The dangerous impurities of vaccines

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Abstract

In 1998 and 1999 scientists representing the World Health Organization (WHO) met with the senior vaccine regulatory scientists of the USA and UK at the National Institutes of Health (NIH) in Washington D.C. to discuss the safety of the manufacturing methods employed to produce vaccines. No journalists were present but official transcripts were kept. What they record is that all the many experts that spoke expressed grave concern over the safety of the manufacturing process currently employed to make the licensed vaccines, such as MMR, flu, yellow fever, and polio. It was reported by leading experts that the vaccines could not be purified, were "primitive," made on "crude materials," and the manufacturers could not meet lowered government standards. WHO specialists reported the widespread and continuing presence in the MMR vaccine of chicken leukosis virus. Others spoke about the presence of foamy virus, many other viruses, toxins, foreign proteins, enzymes and possibly prions and oncogenes. It was reported that the polio vaccine had sometimes contained more monkey viruses than polioviruses. Grave concerns were expressed about the level of foreign residual DNA and RNA contaminating the vaccines. It was feared that this could be causing cancers and autoimmune diseases. It seemed possible to this writer that, given its mutagenic properties, this DNA contamination might relate to the incidence of autism and other serious disorders occurring in the vulnerable after vaccination. Experimental evidence also suggests that there could be a link of autism to environmental toxins such as acrylamide.

This narrative by Janine Roberts has been extracted from Chapter 7 of her book entitled "Fear of the Invisible", Impact Investigative Media Productions, 2008; ISBN 978-0-9559177-2-1.

Keywords: vaccines, impurities, autism, MMR, influenza, smallpox, poliovirus, rubella, measles, mumps, yellow fever, ALV, substrates, cell lines, cell cultures, residual DNA, acrylamide

A year after I met with the top government regulatory scientists at the NIH Emergency Workshop on SV40 in 1997, they met again in Washington for another workshop on vaccine safety. At this there were representatives of all the major US government health organizations and of the vaccine manufacturers. A third similar meeting would be held a year later in 1999.

The main issue at the November 1998 meeting was whether or not it would be safe for manufacturers to produce the viruses needed for vaccines from cancer cells. Pharmaceutical companies were seeking government approval for this, on the basis that cancerous cells, as "immortal" and permanent, would be cheaper to use than cells they had to regularly replace by, for example, buying more monkeys.

These workshops looked at the issue broadly, by comparing the safety of the different ways available for making our vaccines. As everyone present was a scientist, the discussions were much more open and frank than they are when journalists are present.

They started with the Measles, Mumps and Rubella vaccine (MMR). One of the first speakers on this was Dr. Arifa Khan from the federal Food and Drugs Agency (FDA) and what she had to report was very disturbing [1].

"Today I would like to present an update on the reverse transcriptase [RT] activity that is present in chicken cell derived vaccines." My attention was immediately grabbed. I knew that the mumps and measles viruses used for the MMR vaccine are grown in fertilized chicken eggs, as are also the viruses for the Flu and Yellow Fever vaccines. (The rubella virus for MMR is produced differently—in artificially grown cells taken originally from an aborted human fetus.)

Dr. Khan was reporting the result of a just concluded two-year investigation into the safety of MMR led by the World Health Organization. She explained this was initiated in 1996 after the discovery in MMR of RT; an enzyme whose presence they believed could indicate that retroviruses had contaminated the vaccine. This had greatly alarmed them as some retroviruses are thought to cause cancers – and AIDS.

WHO had then quietly, without telling the public, without withdrawing the vaccine, organized MMR safety studies at various laboratories to see "whether this RT activity was associated with a retroviral particle, and even more importantly, whether this retrovirus particle could infect and replicate in human cells."

What they then discovered confirmed their worse fears. Dr. Khan continued: "The RT activity is found to be associated with retroviral particles of two distinct avian endogenous retroviral families designated as EAV and ALV." Now ALV stands for Avian Leukosis Virus. It is associated with a leukemia cancer found in wild birds, so definitely was not wanted in the vaccines. EAV was less dangerous, at least for birds as it is natural for them to have it.

Khan added that they had also found another possible danger; "There was a theoretical possibility that the virus [ALV] could … infect the [human] cell" thus integrating its genetic code "into the human DNA" to cause cancer. The only reassurance she could give was that her team had watched vaccine cultures for a full "48 hours", and, in that time period, no merger of viral and human DNA had been observed. I thought this much too short a period to guarantee safety. Cancers develop over years.

Dr. Khan then warned, "there is a possibility that there could also be potential pseudotypes (merging between) … the measles vaccine virus and the retroviral sequences"—meaning there was a risk that bird viruses might combine with the measles virus in the vaccine to create dangerous new mutant viruses, They had not seen it, but it could happen.

doi: 10.1588/medver.2008.05.00197

She acknowledged much longer term safety studies were needed than 48 hours, but said long-term studies of measles vaccine cultures were very difficult: "because the measles vaccine virus itself lyses [kills] the culture in about three to four days." This had prevented them from studying the longer-term consequences of this contamination of the MMR vaccine [2].

So far, she added, they had only managed to analyze a small part of the retrovirus contamination in the vaccines. "Our ongoing studies are directed towards doing similar analysis of other retroviral genetic codes found in the vaccine preparations." It was suspected that other retroviruses might also be present. She also noted that "about 20 years ago similar RT activity was reported" in the vaccine. Apparently nothing had been done about it at that time and the public were never told.

She concluded by explaining what the World Health Organization (WHO) had decided to do about this chicken leucosis virus (ALV) contamination. It would take the risk of quietly allowing MMR to continue to be contaminated. It would permit vaccine manufacturers to continue to use retrovirus contaminated eggs, because "you cannot get ALV free flocks in places where you are making yellow fever vaccine."

Dr. Andrew Lewis, head of the DNA Virus Laboratory in the Division of Viral Products, then warned. "All the egg-based vaccines are contaminated," including "influenza, yellow fever and smallpox vaccines, as well as the vaccine for horses against encephalomyelitis virus" for "these fertilized chicken eggs are susceptible to a wide variety of viruses."

This was an eye opener for me. Before I started on this investigation, if I thought about it, I would have presumed our vaccines were made of selected viruses in sterile fluid to which a small amount of preservative chemicals has been added. I think this is what most parents presume.

It was thus a shock to discover from this top-level scientific workshop that the viruses in our current vaccines are not in a sterile fluid as I had presumed, but in a soup of unknown bits and pieces, a veritable witches' brew of DNA fragments, added chemicals, proteins and, even possibly prions and oncogenes, all of which would easily pass through the filters used, to be injected into our children.

Our vaccines, I thus learnt, are not filtered clean but are suspensions from the manufacturers' "incubation tanks" in which the viruses are produced from "substrates" of mashed bird embryo, minced monkey kidneys or cloned human cells. These suspensions are filtered before use but only to remove particles larger than viruses. The point of the vaccine is that it contains viruses, thus these must not be filtered out. This means there remains in the vaccine everything of the same size or smaller, including what the manufacturers call "degradation products"—parts of decayed viruses or cells.

I also learnt that the only official checks made for contaminants in vaccines are for a few known pathogens, thus ignoring a vast host of unknown, unstudied, small particles and chemicals. These eminent doctors reported at these vaccine safety meetings that it is simply impossible to remove these from our common vaccines—and this would of course also apply to vaccines for pets, farm animals and birds.

I went to the published reports of the MMR manufacturers and found these confirmed what the scientists at this workshop had reported. A manufacturer stated in 2000 that it made the MMR vaccine with "harvested virus fluids." It stated frankly that their "Measles vaccine bulk is an unpurified product whose potency was measured through a biological assay for the active substance rather than through evaluation of integrity of physical form. Degradation products are neither identified nor quantified." In other words, it left the latter in the measles vaccine along with all contaminants that lay there quietly, or worked slowly. The pharmaceutical company admitted checking the measles vaccine only for obviously active contaminants. It did not measure how much the vaccine was polluted with genetic code fragments, other viruses, or with parts of bacterial, animal, bird or human cells [3].

I looked also to see how the checks on known pathogens in vaccines are done. The main method involves PCR—and detects incredibly small DNA fragments. These cannot be identified unless they are found to be identical to a fragment that has been proved unique to a pathogen, something that is complex and difficult to do. That is why the scientists checking the avian leucosis virus contamination of the MMR vaccine had admitted that, in several years of work, they only managed to check a small part of this contamination.

In any case, PCR is utterly unable to prove a vaccine pure. A recent report stated: "A negative PCR signal could be obtained when the total batch [of 10 liters] still contained 106 undetected viral particles." [4]

Another common method of testing for the presence of a particular pathogen, whether a toxin, virus or bacteria, is to use an antibody test such as the HIV blood tests (ELISA and Western Blot). Such tests only work if the antibody searched for in a blood sample, cell culture, or vaccine substrate, is already proved to mark only a molecule unique to this pathogen for destruction.

But can any molecule be proved unique to a specific pathogen? Proving this is virtually impossible to carry out with complete accuracy. There is always the chance that the molecule targeted can be found in more than one thing—including many yet unidentified viruses. In other words, there is always some degree of uncertainty with these tests. As far as I can discover after a rigorous search, the accuracy of even the HIV test has never been so verified.

A major problem is that we have so far only identified a very small part of the microbial world—and therefore we just cannot verify a particular molecule is only from one type of virus. If antibodies are detected, then all that can be said with certainty is that these antibodies fit to molecules that were at some point present in the patient.

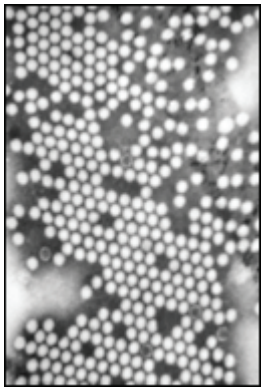
David Relman wrote in *The Atlantic:* "Much of the microbial world is still as mysterious as an alien planet…It has been estimated that only 0.4 percent of all extant bacterial species have been identified…. Even the germs that inhabit our bodies, the so-called 'human commensal flora,' such as the swarming populations of organisms that live in the spaces between our teeth, are largely unknown." [5]

But despite all these possible sources of error, virologists have found ways that they hope will minimize error. A way has been discovered to separate out particles found in cell cultures according to their densities—thus distinguishing particles such as retroviruses that are defined as of specific density. A sample

doi: 10.1588/medver.2008.05.00197

of fluid thought to possibly contain viruses is put into a thick sugar suspension and then spun extremely fast for many hours in a centrifuge, often at 5000 to 12000g – gravity forces humans could not live under [6]. This makes the particles band according to their density. But great care needs to be taken. This is reportedly not a good way to try to find HIV—for it is said to be extremely fragile and to easily disintegrate. In general, high speed centrifuging and freeze-drying may considerably damage results prior to microscope imaging [7].

The micrograph below is said to be of purified polioviruses, but the extraordinarily regular shapes of these particles made the molecular biologist and virologist Dr. Steven Lanka wonder they might have been shaped out of soft fragments by filtration meshes and hours of rapid centrifugation. (Contrast the micrographs of viruses later in this book.)[8] Lanka concluded: "The 'isolated' polio viruses are artificial particles, generated by suction of an indifferent mass through a very fine filter into a vacuum."[9] (If he is right —then where is the evidence for the isolation of the poliovirus? I clearly would have to seek this elsewhere.)



The next stage involves the use of the electron microscope. The appropriate density band for the type of virus sought is micro-graphed. This hopefully reveals some particles that look like viruses—but does not prove that they are. Next they must be tested in a cell culture to see if the cells exposed to these same particles will fall ill.

If they do, what are observed are cell deaths, mutations or distortions. The normal diagnostic symptoms of the disease under study are not usually seen. This is a serious difficulty as if a causal link between the particle and this disease is being sought.

We also cannot assume that these cells, living artificial lives in laboratory vessels, in conditions that often bring about mutations[10], are producing the same viruses as those they are exposed to in the culture. The new viruses may contain variations in genetic codes. They may be entirely natural and harmless particles, as cells also produce these. It's thus very difficult to tell if the illness in the cell culture is the same as in the original patients. But, if cells die in the lab, it is often simply assumed that the correct viruses are present. (For more on this, see chapters 19-20 of "Fear of the Invisible")

The genetic codes of viruses produced by the exposed cells are also very rarely checked to see if they are identical to the added particles—for they may share many code sequences simply because the same cells can make many types of viruses out of near identical materials—and because cells often vary the viruses they produce to some extent.

If it is finally judged that these tests have been successful in growing the right viruses, a sample of the virus-rich fluid from the cell culture is taken, and this may then be used as a 'vaccine seed' that is added to monkey or other cells in an incubator, with 'growth' chemicals, to make them produce more of the viruses wanted for vaccines.

The latest information I could find on the retroviral contamination of the MMR vaccine was in a 2001 scientific paper from the CDC. This reported that 100 MMR recipients were tested to see if they were contaminated by either of the two types of retroviruses identified by Dr. Khan and others. The conclusion was dramatic. "**The finding of RT activity in all measles vaccine lots from different manufacturers tested suggests that this occurrence is not sporadic and that vaccine recipients may be universally exposed to these [chicken] retroviral particles."**

They then concluded: "Despite these reassuring data, the presence of avian retroviral particles in chick embryo fibroblast-derived vaccines [like MMR] raises questions about the suitability of primary chicken cell substrates for vaccine production." They recommended considering stopping production in fertilized eggs, and growing the vaccine viruses instead on "RT-negative cells from different species, such as on immortalized [cancerous] or diploid [laboratory grown] mammalian cells." I was amazed to learn this, for, to the best of my knowledge, nothing has been done since this report was made to render MMR safer. The measles vaccine is still produced from contaminated chicken embryos.

A year later, on September 7, 1999, another Workshop was convened in Washington DC to consider these issues [11]. Representatives from all the largest public health institutions in the West were at this, including the World Health Organization whose representative co-chaired it. The UK government's vaccine safety bodies had a top-level representative in Dr. Philip Minor. Apparently no press were present– but the importance of the meeting meant that it was taped, as was the earlier conference, to ensure an accurate record.

Dr. Bill Egan, the Acting Director of the Office of Vaccines at the Center for Biologics opened the meeting with this statement:

"I think we need to remind ourselves that viruses can propagate only in live cells, and this of course holds true for whole viral vaccines… They can only be produced in cells [substrates]… We have only to think back to the finding of SV40 in poliovirus vaccines to realize the extent of the risk that any cell substrate may pose, there is still great need for concern… we have been given the task of identifying these concerns…"

The scientists present then told that our vaccines are widely contaminated by viral and DNA genetic code fragments, many viruses and proteins. They openly worried that among these could also be dangerous prions or oncogenes.

They reported that they had found monkey viruses in still more vaccines. Dr. Andrew Lewis of the FDA gravely added that "humans were immunized with adenovirus vaccines that contained adenovirus-SV40 hybrid viruses." In other words, a brand-new monkey-human mutant virus was created in this vaccine. Dr. Ben Berkhout exclaimed at hearing this: "That's the one I would like to focus on today, Is [there a danger of] the potential reversion of an attenuated vaccine strain to a virus variant that can replicate fast and can potentially cause AIDS?"

This was a startling and horrifying question. Could our most common childhood vaccines be so affected by contaminating DNA that they will give our children AIDS? Were such mutation events in vaccines rare? Apparently not. Another doctor stated. "Recombination among a variety of viruses and cells co-

doi: 10.1588/medver.2008.05.00197

infected in tissue culture is not uncommon. This is an issue that certainly will need further consideration." In other words, vaccine incubators can create mutated viruses.

The next speaker described the "foreign cellular DNA" they had found contaminating our childhood vaccines. Dr. Andrew Lewis of the CDER and FDA worried that this might well include "viral oncogenes"—in other words, contaminants that might cause cancer.

Another scientist, Dr. Adimora, asked how would the public react if they knew of these dangers? "The general public has a variety of concerns about vaccines but, to my knowledge, the cell substrates in which the vaccines are grown have not been one of their major concerns to date." But, "it could conceivably be different in future."

Dr. Lewis corrected him slightly, saying the public on one occasion had worried about substrates: "There was a tremendous concern associated with the polio vaccine developed in rhesus monkey kidney cells associated with the SV40 infection. Two years ago we were one of the sponsors of a meeting that were dealing with the follow up to those concerns." This was the NIH meeting that had first introduced me to these issues.

Dr. Rebecca Sheets of the CBER, the US laboratory responsible for monitoring vaccine safety, worryingly noted that as government officers they had no control whatsoever over how vaccines are made! Under current legislation they could only give "recommendations" to the manufacturers. Nevertheless, they were highly concerned about the "cell substrates in which the vaccine viruses are grown … They can be the source of adventitious agents, the source of tumorigenic potential, and the source of residual cellular DNA which can have both infectivity or tumorigenic potential."

She continued: "If the use of cancer cells for the growth of vaccine viruses were authorised," then they would be concerned about "the potential for exposure to adventitious oncogenic viruses. The screening methods for these viruses are difficult or relatively insensitive, and that there may exist currently unknown or occult agents that have never before been detected despite use of current technology." (I was later to learn that the particle identified as HIV was first grown in such a cancer culture.)

All ways of making vaccines have their dangers. Dr. Hayflick, a well-reputed scientist involved for many years with vaccines, described how the 'Primary Culture' method of taking cells from 'sacrificed animals' or bird embryos ran into problems when "*it became apparent that these cells contained many unwanted viruses, some of which were lethal to humans."* He noted: "Latent viruses were such a problem with primary monkey kidney cells that a worldwide moratorium on the licensing of all polio virus vaccines was called in 1967 because of death and illnesses that occurred in monkey kidney workers and vaccine manufacturing facilities." The contaminating virus blamed was the deadly Ebola. This was most serious, but again I could find no record of the public having been informed about this suspension or the Ebola.

The top UK government expert present at this conference, Dr. Phil Minor of the National Institute of Biological Standards and Control, added that the polio vaccine had originally been so polluted that its doses contained as much monkey virus as poliovirus! I had no idea that so much monkey virus was in this vaccine given to hundreds of millions of children. Then there was another shock for me. I had been assured two years earlier at the SV40 Workshop that the polio vaccine was no longer contaminated with SV40—and consequently I had so assured the UK public in our resulting Channel 4 television documentary. Now I learnt I had been misled and consequently had seriously misinformed the public. Scientists reported to this meeting that "SV40 sequences" remained in the poliovirus seed used for the current polio vaccines.

As for the rubella, measles and other vaccines produced in 'Cell Line substrates', in cells taken from the wild but now grown in laboratories, these cell cultures host "the broadest virus spectrum of any cell population known." It was also explained that these cultures in which are produced our children's vaccines, were safety tested, controversially and alarmingly, on "terminally ill cancer human patients" and on "prisoners."

Dr. Hayflick told how, when laboratory-grown cell lines were first introduced, they were erroneously thought of as immortal. He said they had now proved them mortal, overturned a dogma that had existed from the turn of the century. This was that cells living in laboratory cultures could live and replicate indefinitely. It was wrongly presumed that "if they do die, you simply do not have the proper culture conditions." But, we now know that healthy cells can only divide and reproduce around 50 times. It seems to be a natural limitation.

For me this shed light on why at first the early AIDS researcher. Dr. Robert Gallo, the scientist now famous for his theory on how HIV causes AIDS, was so upset when he failed to keep alive his cell lines of CD4 white blood cells. He then had guessed this must be because an AIDS related virus was killing them. But – what if these cells were dying naturally —as we now know they would have been? If so, then this is important—for their deaths were the only evidence he produced for deciding that the viruses in his cultures were deadly to white blood cells and thus the cause of AIDS, as we will see!

A year later Gallo had tried to grow HIV on white blood cells that were previously deliberately made cancerous ('transformed') by exposure to radiation or toxins, thinking this would immortalize them—and thus prevent his virus from killing them. It is a method known as the 'Continuous Cell Line'—and it was the next item on the agenda of this workshop. Dr. Hanna Golding, an expert with the CBER, explained she was really worried about being asked to approve of the use of cancer cells in making vaccines: "The issue that we are really concerned about is the unknown. We are dealing with 13 new cell substrates that are transformed. We don't know their history. We don't know what's the etiology." In other words, we don't know from where they come or what they do.

The meeting was told: "The main disadvantage of the continuous cell line is that many [cells] express [produce] endogenous viruses, and there has always been this concern over tumorigenic potential, should we say, associated with cellular DNA." They were saying that all of these had made their way into vaccines given to children. I felt this was getting more and more horrific.

Cancer cells can be extremely aggressive, moving around laboratories, contaminating culture after culture. Dr. Hayflick told of how the eminent Dr. Maurice Hilleman, the scientist I had earlier interviewed about the MMR vaccine, had used what

doi: 10.1588/medver.2008.05.00197

he thought was an 'intestine-based cell line' to make an adenovirus vaccine, only to discover later to his horror that his cell line had been invaded and taken over by the aggressive cervical cancer virus known as HeLa.

I also learnt that DNA fragments contaminating vaccine lots might be from dead cells but nevertheless remained extremely active and dangerous. Dr. Golding feared these contaminating DNA codes might combine together in the vaccine lots – creating a mutant viral strain that could easily get in the individual doses of vaccine.

The removal of this contaminating DNA has proved so impossible that the US government in 1986 told the vaccine manufactures that some of it could stay. It recommended a weight limit for contaminating DNA of 100 picograms per dose. But the manufacturers could not meet this safety recommendation, as was explained at this Workshop. Their failure had led the government to relax its standards, applying the 100 picograms limit solely to the product of continuous [cancer] cell lines, and allowing one hundred times as much contaminating DNA (10 nanograms) in vaccine doses produced on other types of substrate, such as the MMR vaccines. But the meeting was told that vaccine manufacturers had now admitted that they could meet even this lower standard of "purity"—and, since these limits were only 'recommendations', the government was not able to enforce them. Thus high levels of hazardous DNA pollution remain in many vaccines. When I read this, I wondered about the cases of brain damage and autism now increasingly reported after the administration of these DNA polluted vaccines?

This failure was also a great concern to this meeting. Many of the doctors present worried that such a great amount of DNA fragments might cause viral mutations in the vaccines. "Naked" DNA (with no protein coat) is known to be highly reactive. Dr. Phil Krause calculated, "If there are 10 nanograms of residual DNA per dose, which is the current WHO recommendation, and if two doses were recommended per child, as is the case with MMR vaccine, and the infectivity of viral DNA in the vaccine were comparable to that of purified polyoma virus DNA, we can calculate the theoretical infectivity risk. … For a vaccine that is universally administered to the 4 million children born in the US every year, this would represent about 500 infections per year, clearly an unacceptable rate."

This shocked me. If he was right, and it seemed he was (none of the experts present questioned his calculations), this surely meant the current MMR vaccine is potentially very dangerous. Krause also had only added up the risk from the one vaccine. What when to it is added all the contaminating DNA in the many other vaccines?

I did not realize initially what it meant for the stricter safety recommendations being only applied to vaccines made on continuous cell lines. It meant that all the common vaccines might be very DNA polluted. This realization only came after I learnt from an expert at the workshop that: "Unpurified viral vaccines (like MMR) … contain residual DNA in quantities greater than 10 nanograms."

Dr. Krause also stated: "Of course, in the context of DNA vaccines, we are talking about injecting even larger quantities of DNA into people." He was speaking here about the new DNA vaccines being developed as "safer" than our current vaccines.

Another important safety issue was raised. "What would this contaminating DNA do when it was injected into humans in vaccines? Could it change our own DNA? Could it cause cancers—or autoimmune diseases?" "When you consider that almost every one of these vaccines is injected right into the tissue that is the preferred site for DNA gene therapy … I think you couldn't do much more to get the DNA expressed [to get contaminating DNA taken up by human cells] than to inject it into a muscle in the way it's being done." Another speaker lamely admitted: "I chaired the committee that licensed the chickenpox vaccine, and it [residual DNA] was actually an issue that we considered at that time. We looked among recipients of the vaccine for evidence of an autoimmune response associated with the DNA included in that vaccine." He then added: "Actually, we didn't look, we asked the company to look and they did not find one."

Dr Walid Heneine of the CDC asked: 'No one has mentioned how much DNA we now have in the licensed vaccines. I mean, how much are we being exposed to? Do we have any idea how much is in the viral vaccines, like yellow fever, measles, mumps vaccines? Do the regulators have an idea from the manufacturers, how much DNA there is?'

Dr. Loewer replied: "I have no idea. Nobody that I know has mentioned it." Dr. Becky Sheets from CBER confirmed the suspicions of many when she responded. "I think that the vast majority of licensed vaccines, U.S. licensed vaccines, have not been tested for residual DNA. The few that have been tested are the ones that have been licensed in the last few years, including varicella and Hepatitis A."

She then added: "**I wanted to respond to an earlier question regarding how purified are live viral vaccines [like MMR] – [the answer is] minimally purified."**

These presentations made some of the experts most uneasy. Dr. Desrosiers stated: "I don't worry so much about the agents that one can test for. I worry about the agents that you can't test for, that you don't know about." Dr. Greenberg agreed, He said he was: "worried also about the agents that aren't known." He continued: "**There are still countless thousands of undiscovered viruses, proteins, and similar particles. We have only identified a very small part of the microbial world – and we can only test for those we have identified. Thus the vaccine cultures could contain many unknown particles."** Another doctor said: "As time goes on, of course, new viruses are discovered and new problems arise. The foamy virus has been [recently] identified as one that we should be really sure is absent from these vaccines."

The Chairman of the Workshop then asked Dr. Maxine Linial: "Maxine, does anybody know if vaccines have been checked for foamy virus contamination?"

She replied: "As far as I know, no."

"You mean nobody has looked or as far as you know?"

She responded; "I don't know. There are very few reagents. I mean, there are reagents for the so-called human or chimp foamy virus, but as far as 1 know, there are no good antibody reagents." In other words, they could not tell if the vaccines contained foamy viruses. ("Reagents" are antibodies to known virus particles.)

The experts voiced other concerns. "And I'll be honest and say that I'm surprised that primary African green monkey kid-

doi: 10.1588/medver.2008.05.00197

ney cells continue to be used, and I'm a little bit disappointed that FDA and whoever is involved had not had a more serious effort to move away from primary African green monkey kidneys. We all know that there are a number of neurodegenerative conditions and other conditions where viral causes have been suspected for years and no viral agent identified. Maybe they're caused by viruses, but maybe they're not."

Another doctor said: "We need to consider again some of the issues of residual DNA. Is it oncogenic? We had a lot of experience with chicken leucosis viruses in chick embryo cells beginning back in 1960. And the thing about them is they are not easy to detect because they don't produce any pathogenic effect."

An unnamed participant added: "I have to express some bewilderment [at this talk of dangerous contamination], simply because, as I mentioned last night, the vero cell, which under many conditions is neoplastic [tumor-causing], has been licensed for the production of IPV and OPV [the common polio vaccines] in the United States, Thailand, Belgium and France." The current polio vaccines thus run the risk of having oncogenes in them. Again this was news to me. I had no idea that the polio vaccine might be grown on such cells.

Dr. Rosenberg added unreassuringly: "When one uses neoplastic cells as substrates for vaccine development, one can inadvertently get virus to virus, or virus to cellular particle, interactions that could have unknown biological consequences."

Dr. Tom Broker said we had to be concerned about 'papilloma virus infections' in the vaccine … "One of the more remarkable facts of this family of diseases is that since 1980 more people have died of HPV disease than have died of AIDS."

Dr. Phil Minor, from the UK National Institute of Biological Standards and Control, told of another disaster. "Hepatitis B was transmitted by yellow fever vaccine back in the 1940s. The hepatitis B actually came from the stabilizers of the albumin that was actually put in there to keep it stable."

He continued: "For many years, rabies vaccines were produced in mouse brain or sheep brain. They have quite serious consequences, but not necessarily associated with adventitial agents. You can get encephalitis as a result of immune responses to the non-invasive protein." "Influenza is an actuated vaccine. Again, it's not made on SPF eggs, that is, specified pathogen-free eggs. They are avian leukosis virus free, but they are not free of all the other pathogens that you would choose to exclude from the measles vaccine production system."

Dr. Minor, the UK's top vaccine safety officer, then added: "So even today then you have to bear in mind that a large amount of vaccine that's made is made on really quite crude materials, from an adventitious agent point of view. It's not a trivial usage. In fact, when considering what vaccines are actually made on these days, they are quite primitive in some respects."

These warnings were coming from a senior doctor working for the UK government who would ask me at a later meeting not to pass on vaccine information that would alarm parents.

He went on to discuss SV40 and the polio vaccine. "It's a very common polyoma virus of old world monkeys, and particularly rhesus macaques. The difficulty with this was that, when the rhesus macaque monkeys are sacrificed and a primary monkey kidney culture made from him or her, as the case may be, a silent infection is set up. So there is evidence of infection [found] just by looking at the cultures. In fact, these cultures can throw out as much SV40 as they do polio [virus].' 'The problem was that the cell cultures didn't show any sign of having defects, when they were actually infected with SV40."

It seemed that SV40, and its accompanying proteins and genetic codes, would never have got into so many humans if they had not contaminated the vaccine—and that they were only dangerous when moved into a species for which their presence was not natural—such as into humans and into Cynomolgus monkeys.

Dr. Minor continued: "Wild caught monkeys were being used extensively in vaccine production. Up to a half of the cultures would have been thrown away because of adventitious agent contamination, mainly foamy virus, but certainly other things as well."

But, they could not be certain what viruses were present. They could be mistaking SV40 for other viruses. Why? He explained because antibody tests are used to test for its presence—and such tests are not all that accurate. Antibodies don't only react to a specific viral protein. They may 'cross-react' against other things. "What you could also argue is that you are not picking up SV40 specific antibodies at all, and they could be other human polyomas [viruses] like the BK or the JC, and it's cross-reacting antibodies that we're picking up. I think that is still a thing that needs to be resolved."

'The point about this long story which I have just been telling you about SV40 is that SV40 was a problem between 1955 and 1962, and it's now 1999, and we still don't really know what was going on. So if you actually make a mistake, it's really quite serious. It may keep you occupied for the rest of your working life. '

Then Dr. Minor made a still more alarming admission: 'Now the regulatory authorities in the room will be well aware of a large number of other examples of this type which don't actually get published. I think that's not so good. I think this stuff really should be out there in the public literature.

Another UK expert then took the stand. It was Dr. Robertson from NIBSC and, as he explained, "for those of you who don't know, NIBSC is CBER's cousin from across the pond in the U.K." In other words, it was the top UK vaccine safety monitoring body. He started off on a reassuring note: "There is no evidence for any increase in the incidence of childhood cancers since the onset of measles, mumps vaccination." But he then said: "**But, I think, as a scientific community, unless we do something at least for the future, we might be in a very difficult situation to defend certain issues. If I confronted some of the violent ideologically pure Greens in our country, [telling them what we have been discussing here]: I'm sure they would say: "Shut it down because this is unsafe, totally unsafe."**

It was thus that I learnt that our vaccines are a veritable soup, made up not just of viruses that should or should not be there, but also thousands of bits of viruses and of cells, DNA and RNA genetic codes, proteins, enzymes, chemicals and perhaps oncogenes and prions. The vaccine was monitored for the presence of only a very few of these particles and vaccine lots are thrown away only if these are found.

doi: 10.1588/medver.2008.05.00197

In other words, the vaccines we give our children are liquids filled with a host of unknown particles, most of which came from the cells of non-humans: from chickens, monkeys, or even from cancer cells. Truly we do not know what we are doing or what are the long-term consequences. All that is known for sure is that vaccines are a very cheap form of public medicine often provided by governments to assure the public that they really do care for the safety of our children.

I have not mentioned one final addition to the vaccines – the preserving and antibiotic chemicals added to the doses. The manufacturer of a MMR vaccine noted: "The finished product contains the following excipients: sucrose, hydrolyzed gelatin (porcine), sorbitol, monosodium glutamate, sodium phosphate, sodium bicarbonate, potassium phosphate and Medium 199 with Hanks' Salts, Minimum Essential Medium Eagle (MEM), neomycin, phenol red, hydrochloric acid and sodium hydroxide." [12] What these chemicals might do was not discussed at these workshops.

On top of this I knew from government records that vaccines sometimes contain the pork-derived trypsin used to break up monkey cells and other flesh in the vaccine cultures. Also, in the latest version of the Salk vaccine there is a surprisingly large amount of formaldehyde left behind after it has done its work of 'poisoning the viruses' (despite biology teaching us that viruses are not living particles). These workshops omitted all these issues from their consideration.

Today the Salk vaccine is back in use under the brand name IPOL, supposedly in a safer format – and the Sabin is out of use in the West as it is now blamed for causing some polio cases. But IPOL officially "contains maximum 0.02% of formaldehyde per dose." [13] This is 200 parts a million, yet a major Harvard University study on the CDC website reports: "Formaldehyde is a reactive chemical that has been recognized as a human carcinogen. At levels above 0.1 parts per million, the exposure causes a burning sensation in the eyes, nose and throat; nausea; coughing; chest tightness; wheezing; and skin rashes." [14]

This utterly shocked me, coming after learning from these reports that our top government scientists know our children are vaccinated with 'primitive' cocktails of viruses mixed among DNA fragments, chemicals and cellular debris, all potentially highly dangerous—along with many unidentified particles.

Furthermore the transcript of another scientific meeting, this one held at the Institute of Medicine in June 2000, comprised of scientists from the CDC, FDA and vaccine industry, reveals it was called because a CDC scientist, Dr. Thomas Verstraeten, found a statistically significant relationship between mercury in vaccines and several neurological conditions, including possibly autism, which today is seriously affecting very many of our children [15].

The official US Environmental Protection Agency (EPA) safety of exposure standard for mercury is 0.1 microgram per kilogram of body weight per day, or 7 micrograms for a 70-kilogram adult. Yet, "fully vaccinated children receive as much as 237.5 micrograms of mercury from vaccines in doses of up to 25 micrograms each." According to 2003 research, "thimerosal [mercury] in a single vaccine greatly exceeds the EPA adult standard." [16]

Mercury is now being reduced or eliminated from vaccines, and yet, undeniably most of our children seem to have survived multiple doses with these vaccines, including those containing mercury, with no evident damage. How can this be?

My horror at discovering how little is known about the contents of our vaccines, is counterbalanced by my growing admiration for our marvelous immune system. Apparently after vaccination, if we are in a good state of health, it normally is quite capable of neutralizing much of this debris, removing or reducing its great danger.

But this did not explain why top scientists, who believe with every iota of their being in the great danger presented by viruses, who see these as the great enemy, have exposed our children to such dangers, without ever informing their parents of these dangers?

In 2002 further research has found major childhood vaccines contaminated with retroviruses. "The RT-positive vaccines include measles, mumps, and yellow fever vaccines produced by several manufacturers in Europe and the United States. RT activity was detected in the vaccines despite strict manufacturing practices requiring that chick embryos and embryo fibroblasts be derived from closed, specific-pathogen-free chicken flocks. Such chickens are screened for known pathogens." [17]

The authors also stated: "Endogenous retroviral particles are not addressed by current manufacturing guidelines because these particles had not been associated with chick cell-derived vaccines." But this is not so. Their paper admits. "The presence of Avian Leukosis virus (ALV) in chick-cell-derived vaccines is not a new phenomenon; many instances of ALV contamination in yellow fever and measles vaccines have been documented." [18] As far as I am concerned, the "current manufacturing guidelines" should have been adjusted to take account of this.

The research paper continued: "The finding of RT activity in all measles vaccine lots from different manufacturers tested suggests that this occurrence is not sporadic and that vaccine recipients may be universally exposed to these retroviral particles."

So far, however, they had not detected these chicken retroviruses in the children vaccinated. But their results were inconclusive, they admitted. "Confirmation of our molecular results by EAV-specific serologic testing may however be necessary. The lack of evidence of transmission of EAV [Endogenous Avian Virus] to vaccinees is likely due to the presence of defective particles. No infectious EAVs have yet been isolated, nor has a full-length intact EAV provirus been identified. However, our understanding of the EAV family is limited." (They were using PCR—a tool with shortcomings in identifying viruses as described earlier.)

Their final conclusion: "Despite these reassuring data, the presence of avian retroviral particles in chick embryo fibroblast-derived vaccines raises questions about the suitability of primary chicken cell substrates for vaccine production…"

They suggest the measles and other egg-grown vaccines should be grown instead on "immortalized or diploid mammalian cells" but added a caveat: "Since the cell substrate is critical to the attenuation of live vaccine viruses, any change in the cell substrate could have unpredictable effects on the safety and efficacy of the vaccine and should be approached cautiously."

doi: 10.1588/medver.2008.05.00197

It thus seems that the reason why so far little has been done to remove the chicken virus contamination from the MMR and other vaccines—is that there is no known safer way to vaccinate, despite many decades of research, despite governments spending millions of dollars to try to find a safe way to make vaccines. Toxins will accumulate in the body—so what long-term cumulative damage is being caused through the great numbers of vaccines given today?

Measles, mumps and other vaccines continue to be produced on contaminated fertilized bird eggs. WHO, and the national health authorities have quietly, but officially, permitted childhood vaccines to contain "a low level" of viral contamination—simply because they cannot remove it economically.

WHO currently approves as acceptable a level of contamination of 106 to 107 possible viral particles per millilitre for the substrates on which are grown our vaccines. They publicly say this only presents a "theoretical safety concern" but clearly they still are very concerned, as they stated when no journalists were present in these conferences, Vaccines have become very big business since more and more doses per child are stipulated and purchased every year. The estimated revenue from childhood vaccines in the US is now over 2.4 billion dollars a year [19]. But is the contamination in the vaccines damaging the children?

Autism and Attention Deficit Disorder

Today there are reports from parents and doctors of increasing numbers of children falling ill after vaccination and developing Autism or Attention Deficit Disorder. It is reported that this may be due to damage to their cells' mitochondria from toxins accumulating from vaccines. [20] Three-quarters of the autistic children tested in one study had damaged mitochondria.[21]

A now discredited CDC report claimed to prove that vaccines could not possibly cause autism. Both the US and UK governments cited this in defense of their vaccine programs. But the CDC has since been forced to admit to Congress that this report was flawed and inaccurate. It turned out that the first time they processed their statistics for this report, these revealed a significant risk that vaccines had caused these illnesses—but then the authors removed a quarter of the susceptible cases and this move, with other unjustified recalculations, reversed the results.

This was unearthed only after 'in 2005, a group of Senators and Representatives headed by Sen. Joe Lieberman wrote to the NIEHS (an agency of the National Institutes of Health) saying that many parents no longer trusted the CDC to conduct independent minded studies of its own vaccine program. Lieberman et al asked NIEHS to review the CDC's work on the vaccine database and report back with critiques and suggestions.' The NIEHS had come back with a report that was severely critical of the CDC.

In 2007 it was accepted by a US court, and by government experts, that vaccination had played a significant role in making autistic the nine-year-old child Hannah Poling.[22] This major test case opened the door for compensation for many in a fast growing autism epidemic. The US government at first tried to play down the significance of this judgment by saying Hannah's disease was mostly due to a small DNA mutation in her mitochondria—but her mother has the same and has never fallen ill. Hannah also did not fall ill after vaccination until June 20th 2000 when she had 9 vaccines on the same day. It was also accepted by the government that the fits she suffered were a result of these vaccinations, although it took 6 years of illness before they began. It seems the damage done by vaccination can take years to unfold.

On February 21, 2008 the US government made a second concession. In court documents it agreed that Hannah's 'autistic' brain disease was 'caused' by vaccine-induced fever and overstimulation of her immune system. She may have had slight damage to her mitochondria from environmental toxins but she had no symptoms of illness—prior to these 9 vaccines [23].

This finding reminded me of what I had read in the above transcripts. These recorded that many senior doctors were seriously concerned about the amount of contaminating DNA fragment found in the vaccines. It was asked: "What would this contaminating DNA do when it was injected into humans in vaccines? Could it change our own DNA? Could it cause cancers—or autoimmune diseases?" Dr. Rebecca Sheets of CBER, the US laboratory responsible for monitoring vaccine safety, had reported that this DNA contamination could have both "infectivity and tumorigenic potential."

Were these DNA fragments capable of damaging the brains of children, perhaps helping to cause autism? Nothing was said that might alleviate such worries. On the contrary, the specialists had said that this DNA might cause mutations in humans.

Could environmental toxins play a role? They will accumulate alongside vaccine toxins. One of the most common brain abnormalities found in autism is a loss of some of the Purkinje neurons found in the brain. Research shows these neurons are affected by acrylamide, a chemical widely put into our drinking water to help "purify" it [24]. According to Genetics professor Joe Cummins, studies also show that heat and light can turn polyacrylamide, used in commercial herbicides, into acrylamide—and that acrylamide is also found in some fast or junk foods [25]. Children are particularly susceptible to toxins as illustrated by the link of pesticides to childhood polio and to similar diseases in other species, although these toxins could also be contributing to the mental disorders of old age.

However, from all that I have read, it is likely to be the cumulative effect of vaccination that finally overwhelms the children who come down with autism or similar disorders for many parents report their child's illness began within hours or days of a vaccination. From the above transcripts, vaccines are full of many chemicals, toxins and biological particles from different species. These are directly injected into the child's blood and muscles, bypassing most of their immune system. This is a hazard that children are particularly exposed to and both autism and attention deficit disorder begin in early childhood.

Some have treated autistic children with some success by having their blood detoxified and providing regular oxygen-breathing sessions—thus removing some toxic contaminants and assisting the damaged mitochondria—but even this has not led, as far as I know, to a full recovery [26].

I should mention here a consequence of having too many vaccine jabs in the same arm muscle. This can cause paralysis

doi: 10.1588/medver.2008.05.00197

in that arm, a disorder known clinically as 'provocation polio'. This is not linked particularly to the polio vaccine – indicating again no link to this virus. Instead, it is surely clear evidence of the damage that can be done by the accumulation of vaccine toxins?

Then of course there are the cases of epilepsy in children following MMR that started me on this investigation, particularly the now teen-aged brain-damaged son of the courageous John and Jackie Fletcher.

Nevertheless, doctors responsible for public health continue to reassure us on television that our vaccines are proved totally safe and effective, while behind closed doors, and in court, it is now clear that these same experts are saying something else entirely. In private they acknowledge our current vaccines are based on primitive science and have many worrying risk factors. Even the replacement vaccines on the horizon, spun to us as safer, are not proving safe in the laboratory. Up until now, parental concerns have mostly been about the additives put in the vaccines—such as mercury and aluminum salts – but this evidence suggests that the very nature of the vaccine manufacturing process provides the major dangers.

I still had other questions about the usefulness of vaccines. What if other viruses were identified as poorly as was the poliovirus? Could the vaccines made with these be as useless as the polio vaccine? I hoped not. Finally, do our children really need vaccines, when they have for centuries gained life-long immunity to most diseases from natural exposure coupled with good nutrition?

But at this point in my inquiry, before I could find answers to these questions, a major debate occurred at the eminent and ancient Royal Society in London on just how HIV had spread. This was the subject that had enticed me deeper into this investigation. I had to be present.

Summary points

Our common vaccines are produced in incubators containing monkey, chicken or human cells.

The vaccines we inject are filtered from fluids in these incubators.

As certain viruses are wanted in the vaccines, no particles of the same size or smaller can be filtered out.

There thus remain in the common vaccines numerous other viruses, foreign proteins, residual segments of DNA and RNA, toxins, enzymes and possibly prions and oncogenes. It has proved impossible to remove these contaminants. This is well known to the regulatory authorities, greatly concerns many of their experts, but these very serious concerns are not communicated to the public.

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