY OF GUAM. PROFESSORS: GARY DENTON, H.WOOD, L. CONCEPCION, H.

SIEGRIST, V. EFLIN, D.K. NARCIS, and G.T. PANGELINAN, 1997).

Contaminant Bio-Uptake Study

≻Increases in ARSENIC, COPPER, LEAD, MERCURY, TIN, and PCB'S recorded in certain biota (the combined flora and fauna of a region), at localized sites, mostly in Apra Harbor. Levels of contaminants in edible parts of consumed organisms were significant or indicative of real health risks for COPPER and ZINC in *OYSTERS* in Apra Harbor and Agana Boat Basin and ARSENIC in the Apra Harbor *OCTOPUS*. MERCURY was found in muscle tissue at a level above Canadian and Australian standards in three out of seventy-five *FISH* sampled; two edible fishes and one lizardfish from Apra Harbor.

Potential Impacts of Sediment Contaminants on Human Health Physical contact with sediment contaminants found in Guam harbors, at the levels observed (UNIVERITY OF GUAM PROFESSORS: GARY DENTON, H.R. WOOD, L.P. CONCEPCION, H.G. SIEGRIST, V. EFLIN, D. NARCIS, and G.PANGELINAN, 1997), would not pose a notable health risk. Ingestion of measurable amounts of the contaminated sediments would not reasonably be expected. However, sources of health risk may arise through uptake of contaminated sediments or their pollutants by harbor organisms and passage through food chains to human consumers. Bio-accumulation of heavy metals and PCB's from sediments potentially can make marine organisms unacceptable for human consumption.

>PCB's are linked to increased cancer risks, disruption of women's reproductive function and to neurobehavioral and developmental problems in children born to women exposed to PCB's and are also associated with other systemic effects (e.g., liver disease and diabetes, compromised immune function, and thyroid effects). A comparative analysis of PCB levels in organisms in Guam harbors with levels in related species elsewhere (UNIVERITY OF GUAM. PROFESSORS: GARY DENTON, L.P. CONCEPCIONB, H. WOOD, V.S. EFLIN, and G. PANGELINAN.

<u>1999</u>) indicates mild enrichment extending to moderate levels in certain species at localized sites in Apra Harbor.

Administration's food standard.

The levels of COPPER and ZINC in filter feeding OYSTERS from Agana Boat Basin and parts of Apra Harbor exceed standards applied in Australia for fishery products (UNIVERITY OF GUAM PROFESSORS: GARY DENTON, L.P. CONCEPCIONB, H. WOOD, V.S. EFLIN, and G. PANGELINAN, 1999).

The *OCTOPUS* from Apra Harbor had arsenic concentrations comparable to those found in related species in other countries, but could cause deleterious health effects to a person

consuming in excess of 60 grams of this per day (UNIVERITY OF GUAM PROFESSORS: GARY DENTON, L.P. CONCEPCIONB, H. WOOD, V.S. EFLIN, AND G. PANGELINAN, 1999).

Potential Impacts of Sediment Contaminants on Natural Resources COPPER and TIN are undoubtedly toxic to marine invertebrates. <u>UNIVERSITY OF GUAM</u>, <u>PROFESSOR R. HESLINGA 1976</u> research showed COPPER impacts on larvae of a common species of SEA URCHIN from Guam's reefs. Copper can be acutely or chronically toxic to aquatic organisms through exposure in water or in sediments.

Dredging Methodology and Water Quality

Some heavy metals found in Guam, such as MERCURY, LEAD, and CADMIUM, are excreted very inefficiently by the human body and even if exposure to these metals is extremely minute, their levels may still exceed the quantity that the body can excrete and, consequently, toxic levels may be achieved after several years of chronic exposure. In addition to lead poisoning, effects of these metals include *chronic fatigue syndrome, fibromyalgia and multiple chemical sensitivity syndrome*.

MERCURY has been recognized as the most significant metal contaminant derived from *FISH* consumption. Even minute quantities of mercury are extremely toxic. When mercury from contaminated *SEAFOOD* accumulates, the *immune system becomes weakened, the detoxification* capacity of the liver and kidneys is diminished, hormones become poorly regulated, and the NERVOUS SYSTEM system becomes impaired. Allergies, chemical sensitivities, gastrointestinal disturbances, depression, anxiety, headaches, muscle and joint pains, chronic fatigue, frequent infections, abnormal gastrointestinal flora and hormonal disturbances are just a few of the many symptoms which have been linked with chronic mercury toxicity.

>Although PCB'S bioaccumulate and concentrate through food chains leading to humans being exposed when they consume contaminated *FISH. Cancer* risks can arise from PCB intake and maternal consumption of PCB contaminated fish is associated with adverse health of children Certain polycyclic aromatic hydrocarbons (PAH'S) are potentially *carcinogenic*. They are also released from sediments through dredging activities.

Potential Impacts of Dredging Contaminated Sediment on Natural Resources >PCB'S and PAH'S also may be released to food chains, and that PCB'S of sufficient doses can produce an *immunosuppressive effect and induce hepatic microsomal enzyme systems*. They have the ability to bioactivate relatively nontoxic compounds in cells to become *cytotoxic or genotoxic metabolites*. Some PAH'S are *carcinogenic* to animals (**UNIVERITY OF GUAM** PROFESSORS: *GARY DENTON, H.R. WOOD, L.P. CONCEPCION, H.G. SIEGRIST, V.S. EFLIN, D.K. NARCIS, and G.T. PANGELINAN*, 1997)

➢Based on Guam studies by the UNIVERSITY OF GUAM, PROFESSORS S. AMESBURY, C.BIRKELAND, M.CHERMIN, R.CLAYSHULTE, F. CUSHING, J.DAY, R.DICKENSON, J. EADS, L. ELDREDGE, D. GROSENBAUGH-HAMEL, S.HEDLUND, R.KOCH, J.MARSH, C.NEUBAUER, S.NEUDECKER, R.RANDALL, R. TSUDA. 1977, accumulation of finer sized sediment fractions has a greater inhibiting effect on the recruitment and growth of corals than does the larger sized fractions. It is not known whether the severity of impacts from pollutants in Guam harbor sediments would be distributed differentially with the size of sediment fractions. ➢But sediment particle sizes in Guam harbors tend to be predominantly sand sized (greater than 0.063mm diameter) with less than 10% being smaller silt particles (UNIVERITY OF GUAM PROFESSORS: GARY DENTON, H.R. WOOD, L.P. CONCEPCION, H.G. SIEGRIST, V.S. EFLIN, D.K. NARCIS, and G.T. PANGELINAN, 1997).

Sources of Pollutants in Sediments

Garbage dumps by the U.S. Military on Guam included the Navy Orote Landfill, which from 1944 to 1969 deposited many tons of discarded metals, as well as industrial and construction wastes (Navy Energy and Environmental Support Activity, 1983). Contaminants in this waste include PCB'S, PAH'S, ORGANOCHLORINE PESTICIDES, DIOXANS, FURANS, and METALS.
The Navy supplied nuclear submarines and other surface ships at Apra Harbor, operated dry cleaning and printing plants, treated building materials with preservatives, stored and operated floating power plants, transferred ammunition and possibly nuclear weapons, etc.
A study by the UNIVERITY OF GUAM PROFESSORS: GARY DENTON, L.P.
CONCEPCIONB, H. WOOD, V.S. EFLIN, and G. PANGELINAN, 1999, indicates that boat

maintenance appears to be the main contributor to the boat-source pollutants found in the Guam harbor.

REFERENCES

?Amesbury, S.A., C. Birkeland. M.I. Chernin, R. Clayshulte, F. Cushing, J.E. Day, R. Dickenson, J. Eads, L.G. Eldredge, D. Grosenbaugh-Hamel, S. Hedlund, R.L. Koch, J.A. Marsh, C. Neubauer, S. Neudecker, R.H. Randall and R.T. Tsuda. 1977. Marine environmental baseline report, Commercial Port, Apra Harbor, Guam. <u>University of Guam</u> Marine Laboratory Tech. Rept. No. 34. 96 pp.

2 Penton, G.R.W., L.P. Concepion, H.R. Wood, V.S. Eflin and G. Pangelinan. 1999. Heavy metals, PCB's and PAH's in marine organisms from four harbor locations on Guam, a pilot study. WERI Tech. Rept. No. 87. <u>University of Guam</u>. 154 pp.

2 Denton, G.R.W., H.R. Wood, L.P. Concepion, H.G. Siegrist, V.S. Eflin, D.K. Narcis and G.T. Pangelinan. 1997. Analysis of in-place contaminants in marine sediments from four harbor

locations on Guam, a pilot study. WERI Tec. Rept. No. 81. <u>University of Guam</u>. 120 pp. ?Marsh, J.& G.Gordon.1974. Marine Environmental Effects of Dredging & Power Plant Construction in Piti Bay and Piti Channel. Guam. Technical Report #8. <u>University of Guam</u> Marine Lab. 56 pp.

?Randall, R.H., and L.G. Eldredge. 1974(a). A Marine Survey, Part I, and a Current Survey, Part II, for the Proposed Guam Marine Company Marina. <u>University of Guam</u>, Environmental Survey Report # 13.

?Randall, R.H., and L.G. Eldredge. 1974(b). A Marine Survey for the Sleepy Lagoon Marina. <u>University of Guam</u>, Environmental Survey Report No. 14.

b. Another irony....there are numerous studies on the contamination of Guam with toxic chemicals conducted by US. Federal Agencies: the U.S. Environmental Protection Agency (EPA), the U.S. Agency for Toxic Substances & Diseases Registry (ATSDR), the U.S. Department of Defense (DOD), the U.S. Army Corps of Engineers, the U.S. Department of the Navy, etc. All the specialized federal agencies concur in that the environment of Guam is contaminated.... except the University of Guam, that conducted numerous studies proving that the environment of Guam is contaminated?

The university of Guam, based in the geological survey (the US Geological Survey was established on 1879, and placed it in the Department of the Interior, with the objective of conducting the classification of the public lands. Mapping of the public lands was begun under the direction of the Surveyor-General, but no special provision was made for classification of the public lands, and it thus became the responsibility of the surveyor), is over-ruling several "specialized" federal agencies, including:

THE US AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR) The US. Agency for Toxic Substances & Diseases Registry (ATSDR) is a federal public health agency of the U.S. Department of Health and Human Services, based in Atlanta, Georgia. ATSDR was established by the United States Congress with the mandate to perform specific functions concerning adverse human health effects and diminished quality of life associated with exposure to hazardous substances.

ATSDR is responsible for assessment of waste sites and providing health information concerning hazardous substances, response to emergency release situations, and education and training concerning hazardous substances (ATSDR Mission Statement, November 7, 2001).

THE US ENVIRONMENTAL PROTECTION AGENCY (EPA)

Born in the wake of elevated concern about environmental pollution, the U.S. Environmental Protection Agency was established in 1970, with the mandate to consolidate in one agency a variety of federal research, monitoring, standardsetting and enforcement activities to ensure environmental protection. EPA's mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends.

AND,

AS DESCRIBED ABOVE, THE UNIVERSITY OF GUAM IS ALSO OVERRULING.... ITSELF?.

- 2. ABOUT THE PRESENCE OF TOXIC CHEMICALS IN THE GUAMANIANS, AND ITS POSSIBLE ASSOCIATION WITH MULTIPLE DISEASES OF MANY ORGANS AND SYSTEMS (INCLUDING LYTICO-BODIG):
 - a. We had two meetings with about the contamination of Guam's Environment with Toxic Chemicals, in which we discussed in detail the type of toxic substances, locations, concentrations, dispersion trough evaporation/rain/wind/infiltration, and their health effects in the population. In relation to the presence of the toxic chemicals, we spoke about a very good example... Lytico-Bodig, and many years of studies of the brains of Chamorro, proving the presence of toxic metals in the Brain...that the only way that the metals can enter the Brain is through the Blood.... that the only way that the metals can enter the Blood, by Eating Food, Drinking Water, or Breathing Air, contaminated with toxic metals. By the way, that is in the same newspaper (Marianas Variety).
 - b. About Lytico-Bodig, there is no such a thing as "cause" in observational epidemiology, only "associations". We spoke in detail about this issue with Ms. Cathleen Moore-Linn, she explained to me that the M. Variety does not have personnel specialized in health. I requested the newspaper to publish a clarification, and they did.
 - c. As in your Memo you only talk about this issue in the M. Variety, you obviously read about it. I am including the clarification to refresh your memory:

MARIANAS VARIETY

"Unknown to the residents of Guam, the food they eat, the water they drink, and the air they breathe are contaminated with toxic chemicals," Szyfres said. "The toxic chemicals enter the person's bloodstream and may affect any organ or system in the body." "The fact that the only way that toxic heavy metals can get to the brain is through the blood, and that they can only get to the blood through the food, water, or air contaminated with heavy metals, proves that the toxic chemicals are not only in the environment of Guam, but in Guamanians as well," he added.

TO MARIANAS VARIETY (WITH COPY TO MS. CATHLEEN MOORE-LINN) From: Luis Szyfres, MD, MPH Date: 12/08/06 14:36:02 To: NEWS=Mar-Vic Cagurangan Cc: cmoore@guam.uog.edu Subject:=FROM:DR.SZYFRES=TO:MARIANAS.VARIETY/MS.CAGURANGAN @=RE: CLARIFICATION Dear MarVic: I'm very happy to see that you included in today's edition my clarification about Environmental Contamination VS Lytico Bodig. "The fact that the only way that toxic heavy metals can get to the brain is through the blood, and that they can only get to the

blood through the food, water, or air contaminated with heavy metals, proves that the toxic chemicals are not only in the environment of Guam, but in Guamanians as well," he added, clarifies my initial commentary: =1=That the high concentrations of toxic

chemicals reported by the federal government are not only in the water, soil, etc, but in people as well.

=2=That the toxic chemicals in blood represent serious risk factors associated with diseases of many organs and systems, and not just the neurological system. Now, we can try our best to inform/help the community in both issues, without creating confusion.

All the best, Luis

- d. After I received your Memo, I spent a long time trying to understand what you are referring to. We had two long meetings about my research on the contamination of Guam with Toxic Chemicals, but in your Memo, you are saying....
 - ⇒ "You must ensure that any research reports distributed publicly or draft manuscripts submitted for external review or accepted for publication <u>with</u> <u>regard to your research on Lytico-Bodig....</u>" My research in Lytico-Bodig? In your opinion, I am with all the senators in the Commission of the Legislature of Guam to conduct research in Lytico-Bodig? I suggest you call the speaker of the house, the senators, and the now Lieutenant Governor of Guam. They will inform you that the contamination of Guam with Toxic Chemicals and Lytico-Bodig are not the same thing. The only connection is that the metals in the Brain come from the environmental contamination.
 - ⇒ Another factor of major interest in the epidemiological characterization of the magnitude, frequency, distribution, trends, patterns, and associated factors of the problem of the presence of toxic chemicals in the food, water, and air on Guam, is the determination of the number of people in our community that have toxic chemicals in their organism. Has during the research on Lytico-Bodig, UOG with the other universities collected blood samples from Guamanians during Forty Years, the specimens are invaluable. Has during the study of the Chamorro brains the researchers found Toxic Metals, it would call my attention if they did not test the specimens for the chemicals, to evaluate the correlation between the presence and concentrations of the metals ions in blood, and the occurrence and characteristics of both, ALS and Parkinson Disease. If for unknown reasons, the university did not test the blood samples, they are already collected and stored; we only need to test them.
 - ⇒ In relation to the reporting of the blood results tests, the University of Guam was reporting very few results, which has been improving recently. However, the law mandates the full report of all results ASAP.

Code of Federal Regulations. TITLE 45 DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC WELFARE. PART 46. PROTECTION OF HUMAN SUBJECTS Revised June 23, 2005; Effective June 23, 2005

§46.101 To what does this policy apply?. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.

Intervention includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes.

§46.111 Criteria for IRB approval of research. Informed consent will be sought from each prospective subject or the subject's legally authorized representative, in accordance with, and to the extent required by §46.116. Informed consent will be appropriately documented, in accordance with, and to the extent required by §46.117.

§46.113 Suspension or termination of IRB approval of research. An IRB shall have authority to suspend or terminate approval of research that is not being conducted in accordance with the IRB's requirements or that has been associated with unexpected serious harm to subjects. Any suspension or termination of approval shall include a statement of the reasons for the IRB's action and shall be reported promptly to the investigator, appropriate institutional officials, and the department or agency head. (Approved by the Office of Management and Budget under control number 0990-0260.)

§46.122 Use of Federal funds. Federal funds administered by a department or agency may not be expended for research involving human subjects unless the requirements of this policy have been satisfied.

§46.123 Early termination of research support: Evaluation of applications and proposals. The department or agency head may require that department or agency support for any project be terminated or suspended in the manner prescribed in applicable program requirements, when the department or agency head finds an institution has materially failed to comply with the terms of this policy.

- ⇒ "This written warning will be placed in your Official Personnel File. In addition to this warning, I am adding a requirement to your CFES plan for this academic year. This requirement is that you prepare a comprehensive review of the available scientific literature on neurodegenerative diseases in Guam and present it for peer review and possible publication"...?Once again, I am preparing a comprehensive review on the contamination of Guam's environment with Toxic Chemicals and their effects in the Health of the Guamanians, not on Lytico-Bodig.
- ⇒ By the way, as you know very well, I am a Physician with Three Medical Specialties, a Master Degree, and Two Postdoctoral Fellowships, none of them in Neurology.
- 3. ASSOCIATION BETWEEN THE ENVIRONMENTAL CONTAMINATION OF GUAM WITH TOXIC CHEMICALS, AND LYTICO-BODIG.

Talking about ironies... the same Federal Agency that is funding all the studies on Neurodegenerative Diseases, the National Institute of Aging (NIA), is precisely the one that supports the association between environmental contamination and Lytico-Bodig, while the... NIA-funded University of Guam, not only does not bother to evaluate that possibility, but states publicly that there is no environmental contamination. Let me give you some examples, even at the risk that, like you state in your Memo ".... There may be a basis to consider more stringent disciplinary measures"

NATIONAL INSTITUTE OF AGING (NIA) Intramural Research Program, and Department of Neuroscience, the JOHNS HOPKINS UNIVERSITY, School of Medicine, Baltimore, Maryland. Metal-catalyzed disruption of membrane protein and lipid signaling in the pathogenesis of neurodegenerative disorders. Laboratory of Neurosciences, Mattson MP. Ann N Y Acad Sci. 2004 Mar;1012:37-50.

Membrane lipid peroxidation and oxidative modification of various membrane and associated proteins (e.g., receptors, ion transporters and channels, and signal transduction and cytoskeletal proteins) occur in a range of neurodegenerative disorders. This membrane-associated oxidative stress (MAOS) is promoted by redox-active metals, most notably IRON and COPPER. The mechanisms whereby different genetic and environmental factors initiate MAOS in specific neurological disorders are being elucidated. In Alzheimer's disease (AD), the amyloid beta-peptide generates reactive oxygen species and induces MAOS, resulting in disruption of cellular calcium homeostasis. In Parkinson's disease (PD), mitochondrial toxins and perturbed ubiquitindependent proteolysis may impair ATP production and increase oxyradical production and MAOS. Increased MAOS occurs in Amyotrophic lateral sclerosis (ALS) as the result of genetic abnormalities (e.g., COPPER/ZINC-superoxide dismutase mutations) or exposure to environmental toxins. Levels of iron are increased in vulnerable neuronal populations in AD and PD, and dietary and pharmacological manipulations of iron and copper modify the course of the disease in mouse models of AD and PD in ways that suggest a role for these metals in disease pathogenesis. An increasing number of pharmacological and dietary interventions are being identified that can suppress MAOS and neuronal damage and improve functional outcome in animal models of AD, PD, HD, and ALS.

Novel preventative and therapeutic approaches for neurodegenerative disorders are emerging from basic research on the molecular <u>and cellular actions of metals</u> and MAOS in neural cells

PMID: 15105254 [PubMed - indexed for MEDLINE]

Elevated levels of ferromagnetic metals in foodchains supporting the Guam cluster of neurodegeneration: do metal nucleated crystal contaminants [corrected] evoke magnetic fields that initiate the progressive pathogenesis of neurodegeneration.

Purdey M. High Barn Farm, Elworthy, Taunton, Somerset TA4 3PX, UK. Elevated levels of aluminum (Al), strontium (Sr), barium (Ba), iron (Fe), manganese (Mn) cations - combined with deficiencies of magnesium (Mg)/calcium (Ca) - have been observed in the foodchains that traditionally support the Chamorro populations affected by high incidence clusters of Alzheimer (AD), Parkinson-like (PD), motor neurone diseases and multiple sclerosis on the island of Guam. Soils drawn from the cluster region demonstrated an excessive fivefold increase in 'magnetic susceptibility' readings in relation to soils from disease free adjoining regions.

Once gut/blood brain barrier permeability is impaired, the increased uptake of Al, Fe, Sr, Ba, or Mn into the Mg/Ca depleted brain leads to rogue metal substitutions at the Mg/Ca vacated binding domains on various enzyme/proteoglycan groups, causing a broad ranging disruption in Mg/Ca dependent systems - such as the glutamine synthetase which prevents the accumulation of neurotoxic glutamate. The rogue metals chelate sulphate, disrupting sulphated-proteoglycan mediated inhibition of crystal proliferation, as well as its regulation of the Fibroblast growth factor receptor complex, which disturbs the molecular conformation of those receptors and their regulation of transphosphorylation between intracellular kinase domains; ultimately collapsing proteoglycan mediated cell-cell signalling pathways which maintain the growth and structural integrity of the neuronal networks. The depression of Mg/Ca dependent systems in conjunction with the

progressive ferrimagnetisation of the CNS due to an overload of rogue ferroelectric/ferromagnetic metal contaminants, enables 'seeding' of metal-protein crystalline arrays that can proliferate in the proteoglycan depleted brain. The resulting magnetic field emissions initiate a free radical mediated progressive pathogenesis of neurodegeneration.

The co-clustering of these various types of disease in select geographical pockets suggests that all of these conditions share a common early life exposure to ferromagnetic metal nucleating agents in their multifactorial aetiology. PMID: 15488650 [PubMed - indexed for MEDLINE]

Concentrations of Cd, Co, Cu, Fe, Mn, Rb, V, and Zn in formalin-fixed brain tissue in amyotrophic lateral sclerosis and Parkinsonism-dementia complex of Guam determined by High-resolution ICP-MS.

Gellein K ; Garruto RM ; Syversen T ; Sjbakk TE ; Flaten TP. Norw.University of Science and Technology. Biol Trace Elem Res. 2003; 96(1-3):39-60 (ISSN: 0163-4984).

Amyotrophic lateral sclerosis (**ALS**) and parkinsonism-dementia complex (**PDC**) are neurodegenerative disorders that occurred with extremely high frequency among the native population on Guam, especially in the 1950s and 1960s, but have substantially declined over the last half-century.

The most plausible hypothesis centers on imbalances in essential and toxic metals. We have determined the concentrations of Cd, Co, Cu, Fe, Mn, Rb, V, and Zn in formalin-fixed brain tissue collected during the period 1979-1983 from eight Guamanian patients with ALS, four with PDC, and five control subjects using high-resolution inductively coupled plasma-mass spectrometry. The concentrations of Cd are markedly and significantly elevated both in gray and white matter in ALS, but not in PDC patients. The concentrations of Zn are elevated for both patient groups, in both gray and white matter, but only the difference in gray matter for PDC is significant. For the other metals, no significant differences are found.

PreMedline Identifier: 14716085

Neurofibrillary tangles in the primary motor cortex in Guamanian amyotrophic lateral sclerosis/parkinsonism-dementia complex. Mount Sinai School of Medicine, New York

Neurobiology of Aging Laboratories.

Hof PR ; Perl DP. Neurosci Lett. 2002; 328(3):294-8 (ISSN: 0304-3940) The amyotrophic lateral sclerosis/parkinsonism-dementia complex is a chronic neurodegenerative disorder with high prevalence among the native Chamorro population of Guam. The cortical pathology of the disease is characterized by the widespread occurrence of cortical neurofibrillary tangles that exhibit a specific laminar and regional distribution different from that seen in Alzheimer's disease (AD).

We report here that the primary motor cortex in Guamanian cases contains high numbers of neurofibrillary tangles, contrasting sharply with the situation in AD and in non-Chamorro cases of amyotrophic lateral sclerosis. Furthermore, the cases with predominant parkinsonism-dementia are more severely affected than amyotrophic lateral sclerosis cases.

These data suggest that the regional and cellular pathology of Guamanian cases differs radically from that commonly observed in neurodegenerative diseases outside Guam and point to the existence of subgroups in the

spectrum of clinical manifestations seen in Guamanian patients. PreMedline Identifier: 12147329

Disappearance of ALS from Guam: implications for exogenous causes. Chen KM. Department of Neurology, *Guam Memorial Hospital*

1995 Dec;35(12):1549-53.

The author reports the disappearance of amyotrophic lateral sclerosis (ALS) from Guam over past 30 years, which coincided with rapid changes in the ecology, socioeconomy, and westernization of the life style. This slow but steady decline is believed to be the consequences of radical changes from food collection to wage-based life style and dietary improvement in recent years and elimination of exogenous factors. Those risk factor(s) are the environmental metals which must have triggered the accelerated oxidative stresses in the motor neurons.

Changing Epidermiology:

- a. The annual incidence of 70/100,000 in 1960s down to 7/100,000 in 1990s, and remained unchanged for past 15 years.
- b. No increase in the incidence of ALS among non-Chamorros transients of Guam and Marianas during W.W.II.
- c. Long-term resident non-Charmorro and half-Chamorros on Guam are also affected.
- d. Charmorro migrants to U.S. Mainland are affected after long absence from Guam.
- e. Incubation period for both ways is estimated to be 18 approximately 20 years. Socioeconomic Changes:
- a) Shift in population demography; Efflux of Chamorros and Influx of aliens; Chamorros less than 50% by 1990.
- b) Tourists passed 1 million in 1994.
- c) Westernization: After W.W.II, almost free access to Military Commissary for imported food and appliances.
- d) Life style: from food collection to wage-based society. [Indexed for MEDLINE]

4. ABOUT CENSORSHIP AND INNACURATE FALSE STATEMENTS

Your Memo states "that Allen refused to renew his (your) contract with the UOG Cancer Research Center, and asked him (you) to sop my research..." another irony, according to the Reappointment Procedures.... "The appropriate Administrator (in my case is you) will remind Faculty members of the need to apply for reappointment". "Faculty reappointment evaluations will be completed in the fourth consecutive semester of service".

I was hired on a three-year tenure-track contractual appointment on June 2005. I had to apply before November 2007. It was not President Allen that told that he was not going to renew the contract, it was you that told me not to apply because, even if all the members of the Reappointment Committee voted for my reappointment, Drs. Allen and Whippy were going to veto the faculty member's decision..... "IF THERE IS ANY DOUBT ABOUT THIS STATEMENT, PLEASE EXPLAIN WHY YOU THERE IS NO REAPPOINTMENT APPLICATION OR REAPPOINTMENT COMMITTEE"UPON DIRECTION FROM THE APPROPIATE ADMINISTRATOR (YOU), THE FACULTY MEMBER'S UNIT WILL ELECT ONE MEMBER FROM THE UNIT, ETC".....AND..... IT WAS NOT DR. ALLEN WHO TOLD ME THAT HE WAS ANGRY THAT I INFORMED THE COMMUNITY (THROUGH THE M. VARIETY) ABOUT THE DISEASES ASSOCIATED WITH THE EXPOSURE TO TOXIC CHEMICALS, AND WANTED ME OUT OF UOG AT ONCE BY BUYING BACK THE REMAINDER OF MY THREE-YEAR CONTRACT....IT WAS YOU, BUT THIS TIME IT IS NOT HEARSAY....*IT IS RECORDED*.

CC: members of the Guam Legislature Right To Know Commission: Ex-Senator-Lieutenant Governor/ Mike Cruz; Speaker of the House/Senator Mark Forbes, Senator Won Pat, Senator Antonio Umpingco, Senator Frank Blas, Jr., Senator Tina Muna-Barnes.

CC: Attorney General, Alicia Limtiaco