The UN's Mercury Treaty Favors Corporate Wealth Over Children's Health

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After almost four years of demanding negotiations, the United Nations Environmental Program (UNEP) announced that 140 nations reached agreement to begin ratifying the Minamata Convention on Mercury. The Convention will be an international binding treaty to reduce and eventually eliminate mercury compounds altogether from polluting industries, such as gold mining and fossil fuel plants, and many common household products.

Overall the treaty is an admirable triumph. In many developing countries, mercury pollution is destroying the environment and causing rampant human illness. However fervent applause should be withheld. One powerful alliance that portends to champion itself as the protector human health—the vaccine industrial complex—is resolved to assure that mercurial exposure continue through aggressive vaccination programs. To the delight all those corralled in the amphitheater of vaccine magic and wonder—the American Academy of Pediatrics (AAP), the US CDC and FDA, the World Health Organization (WHO)—the treaty will exempt thimerosal (ethylmercury) containing vaccines (TCVs). So while sources of mercury pollution will lessen dramatically, hundreds of millions of child-bearing women, newborns and small children will be increasingly poisoned by TCVs.

The absurdity of this scenario should be evident. On the one hand, the international community agrees that mercury is highly toxic and levels must be phased out from mining operations, coal powered plants, cement production, thermometers and light bulbs and other every day products. On the other hand, a powerful group of individuals, health organizations and government agencies, lobbying on behalf of the pharmaceutical industry, has won a victory because they believe it would be too costly

for drug companies and international health agencies if mercury were banned from vaccines. In their upside down world, the cost benefits of thimerosal weigh heavier in the corporate scales than the health threats from mercurial toxicity.

Thimerosal has been proven scientifically to be a human carcinogen, a mutagen (abnormally affects DNA), a teratogen (induces abnormal prenatal development), a reproductive toxin, and an immune system disruptor. It is associated with abnormal neurological development and brain injury. If this were not so, Eli Lily, the leading manufacturer of thimerosal, would not be required to print on thimerosal‘s Material Safety Data Sheet: “Exposure to mercury in utero and in children may cause mild to severe mental retardation and mild to severe motor coordination impairment.”

If current global trends continue, climate change and unsustainable agro-chemical farming will increase environmental stress. The vultures of shock capitalism will expand their endless quest for new profiteering ventures that will privatize and commodify every thing essential life. In turn this will further impoverish and environmentally decimate nations struggling to develop. Finally population growth, climbing poverty, diminishing nutrition and harsher climate conditions will breed and escalate disease and illness. This is a perfect equation for the vaccine industry. It translates into more vaccines, higher vaccination rates, greater revenues, and hence greater demands for inexpensive thimerosal to keep production and operation costs low.

When Dr. Paul Offit—a leading priest for today’s vaccine ideology—or Bill Gates attack those who suggest thimerosal can cause autism, or those who exercise their civil right to refuse vaccination, should we take their condemnations seriously? None of the twenty flagship studies Dr. Offit frequently cites in his publications is a biological study. Instead, each is either an ecologic or cohort report. Most of these studies have been discredited as unreliable due to serious scientific design flaws. For example, the chief author and researcher of the CDC-funded Aarhus study in Denmark, referenced in the UNEP secretariat correspondence, and often cited by Offit and Bill Gates, as proof of thimerosal safety, is now under criminal investigation for embezzling over $1 million from the study. The study has been deconstructed and exposed as a sham to support

political and corporate interests. All the studies referenced by thimerosal supporters are statistical analyses of a variety of parameters comparing select populations or sub groups within a population. Such studies are highly predisposed to design flaws and data manipulation in order to achieve a desired result. This is why ecologic and cohort studies are valued favorably by the vaccine industry, the CDC and AAP. In the real world of hard science, observational, non-biological studies lack the methodical rigor to establish trustworthy scientific conclusions.

In order to determine medical certainty in vivo and/or in vitro biological research is necessary. These are the only scientific models to detect and measure thimerosal's toxic activity at a cellular level. For example, in vivo studies conducted at the University of Pittsburgh reported that when macaque monkey infants were injected with TVCs equivalent to a human infant's vaccine schedule, they exhibited neurotoxic disorders characteristic to autism.

In order to better evaluate the Convention's rationale for excluding TCVs, we contacted one of the world's most knowledgeable scientists about the health risks of ethylmercury and thimerosal. Why was a large body of toxicological research proving ethylmercury's serious heath risks being undermined or ignored? And is there any scientific truth to AAP, CDC, FDA and WHO claims that TCVs pose no risks to normal neurological development in children? In fact is their any sound evidence to deny a relationship between thimerosal and neurological damage?

Dr. Jose Dorea is a full professor at the Department of Nutritional Sciences at the University of Brasilia in Brazil, one of Latin America's largest educational institutes for medical training and research. He is an expert on the metabolism of neurotoxic metals, specifically aluminum, lead and mercury, during pregnancy, lactation and throughout childhood. He has also been an international voice in the fight to remove thimerosal from vaccines in developing countries.

Contrary to media propaganda that thimerosal disproval is identical to opposition against all vaccines, Dr. Dorea believes vaccination is an effective means to prevent the

spread of infectious diseases. Where he parts company with the AAP, WHO and government health agencies is that he calls for safe vaccines and vaccines free of toxic chemicals. He stresses upon the need for toxicological experts' evaluations to determine the safety of vaccine ingredients before licensure. The toxicodynamics of vaccine ingredients and additives are low priority concerns when institutional committees make their evaluations on vaccine safety. Not one of the vaccine advisory committees of the AAP, CDC or SAGE at the WHO include a trained toxicologist. As a researcher who has conducted and contributed to numerous toxicological studies and reviews, Dr. Dorea is convinced that ethylmercury is highly toxic at doses considerably less than that found in TCVs.

A rarely asked question is whether or not there are any biologic studies, either in vivo or in vitro, to support the belief that low doses of thimerosal present no serious health risk. If there are no biologic studies then the exaggerated, far-reaching conclusions about thimerosal safety is mere advertising. It holds the same weight as a propaganda stunt to reduce vaccine fears and increase vaccination rates. Is there such as study?

"Defintely not!" Dr. Dorea replied emphatically. "Actually, the studies—in vitro, in vivo, ex-vivo—with low doses of ethylmercury or thimerosal unequivocally show toxic or untoward effects."

There is no reason to doubt Dr. Dorea. In the June 2011 issue of the journal *Neurochemical Research*, he published his analysis of all neurotoxicological studies on ethylmercury and thimerosal found in two of the largest medical research databases, PubMed and Web-of-Science. Three primary observations stand out.

First, neurotoxic activity of low dose thimerosal in isolated human and animal brain cells was found in all studies to be consistent with the neurotoxic activity of mercury in general.

Second, Dr. Dorea realized that "the neurotoxic effect of ethylmercury (thimerosal) has not been studied with co-occurring adjuvant aluminum in thimerosal containing vaccines

(TCVs).” Aluminum hydroxide is also a neurotoxin. It is also another common vaccine ingredient. This toxic combination of ethylmercury and aluminum has never been thoroughly researched and evaluated. Prior to 1999, this combo was not uncommonly found in pediatric vaccines distributed throughout the US. This was when the country witnessed an alarming spike in autism rates among children.

Third, animal studies show that thimerosal contributes to the accumulation of inorganic or elemental mercury in the brain. For the developing world, where many sources of inorganic (elemental) mercury pollution are found, this is particularly disturbing. Thimerosal, an organic carbon-containing mercury, has properties that enhance the buildup of inorganic mercury, the common form of mercury released from the mining and fossil fuel industries. Therefore, Dr. Dorea writes that “the persistent use of TCV (in developing countries) is counterintuitive to global efforts to lower mercury exposure and to ban mercury in medical products.”[1]

These findings should be sufficient to convince the health authorities responsible for vaccine safety to enforce the precautionary principle and ban thimerosal from all vaccines.

Most vaccines in the developed world are thimerosal free and some countries have banned it altogether. In 1999, the US started phasing thimerosal out of most vaccines, except for the flu vaccine. The UNEP has now failed to follow suit due to the lobbying efforts by these same organizations, such as the CDC and AAP, that recommended thimerosal removal over a decade ago. There is also strong evidence to surmise that the AAP took advantage of the Conventions’ TCV exemption and used it as an opportunity to discredit flu vaccine skeptics, especially at a time when most Americans have lost confidence in its efficacy. Besides flu vaccine ineffectiveness, a second fear contributing to public adversity to the flu shot is the persistent inclusion of thimerosal as an ingredient. Otherwise, why is the AAP, which holds no mandate for advising upon the welfare of children outside the US, aggressively opposing a thimerosal ban and vociferously applauding its exemption from an international treaty?

The AAP's press release criticizes thimerosal opponents for confusing methylmercury's toxicity with ethylmercury. It would therefore seem that Harvard Medical school is also confused. Researchers at Harvard's Department of Psychiatry published a biologic study in the June 2012 issue of the journal *Cerebellum* demonstrating that thimerosal had a negative impact on the neurodevelopment of rat pups during the perinatal phase. The abstract begins with the proven fact that, "Methylmercury and ethylmercury are powerful toxicants with a range of harmful neurological effects in humans and animals." Why is there is so much resistance at the AAP, CDC and WHO to accept this fact of science based medicine?

We asked Dr. Dorea about the relevancy of the ethyl- vs. methyl-mercury argument; that is, ethylmercury's low half life in the body confers safety and therefore TCVs present no neurological threat. This entire argument, he says, "confuses the untrained mind. The time a drug resides in the body is important in therapeutics, I mean medical treatment of a prescribed drug. However, when we try to access toxicity, the main question is the target organ."

For example, it takes very little time for an analgesic to alleviate a headache or a body pain? In many cases the drug's bioactivity brings relief almost immediately. Consequently, whether or not ethylmercury remains in the body longer than methylmercury is not critical to determine its toxicokinetics. That is why Dr. Dorea is suggesting this is a ploy to avoid the more important evidence showing thimerosal's threats to normal human development.

Although the AAP, CDC and WHO have never issued stern health warnings against vaccinating pregnant mothers, infants and children with TCV's, Dr. Dorea remains extremely worried. "When you have a fetus, a new born (especially with low birth rate), the blood-brain barrier is not fully formed. This special circumstance has not yet been modeled [ie. studied under well designed scientific models] in order to evaluate how much [ethylmercury] enters the brain during its blood clearance." In other words, although the life of ethylmercury is shorter than that of methylmercury (3.7 days and 44

days respectively), there are no definitive studies to determine how much is circulating through the brain before being evacuated from the body. Nevertheless, during those 3.7 days as thimerosal circulates the body and brain, the damage could be irreversible. And there is sufficient research to warn us about thimerosal's debilitating effects once it passes the blood-brain barrier.

In a 2012 issue of the *Journal of Toxicology*, neuroscientists at the prestigious Methodist Hospital Medical Center in Houston published their investigation into thimerosal's toxicological effects upon mitochondria in human astrocyte cells. Astrocytes are the most abundant cells found in the human brain and are critical for maintaining normal, healthy blood-brain barrier function. The researchers observed that ethylmercury, which is more lipophilic (able to cross the blood-brain barrier) than methylmercury, is readily taken up by the astrocyte's mitochondria. It then disrupts the cell's respiratory functions, eventually leading to cell death. The researchers observed that astrocytes, when exposed to thimerosal, exhibit severe signs of oxidation and "highly damaged mitochondrial DNA."[2] This study seems to provide biological evidence to support claims that thimerosal is very likely associated with some incidences of autism.

Finally, we asked Dr. Dorea whether he at any time was hopeful that the UNEP treaty would ban thimerosal from vaccines, or whether including it on the agenda was simply a ruse to assure stakeholders that the negotiations were inclusive, open and transparent. "Philosophically," he said, "when there is no hope, there is no meaning to life. Realistically, I expected a 'song and dance'. However I do hope that toxicologists will keep on working on the topic so we can have answers to guide health professionals, pediatricians included, and help young children in third world countries."

We also hope for this. However, until there is a systematic clearing of corporate money changers at the highest levels of our national and international health agencies and organizations, the international ruling on TCV exemption assures us that the thimerosal controversy will remain with us for some time. The UNEP Convention has made a

serious mistake by succumbing to the pressures from pro-mercury lobbyists in the medical establishment and government health agencies.

The treaty ignores a perfect storm of vaccine injury brewing on the horizon. It fails to predict what might occur when aggressive vaccination programs are imposed upon large populations already physically weakened and diseased from the abuses of poverty. The body of a well nourished, healthy child, with a robust immune system, living in a hygienic American suburb, will be far more physically robust to eliminate heavy metals. This child's immune system will likely be stronger for resisting disease and cellular deterioration. Moreover, most if not all of the vaccines a child in the developed world receives are thimerosal-free. However, what can be said about the physical vitality and immunology of a small impoverished child in Africa? A child severely malnourished, inflicted with local diseases, dysentery and parasites, and with a compromised immune system? How will this infant, boy or girl metabolize the mercury contained in dozens of injections given over the course his or her early years? What will be the untold costs following this barrage of TCV injections? These are the questions concerning the human rights of every child that the Convention ignores in order to appease corporate financial concerns. It is also the mandate of the UNEP to protect the world's children from health risks of disease and death due to environmental toxic pollution, including mercury in medical products. Instead the agency has betrayed its mandate to follow the dreams of vaccine zealots.

The future health of women and children throughout the developing world would be better guaranteed if a binding agreement insists that all thimerosal will be phased out of vaccines by a specific deadline. If this had been demanded, the pharmaceutical industry would certainly be motivated to develop safer, non-toxic alternatives to replace mercury. Repeatedly, whenever regulations and conditions leveled at the pharmaceutical industry are not definitive and made mandatory, nothing is ever done to bring about constructive change. Therefore, once again, we find the greed of Big Pharma, the Glaxos, Mercks and Novartis, along with their minions at the AAP, CDC, FDA and WHO favoring profits over human health.

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NOTES:

[1] Dorea JG. Integrating experimental (in vitro and in vivo) neurotoxicity studies of low-dose thimerosal relevant to vaccines. Neurochem Res. 2011 Jun;36(6):927-38.

[2] Sharpe MA, Livingston AD, Baskin DS. Thimerosal-derived ethylmercury is a mitochondrial toxin in human astrocytes: possible role of Fenton chemistry in the oxidation and breakage of mtDNA. JOunral of Toxicology vol. 2012, (2012)