

# **Plague: One Scientist's Intrepid Search for the Truth About Human Retroviruses and Chronic Fatigue Syndrome (ME/CFS), Autism, and Other Diseases: A Special Interview With Dr. Judy Mikovits**

**JM:** Dr. Joseph Mercola

**DM:** Dr. Judy Mikovits

**JM:** Hi, everyone. This is Dr. Mercola helping you take control of your health. Today we are joined by Dr. Judy Mikovits, who is a scientific researcher, who got into quite a challenge and battle not too long ago, when she did some interesting research that was published in one of the most prestigious journals in the world, *Science*, and stirred up enormous controversy. As a result, she has gone through enormous personal turmoil.

But the title of her book – She wrote a whole book about this, which is called *Plague: One Scientist's Intrepid Search for the Truth About Human Retroviruses and Chronic Fatigue Syndrome (ME/CFS), Autism and Other Diseases*. It's about the XMRV, which is short for xenotropic murine retrovirus. It's like a spy novel thriller. It tells about her story, about how she gets imprisoned. She's just led an enormous life and has gone through enormous personal tribulations as a result of seeking out the truth. She's going to share the story today. I'm not going to talk about it anymore, because Judy's going to explain it firsthand. Thank you and welcome for joining us today, Judy.

**DM:** Thanks, Joe. It's a pleasure to be here. It's a pleasure to be alive, actually. I used to call *Plague* a murder-mystery, but I survived. So now, I think you have to call it a suspense-thriller.

**JM:** Yeah. That's really what it is. I read about 50 books a year. There's no book I've read that comes close to this. It's almost like a non-fiction book – I mean a fiction book, a spy thriller. I used to read more books, but now I'm writing three books, so I'm reading mostly paper. I've probably read more than 1,000 papers this year already.

**DM:** The important thing about it is Kent Heckenlively essentially wrote it. The way we wrote it together, because I write like a scientist – We wrote it using the genre of flashback. He sat and he taped hours and hours of me telling the story as he asked me questions – because he's trained as an attorney – and then he turned that into this suspense-thriller. Interestingly enough, it almost has to read like fiction because of the lawyers it took to put together from Skyhorse to make sure we weren't sued.

**JM:** Well, your book, from an interview perspective, it might be best if we don't follow the formula. But it's a little bit confusing because initially you start with yourself in jail and you don't really understand what the story is.

Let's start at the beginning. Let's talk about XMRV, which is the virus that you believe is contaminating many of the vaccines and is a contributing factor for chronic fatigue syndrome (CFS) and chronic [myalgic encephalopathy] (ME). It's present in a large percentage of the population. Why don't you go about – Describe your history and how you got into retroviruses and how progressive this XMRV identification publication science is.

**DM:** Well, I started with – My mentor and 35-year colleague is Dr. Francis Ruscetti. In 1980, he and Dr. Bernard Poiesz isolated from somebody with leukemia, with an adult T-cell leukemia, the first disease-causing human retrovirus. Prior to that publication, a dogma in science was that human disease-causing retroviruses simply did not exist. I was just out of college. I met Frank in 1983. I had been purifying that virus for studies on that virus in another part of the National Cancer Institute (NCI).

I'm a protein chemist and a purification chemist out of the University of Virginia. I graduated in 1980. I started working for Frank – we still laugh about it – on D-Day, on June 6<sup>th</sup>, 1983. From that day on, my entire life has been dedicated to understanding what retroviruses do to the immune system to cause disease. How are they associated with diseases, and then how to cure them?

I went back in 1999 to lead the lab of anti-viral drug mechanisms, because, basically, my passion is curing these diseases. My Ph.D. thesis actually changed the paradigm, because in the human immunodeficiency virus (HIV), which was because of Frank's discovery of disease-causing human retroviruses, we were able as a scientific community to get on top of what was going on with gay-related immune deficiency, or whatever all the funny names we call that – they're not funny at all, I'm sorry – all the derogatory terms we used to describe the infected people. It's not lost on me that myalgic encephalomyelitis, which is a devastating disease and deadly disease is made to be CFS by our government.

**JM:** Before we go on, why don't we take a step back? I mean you are so solid in the science, but you've got to take this lower for many of the people.

**DM:** Right.

**JM:** Let's start with the retrovirus. HIV is an example of a retrovirus.

**DM:** Right.

**JM:** Which can cascade into the clinical symptoms of acquired immunodeficiency syndrome (AIDS). I think HIV was discovered in like the mid-80s or so. Was that the start of your work?

**DM:** 1982. Correct.

**JM:** Yeah. You have in your book a whole history of that discovery and the credentialization and the honoring with Robert Gallo and some other luminaries in there that you shed some light on. Why don't we talk about retrovirus in that story? And progress up into the even more fascinating story of later on in the year after 2000.

**DM:** Correct. In that story, I walked right in the middle of Frank's lab when we didn't know. We suspected it was a retrovirus because of our knowledge of how they affect the immune system and how they lead to acquired immune deficiencies and cancers from the other family that Frank and Berny had discovered in 1980. We suspected, given the immune dysfunction and how it developed over the course of time. We suspected that [in] the diseases we were seeing in beautiful, healthy young men who came up with Kaposi sarcoma.

Well, Kaposi sarcoma is a disease that I knew to be [in] old men in Italy. The idea is there is the location of a pathogen in a cluster of a pathogen and a disease. That as we age, our immune systems weaken. This is why older people get shingles, because they're stressed and the viruses wake up from a latent or dormant state, and then they infect more cells in the body and make a person sicker and sicker.

Well, you don't just one day get this virus and you're sick. In fact, now we know millions of people have HIV and will never develop AIDS. We do talk about that in the book, because the book ultimately is one of hope that we fix HIV. I can honestly tell you in 1999, when I was running the lab of antiviral drug mechanisms, I did not ever expect we would solve that problem. Now, AIDS patients on antiretroviral therapy are probably healthier, develop fewer cancers, as was published a few years ago, and healthier than most of the rest of the society, HIV-infected people.

**JM:** Yes, indeed. Let's go back again though to, "What is a retrovirus? How does a retrovirus differ from a regular virus?"

**DM:** Okay. Retroviruses are ribonucleic acid (RNA) viruses. We, as humans, have a deoxyribonucleic acid (DNA) genome. Our blueprint is DNA. Retroviruses have an RNA genome, but they also are unique in the RNA family of viruses, where their RNA genome is reverse-transcribed. That is written backwards by an enzyme unique to retroviruses called reverse transcriptase. That enzyme writes the RNA into DNA, and then they have another enzyme called integrase.

Integrase is like a pair of scissors that cuts open your DNA and then inserts the retrovirus, which is only about 8,000 base pairs, a very, very, very small virus, 50 to 100 nanometers on an electron micrograph. It cuts it open. That piece of DNA – it's called a provirus – is in your DNA of your cells forever. Every time your cells replicate, you make more viruses.

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The key is to keep the virus silent. How they cause disease is when you can't keep them silenced, the cells are dividing and you're making more retroviruses. But they can also cause disease by what we call insertional mutagenesis. That's when they cut open the parts of the genome and they insert themselves into your DNA. That happened to be a key tumor suppressor gene or an oncogene, which is now crippled and can actually lead to causing cancer, as in the case of adult T-cell leukemia. Retroviruses are associated with increased cancers.

**JM:** Do these retroviruses infect the germ cells also? In other words, if there are germ cells infected, not only do your own cells continue to be infected continuously, but your progeny will also.

**DM:** That's the very important question. HIV, the answer is no, because the receptor is not on all cells in the human body. But as we know about XMRV, the murine leukemia retrovirus is the mouse-related retroviruses that cause cancer and lots of neurological diseases. Those infect the stem cells. Those affect the stem cells, the egg, the sperm, the cells, every cell in your body. That was one of the big "Oh my God," about our discovery.

**JM:** Okay. Before we go onto XMRV, I just want to tidy up one other component and sort of put these viral insertions into our DNA into proper context. Hasn't this been going on for as long as humans have been around, where the viruses are infecting us?

**DM:** Absolutely.

**JM:** In fact, isn't a large percentage of our DNA not our own, but there as a result of these viral infections?

**DM:** Yes. We have about 10 percent of our genome is retroviral in origin. I say "in origin" because those viruses are crippled. Our DNA methylation machinery, our immune system, it literally cuts them up so they can't make whole viruses. They can't infect other people. They can't become infectious and transmissible. Those are called human endogenous retroviruses.

**JM:** Okay.

**DM:** In fact, part of the hypothesis of how these cause disease is that we know AIDS patients or people with HIV. We know people with human T-lymphotropic virus (HTLV-1), we know people with chronic Lyme disease, other pathogens, where they are sick and have immune dysfunction, actually express their endogenous retroviruses. People with immune dysfunction express endogenous retroviruses. Healthy people do not. It's really important.

**JM:** Okay. Now we can go on to the journey, the true, exciting journey of your process with the XMRV elucidation. Why don't you discuss that and put it in proper context? Pretty much, you can take it over from here, because it's just an amazing story. I just wanted to develop the framework so we can put your story in the proper context.

**DM:** Right. I was actually working for a few cancer companies here in California. I came to California, got married and went back to my passion of making cancer drugs. We were making cancer drugs. 9/11 hit and our company literally went bankrupt, because we don't need to cure cancer if we're worried about everybody dying with a foreign attack like 9/11 on any given day.

The industry here in California, Southern California, in the Carlsbad area, literally collapsed. Our company was bought out by another company in Northern California, which the technology ended up being very, very helpful and can be used to treat these diseases, like autism. Our company was bought out. I was looking for a job. One of my friends in our sailing club – and it's all in the book – one of our friends actually said, "Well, Judy, I know a person. My girlfriend works for a person whose children are really, really sick." He said, "She needs some help." I said, "Sure, Joe. Maybe I'll go talk to her." I gave her a call and basically, that was the first time I ever saw the disease called ME/CFS.

**JM:** Okay.

**DM:** She had a daughter who was severely ill at that time. They came from Connecticut. They moved to California so they could be near her. She ultimately went to Stanford and was healed. This person was looking at a herpes virus known as human herpesvirus 6 (HHV-6). This is a virus that is prominent in people with [Kaposi sarcoma]. I mentioned it at the top of the show – Kaposi sarcoma became associated with HIV and AIDS. That was what was discovered by Dr. Patrick Moore and Dr. Yuan Chang after HIV, that Kaposi sarcoma was actually caused by a herpes virus, then known as Kaposi sarcoma herpes virus. Now, it's HHV-8.

Because the immune system was crippled, you wake up the sleeping herpes viruses. People with autism, ME/CFS and cancers have a lot of infections, chronic infections and chronic active infections, so we often see the Epstein-Barr virus (EBV) associated with outbreaks of ME/CFS. The Epstein-Barr virus, these herpes viruses, which we've also coevolved with for millions of years. It's all about the acquired immune deficiency.

I met this woman — It's in the book — I met her and she introduced me to Dr. Dan Peterson and Annette Whittemore in Incline Village, Nevada, where he had been studying outbreaks of ME/CFS for probably 25 years. I went up there for a summer. He said he had a bank of samples. We went up there. I met all the patients. I interviewed them in great length and basically developed a hypothesis, which had actually been shown before by Elaine Defreitas, Ph.D., another scientist many years earlier.

The book for that, there's a book about her discoveries. I'm sorry. I'll think of the title eventually. But Elaine Defreitas had also isolated retroviruses from patients with ME/CFS. A doctor, who I've never met, named Sidney Grossberg, had isolated retroviruses from at least one patient with ME/CFS. The retroviral hypothesis wasn't new. Everything about it fit.

As I met Dr. Petersen and talked about it, one of the most severely injured patients at that time was Annette Whittemore's daughter, Andrea. Obviously, that summer, I went up there to look at it. It was 2006, summer of 2006. I went up there and I started studying it. This young woman was terribly, terribly ill. That's that.

Annette founded and funded an institute. I helped set up the study just as I would – I used the systems biology approach, because there's a lot of heterogeneity. We know AIDS patients who, as I mentioned earlier, have HIV and will never get AIDS. You can look at Magic Johnson to this day. He doesn't have AIDS. As my Ph.D. committee and I still have my Ph.D. I lost a lot of things, but because I'm still right about Magic Johnson, they can't take away my Ph.D., which they wouldn't anyway. We're still right about all of these.

**JM:** They never take away a degree. They can take away licenses, publications, but they can't take away degrees.

**DM:** Degrees. Yeah. Exactly.

**JM:** History. You graduated. You've earned the credentials.

**DM:** Yeah. Basically, I just called all of my friends. I called Dr. Ruscetti. I interviewed these patients up in Dr. Peterson's office all summer long and took blood, urine, saliva and all kinds of samples so I could isolate that virus, which is what you need to do to show it's associated with a disease. As I met him and I talked to all these patients, one day I got on the phone and Frank was back at the National Institutes of Health (NIH). I'm now in Incline Village, and had been married for a number of years and haven't been working at the NIH.

I called Frank and I said, "Frank, what would you say if I said I'm looking at a 13 year old, an 11 year old and their sisters, and they have shingles." He's like, "Judy, don't waste my time. They'd be AIDS patients." I'm like, "Yeah. That's what I was thinking." I brought him. He happened to have colleagues at the university. We had colleagues at the university in Nevada. This institute was the University of Nevada. I just basically brought all my friends, who were the world's experts in HIV sequencing – All the resources that this disease had never seen before, that ME/CFS had never seen before.

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We had everything that the NCI had, and the world's best electron microscopist, Kunio Nagashima, who is the person who has done the electron micrographs of every family of human retroviruses discovered, which now are three or four. Actually, there's four of them, because there's one that's called human beta retrovirus. They name these viruses according to Greek letters, just based on their electron micrographs and how they look. There's a delta. There are lenti-viruses, HIV. There are gamma retroviruses, the mouse family of viruses. We discovered they're in other animals as well, including humans.

Kunio did the electron microscopy. We worked with Cleveland Clinic, because as I knew from my work in prostate cancer, I used to develop drugs in California. That company that went bankrupt was making prostate cancer drugs not based on retroviruses. But I knew of Bob Silverman's (Ph.D.) work at the Cleveland Clinic, where he and Joe DeRisi, Ph.D., had actually described the patients that got the most aggressive prostate cancers had a defect in the immune system that degrades retroviruses. That defect made them more susceptible and they identified and named pieces and parts. They found in sequences, pieces and parts of this family of mouse retroviruses. They called it xenotropic, because it wasn't in a mouse. It was a sequence pulled from a human, from the human genome.

MLV, murine leukemia virus, because that's what they were by those sequences in the glycosaminoglycans (GAGs) in the envelope, which they only had maybe 10 percent of the genome at the time identified in people. What we did was really critical because we isolated the virus. We isolated it. We worked with Bob Silverman and spent the better part of 2008 and 2009 putting the paper together and proving the retrovirus was infectious and transmissible. It was proving that it wasn't a crippled human endogenous retrovirus, proving it wasn't just an empty circle, proving that these diseases were actually contagious, infectious and transmissible.

To our horror, we learned these could be aerosolized. This was 2011 that we learned that they could be aerosolized. That was really the first nail in my coffin. Pun intended, because the national academy member, John Coffin, Ph.D., who had told Frank Ruscetti, "There is no such thing as human retroviruses. Don't study them," and then made a fortune out of HIV and just did everything he could to destroy me and the patients.

He wrote a patent on the detection of these retroviruses, these pieces and parts as contaminants of the cell cultures, of the cell lines from which we make vaccines. After they destroyed my reputation and career and forced the retraction of our paper from science, John Coffin turned around and wrote a patent on the detection of these viruses in contaminating cell linings and contaminating biologicals in our labs.

**JM:** Yeah. That progressed to a really important highlight that you documented in the book and are really continuing today. It's that these are infecting many biological solutions that are being used clinically today, such as vaccines and other therapies that are given to individuals. Why don't you elaborate on that? Because that definitely is a concern.

**DM:** Yeah. That was really at the heart of the big "Oh my God." When before our paper came out, I learned a lot. The worst I learned in this whole experience is how corrupt scientific journals are. In fact, Frank Ruscetti now calls Science, that prestigious journal, "The National Inquirer," because they literally engineered the whole thing to destroy MEC/FS patients and any association that this virus had with these diseases.

In fact, John Coffin made sure because all of the studies showed that the control population was between 3.75 percent infected, and as much as 6.8 percent infected. When you do a study, there was evidence of infection in 6 percent of the human population. That's 25 million Americans. To put that in context, at the height of HIV/AIDS in 1995, it was 1 million Americans. It would crush our healthcare system if they had to pay for what they caused.

**JM:** Yes, indeed. It's considerable. Why don't you also expand on what happened to you as a result – You mentioned that the head of your publication retracted from Science, but there was a whole variety of other activities that occurred that actually resulted in bankrupting you and winding up in prison for stealing your own lab notes.

**DM:** Right.

**JM:** It's just such an outrageous travesty.

**DM:** Which you wish actually would never happen. Basically, our paper came out on October 8, 2009. It was literally like “the shot heard around the world.” I mean I was on the road every single day. Everywhere I went doctors were like, “She's got it. She's got it. She's got it,” and not just with MEC/FS – with cancer, with leukemia, with lymphoma, with prostate cancer.

When you start looking at the inflammatory events in the acquired immune deficiencies, with autoimmune disease, with Lou Gehrig's disease, the problem became – and you said it at the top of the show – this virus. Well, there's no single virus. There's no HIV. There's a whole family of HIVs. There's an HIV 1. There's an HIV 2. There's a strain A, B, C and D. Why do we do influenza vaccines for this strain de jour or every year? There are strains of viruses. There are families of viruses.

What the government did to make our paper go away – Remember I told you that Joe DeRisi and Bob Silverman didn't isolate the virus. They're not virologists. They're not what Frank and I are. Frank Ruscetti remains, to this day, the only person to have isolated and discovered all three families in human retroviruses, because that's who he is. He's really the father of human disease-causing retroviruses. They only identified like 10 percent of the genome, 10 percent of 8,000 bases. They had maybe 400 bases of the GAG.

We actually sequenced almost 1,000 of the envelope. That's the outer layer of the virus that interacts with the cell. We had gotten out of Andrea Whittemore and several of the ME patients a big chunk of the sequence. But what was starting to become apparent, because what Bob Silverman did in his lab, a Ph.D. named Jyotishman Dasgupta. J. Dasgupta sequenced and created a clone, because Bob and Joe identified the sequences in prostate cancer.

I believe the paper was published in 2005 or 2006, probably late 2005, because I was still working on cancer at the time and with that company. They only had sequences. So because the

technologies are such that we can take enzymes in the laboratory and clone it – and these are very good enzymes, we call it genome walking – you just start and you literally build a virus.

What we didn't learn until 2011, probably around May or June of 2011, when we went to a leukemia virus meeting in Belgium. Bob Silverman apologized to Frank and said, "Joy," – we used to call him Joy – "Joy is really sorry about all this." Frank's like, "What is he sorry about?" Well, they didn't sequence the virus from a single patient. They cloned it. They didn't do the sequencing from a single patient. Because think about the prostate biopsy. How many cells do you get? You don't get enough DNA to do that. They actually took a number of patients and sequenced the patients, so their infectious molecular clone was actually like a Frankenstein virus.

But then when we sent him samples to sequence the virus – Note that Bob Silverman and the company, Abbott, had the patent on XMRV. I always put an S on it because it's an entire family of viruses. When they sequenced the virus, the ones we isolated weren't the XMRV that they had pieced together.

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In fact, it was probably 50 percent different sequence. He actually tried three times and kept asking for more and more samples, so we'd send back more and more samples. His clone never came to our lab. We sent him the real nature isolate of the virus. He was the one who told us, "It's XMRV. It's this sequence. It's 90 percent similar."

But we did something called a phylogenetic tree to show there were enough differences, to show that it wasn't a contaminant, that it actually came from the people. The viruses were just different enough in the prostate cancer patients, in the CFS cancer patients. We could understand how they could cause both diseases, which were inflammatory in nature.

We'd only learned in July what they had done. They had actually said the virus we isolated was their sequence, was XMRV. We call it VP-62, because it's the clone from a Patient No. 62. And it wasn't 62. It was 62, 63 or 64. God only knows. They did this and said, "Our virus was their virus, and our virus never was."

In fact, Dr. Harvey Alter and Dr. Shyh-Ching Lo – Shyh-Ching Lo was at the U.S. Food and Drug Agency (FDA). I believe Harvey Alter was, at that time, an Albert Lasker Award winner, so a very distinguished beautiful scientist, lovely man and doctor. When Shyh-Ching Lo saw our paper, unbeknownst to – I've never met Shyh-Ching Lo until this happened.

He had been working on HIV and he had a whole bunch of samples that he had frozen and never thawed from the early '80s. Because these were women, these were women who were almost as sick as the men. Remember at that time, HIV only infected gay men. You didn't have to worry about women and children until Ryan White, right? And Arthur Ashe, with the blood supply contaminated.

The second that we published this paper, we started working to get a diagnostic test for the blood supply to show it wasn't contaminated, which, in fact, it was. Later that year, the last talk I ever gave was on a science paper that came out in October 22<sup>nd</sup> of 2011, the last talk I ever gave to scientists.

But as a professional – I don't know what to say. Anyway, that talk was basically a debate for the evidence that there were actually human retroviruses of the XMRV family that weren't VP62. We could show in the original paper that there was evidence of murine leukemia viruses, gamma retroviruses that were infectious and transmissible, just as we had said. There was evidence in that paper.

John Coffin was on the other end of that debate. He said it was all a recombination event. He published a paper in 2013 saying, "Oh yeah. When we worked with mouse cells, they expressed a lot of pieces and parts of retroviruses. This just happened to happen in the laboratory. That's what we had isolated. What we were looking at were just contaminants in the laboratory. It's all a lab contaminant. You can all go home. You're safe."

**JM:** Let's stop here. Because that's the response to what I believe was a massive concern you created in the professional community. Because here is a newly identified retrovirus that no one was screening for.

**DM:** Right.

**JM:** It was potentially contaminating 10 percent of the human blood supply.

**DM:** Correct.

**JM:** It could be transferred. Why don't you elaborate on that? Because you skipped over it and that was huge, because that was like in all the media, wasn't it?

**DM:** Yeah. It was in all the media in fact. My mom was watching Good Morning America one morning. Across the bottom of the ticker tape said, "XMRV all a hoax," as if they took care of Dr. Mikovits. She called me up. I said, "Sorry, Ma."

It was horrible. We started to realize our fake news and fake science. Because what we had actually done in the blood supply – That study was a three-year study. What we were charged to do in that study was develop a test for the blood supply that was simple and efficient. We usually do that based on polymerase chain reaction, or PCR.

But this virus, because of its DNA methylation sites in the promoter in the start site, it was so tightly latent if methylated that in a short PCR reaction, you couldn't see it. You had to use a reagent called 5-azacytidine which is that reagent that we use in cancer therapy that we developed

in my company back in 2005, 2004, 2003, 2002 or 2001, before the company went bankrupt. It's still a drug that we use to treat patients. Of course, we're using it in the patient communities today successfully. Anyway, the blood supply was contaminated, but we didn't have a diagnostic test.

**JM:** Is it still today contaminated?

**DM:** Well, no. Probably not.

**JM:** Why is that?

**DM:** Because at the same time that we were doing all of this, a company called Cerus in Northern California called me up and said, "We believe that we have a way to decontaminate that virus." I worked with Cerus and the lovely people there from 2009. When the paper came out, there were a lot of things. My team of maybe three people did a tremendous amount of work. Unfortunately, all of us lost our professional lives over it.

At any rate, Cerus had a test. I gave a talk at a blood supply meeting at the New York Academy of Sciences in March of 2011. I believe it was March 29<sup>th</sup>, 2011. I gave a talk that said, "Okay. Here's the bad news. But here's the good news. We can decontaminate it." I believe from that date, they have decontaminated it. They gave huge grants and huge financial awards to Mike Busch and others.

Mike Busch is the Ph.D. who heads the Blood Systems Research Institute (BSRI) in San Francisco, which is really the head of blood supply. Simone A. Glynn, who headed The National Heart, Lung and Blood Institute (NHLBI), also knew the blood supply was contaminated. Both of those two have financially gained a great deal from Cerus, the company, whose stocks exploded. I don't believe it's contaminated anymore.

**JM:** And they're still doing that today? That decontamination procedure?

**DM:** Yes. Correct. The good news about it, as I showed in that talk – I can pull up those slides and make sure everybody sees them. But as I said in that talk, which, by the way, Ian Lipkin, Dr. Lipkin – you know him well. He's the great debunker. He never did anything scientifically himself, but he covered up a lot of real science of mine and Dr. Andy Wakefield's and others down the line. He also made a fortune doing so.

They were paid quite handsomely by Tony Fauci, head of The National Institute of Allergy and Infectious Disease (NIAID), to make this go away, a lot like they did with taking out the proper patients in Andrew Wakefield's study. But at any rate, the blood supply was contaminated. Cerus cleaned it up.

**JM:** But why aren't they using this decontamination procedure –

**DM:** Well, they are.

**JM:** – for the vaccines and other biologicals?

**DM:** Because if they decontaminate – Number one, they don't have to.

**JM:** Okay. That's true.

**DM:** There is no liability. There is no law. If they inactivate, for instance, measles, mumps, rubella (MMR) is three RNA viruses, so you can't get the XMRV out of MMR. One of the most important

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**JM:** That's interesting.

**DM:** Yeah. Because you'll decontaminate the whole vaccine.

**JM:** It won't work.

**DM:** It won't work. Exactly. It won't work. It will no longer be a vaccine. One of the studies that I gave a talk on June 2<sup>nd</sup>, 2011. One of the reasons I never got to testify is I have photographic memory. But I know dates and names. When the government shut me down, and I never had a single hearing and I lost all my constitutional rights, it was because my lawyers just laughed. They're like, "You got it. They're not ever going to let you testify." That's how I ended up in bankruptcy.

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I said, "I'm going to the hearing and I'm taking my 101 witnesses, which will say everything I did was right and true, including John Coffin and others." Very interesting, the legal aspect of this story, but the scientific aspect to the story is the Cerus method cleans up Ebola. It cleans up Zika. It cleans up essentially any RNA viruses, including HIV and all three human retroviruses. The Cerus system is extremely valuable to cleaning up the blood supply. But they cannot clean up the vaccines for another reason.

If they do, they prove Andy Wakefield right. They prove me right. They prove that they've got 25 million Americans, who they have to support for the rest of their lives and pay damages, probably not unlike the damages that that gentleman just got for glyphosate-causing cancers. Two-hundred million dollars for –

**JM:** That's 289 million dollars for Dewayne Johnson, who had a lymphoma, non-Hodgkin's lymphoma, I believe.

**DM:** Correct.

**JM:** As a result of that, he only got like less than 10 percent, because Trump changed the law so that attorney's fees were not deductible, so they have to pay taxes on what the attorneys got, which makes no sense.

**DM:** Yeah. It's crazy. But at any rate, I know that as far as attorney's fees, because I'm in tax court right now. Because they told my husband, who makes a grand total of 45,000 dollars a year we had to pay tens of thousands of dollars of back taxes going to 2015. I'm not sure on what. I have been deducting my legal fees to try to get my constitutional rights back, my right to work and my right to tell this story. They said your legal problems are not tax-deductible. We'll stay in court, I guarantee you, because I'm not paying a penny.

**JM:** Why don't you elaborate a bit on the attempts to destroy you personally by throwing you in jail? And essentially bankrupting you and decriminalizing you? You've really taken up enormous personal hit for your efforts in this area.

**DM:** Well, I was fired on September 29<sup>th</sup>, 2011 for insolence and insubordination. Why I was fired by Annette Whittemore was because they have been selling what was an unvalidated blood test. Remember, we were all trying to develop tests for the blood supply. I just told you that Cerus test is worth a whole lot of money. That Cerus procedure for decontaminating. Well, the Whittemores have been selling a test based on our work. The director of their for-profit commercial laboratory was using federal grant funds to do that work, which is misappropriation of federal funds.

I found that out in, basically, August of 2011, and wrote him off the grant. I said he's no longer on the grants. I told the bosses. The bosses happened to be really good friends of Harry Reid. When the science paper came out, when I gave that talk, October 22<sup>nd</sup>, 2011, basically the Whittemores came after me, because it said they had committed Medicare fraud and every other kind of fraud with this invalidated test and their misappropriation of federal funds.

The Whittemores basically fired me immediately in an attempt, because they were going to – September 29<sup>th</sup> is important because the end of the fiscal year is September 30<sup>th</sup> for the government. They were trying to get this scientist, Vince Lombardi, Ph.D. They were trying to get him to recreate the work while I was out of town and say I was a lunatic. That he'd been doing the work all along, and he hadn't misappropriated any of the funds.

They fired me on September 29<sup>th</sup> and immediately locked down the entire university to me or my staff. One of my staff – I just went home because I was on my way to Ireland to give a talk. I said, "Oh, she'll get over it." The insolence and insubordination was I had refused a direct order to misappropriate federal funds, basically. I wasn't ever going to do that. The insolence I'm trying to learn not to do, because it probably would have gone a lot better for me if I didn't say, "Fuck you," at the same time.

**JM:** Yeah. I thought it was surprising because it seems like you had the commitment to high integrity when all those around you didn't. And then later on, towards the end of the book, you mentioned that you were a Christian. I suspect that that moral value foundation you had was partly responsible. Because so many scientists would not have done what you've done.

**DM:** I know.

**JM:** They would just go with the flow and not endure any personal hardships.

**DM:** Right. It's interesting in that regard, it was only Dr. Ruscetti and me who stood up. He didn't lose his economic life. That's a little bit of a story. What the head of the NHLBI did was put a gun to my head on Labor Day weekend of 2011, when they were trying to get this paper published in Time. It was actually not October 22<sup>nd</sup>. It was September 22<sup>nd</sup>, 2011 when I gave that last talk. They had three weeks to get a Science paper out there that would destroy my reputation in the MEC/FS community, because that was on every other of their meetings.

What Michael Busch did was have Dr. Simone Glynn on the phone and Dr. Harold Varmus on the phone and said, "Frank Ruscetti signs that paper, or he and Sandy Ruscetti will be fired immediately for fraud. They will lose their entire retirement, which is 75 years." That was one of the few times I sobbed. I was sitting in my bed screaming, in Oxnard. My husband was like, "What's going on?"

It was 6:00 in the morning. They were on the east coast and they needed to get this paper published fast by Science. I called them up and I said, "Frank, they agreed to change the language. They agreed to change the title. They agreed it wasn't an association study. All it was was we didn't have a diagnostic test. Either way, I die because the Whittemores are going to kill me because they're selling the diagnostic test." But Frank signed the paper. They didn't change the wording. It came out as scientific fraud. It is pure fraud. Here, the head of the NHLBI published pure fraud in the journal Science, just as two years later, Ian Lipkin published pure fraud.

**JM:** Going through all these hardships, how has that changed your personal impression of the field of science?

**DM:** Wow. I can't tell you. It's destroyed my – It is fake news. It is so corrupt, everything about it.

**JM:** Is this for most of it? Aren't there some people who have integrity? Like you, who are committed? I'm thinking of a lot of the Asians, who really don't have an ulterior motive in many cases. They're just pure, hard, diligent researchers.

**DM:** Yeah. It's not them. It's the top of the line. It's Dr. Tony Fauci. We're only allowed to make incremental advances. When we make a discovery of this nature, which is akin to Galileo – When you make a discovery of this nature, it changes all of everything. They're a bunch of little boys.

This is misogyny, so much worse than anything of Weinstein or any of that crap. This is a bunch of little boys, like Gallo, fighting over who gets credit, while the world dies, while you kill an entire continent.

No. It's not the little guys. In fact, that's why we do marketing. That's why I do shows like this. Because we're going to teach doctors. When doctors understand the science – and they're coming around a lot – because the science is there. Nothing about our paper, except the sequence of the virus, has ever been wrong. We knew that in the beginning.

**JM:** What's the fundamental principles that you'd like to share your positions or patients who are infected with this virus?

**DM:** Families with this virus.

**JM:** And many of them have autistic children, which you believe is a contributing factor in many of these cases also. What are the pearls of wisdom that you're sharing with them that can really make a dramatic change in the course of their illness?

**DM:** Right. Well, certainly the pearls of wisdom is stop the vaccinations. Until 2011, not inconsequentially, we didn't vaccinate AIDS patients the same way. It's in the book. You don't vaccinate the immune-compromised. Why do I walk in a cancer ward and say, "Get your flu shots," to the patients? You don't vaccinate.

By definition, you have an immune system that doesn't work. Why would you vaccinate them? Why would you vaccinate somebody under 3 years old, who has an immune and detox systems that don't work? This was the key of the RNA cell story, of Andy Wakefield's, of the Thompson fraudulent paper.

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All they had to do was wait for black boys to be 3 years old, and they would have been able to degrade the RNA virus. That's criminal. That's beyond comprehension. Sorry I'm shouting. Because it's like are you kidding me?

**JM:** You're not shouting. Someone needs to spread this information.

**DM:** When I saw that paper, I mean, when I saw Brian Hooker's paper, I didn't see it until within months of when our book came out. That was August of 2014, the first time I knew there was any connection. And then it wasn't until I met Mike Hugo, a lawyer, an attorney who you'd love to talk to, who knows all who helped write the laws for vaccine court. It wasn't until he came to me and my book. He saw the book and said, "You have no idea what you stepped into." We didn't work on vaccines. The pearls of wisdom is this DNA methylation. Keep the violent virus silent. We don't care what they call it. Human endogenous retrovirus? We don't care. Keep them silent.

**JM:** How do you silence them? You mentioned DNA methylation. The implication is that many people, through either their diet or genetics, have an inability to optimally methylate.

**DM:** Well, the more retroviruses you see, DNA methylation has to silence them. You can't inject them in a vaccine. We're injecting millions of pieces in parts of retroviruses in every vaccine, by definition. I have an ongoing cancer lawsuit, a [inaudible 51:41] lawsuit that says vaccines cause childhood cancer, a lymphoma. By these same mechanisms, you've destroyed the DNA methylation machinery's ability. You've simply overwhelmed it. You've overwhelmed the substrate. You've overwhelmed the ability to methylate.

Every time those viruses integrate, you have a better chance at insertional mutagenesis. Don't expose anybody to human retroviruses. Use anti-retroviral therapy, which are natural products, which you know from your friend Dr. Dietrich Klinghardt. There are lots of natural products. We published on them. Those are actually therapy for these kids.

**JM:** Yeah. He's actually the person who enlightened me as to your work. He also mentioned that he treats a lot of autism patients also. He mentioned the use of a drug that's called "suramin," which is actually an ancient drug that's been used to treat river blindness, I believe.

**DM:** Interesting. And sleeping sickness. That drug, the reason I knew it, when AIDS patients were dying – they were dropping like flies – my colleagues pulled it off the shelf. It was one of the first anti-retroviral therapies for HIV. But you know what? They developed newer ones. We developed newer ones because it worked best against the murine leukemia virus-related viruses, against the mouse retroviruses, the gamma retroviruses. It was what it works best on.

Naviaux did a small clinical trial. These kids got their life back. They started talking again. What did Bayer or Monsanto do? They stopped the trial and they took the drug away from everyone. Now, you can't get it. Here's a drug that within the 30 years we used to use too much of a dose, the chemistry of it. Now, 30 years later, we know how to use it. We could help millions of people get over this. But when you show cure, you know cause. That's it. I would be right. We would be right. Millions of people would get their lives back, and it's all about money.

**JM:** Yeah. But isn't it because of the age of the drug? Doesn't its patent expire, and can't other companies create it as a generic?

**DM:** Well, nobody will if you're going to be destroyed. I mean Bob Naviaux won't do the work, because as he said, "I don't want to see my mugshot on the cover of Science." The jailing, the arrest. Basically, I refused to throw everything away. I refused to cover it up. I refused to retract it, so did Max, my lab, Cathy, others, and Dr. Ruscetti. We refused. Frank Ruscetti was forced into retirement.

They said we did something wrong. The journal said they lost confidence. The editor retracted it, forced the retraction of it. Again, nothing was wrong with it but the sequence. If I hadn't been jailed and see what the Whittemores, why I was jailed, in addition to misappropriating federal funds, what were they going to do to the Whittemores? They were going to take the drugs away from their child, which had saved her life.

**JM:** Yeah.

**DM:** And she's got her drugs at 25 dollars a month. We don't realize this, but the AIDS patients can act up. If you have a human retrovirus, the pharmacists, nobody can ask. All you have to use is the ninth revision of the international classification of diseases (ICD-9) code or -10 code, which we were using with other professionals who said other human retrovirus. You could get your therapy at 25 dollars a month.

**JM:** If you have insurance.

**DM:** Medicare has the paperwork.

**JM:** Medicare has the paperwork.

**DM:** That's right.

**JM:** Wow.

**DM:** Medicare has the paperwork.

**JM:** But not suramin. These would be other anti-retrovirals.

**DM:** No. Not suramin. Other anti-retrovirals. But the other ones are fabulously helpful in these cases.

**JM:** But suramin is better?

**DM:** Suramin is better for the gamma retroviruses, yes.

**JM:** Okay. How many other retroviruses are there? Aside from the HIV and XMRV.

**DM:** There's the HTLV-1 family, human T-cell leukemia lymphoma virus family. There are five or six of them, but only one is known to cause severe disease. That's HTLV-1 that Frank and Berny isolated. There is one called human beta retrovirus that's associated with primary biliary cirrhosis. That's the work of Andy Mason in Canada. A lot of our patients with MEC/FS also have family members with primary biliary cirrhosis. There are at least four families of human retroviruses that we know: The delta, the lenti, the beta and the gamma.

**JM:** What do you perceive as being the most significant threat? Which one of those? It's the XMRV, beyond the shadow of a doubt. How much more of an impact do you think XMRV has than HIV?

**DM:** Well, right now HIV is contained. But because XMRV integrates more specifically in the hotspots, it integrates every immune-response gene, one that's called tet methylcytosine dioxygenase 2 (TET2), which we could talk about later. It's very, very, very important in methylation machinery and diseases of methylation, and TET2. They use murine leukemia viruses as vectors for gene therapy and the new cancer therapy, called chimeric antigen receptor (CAR) T-cell therapy. The louder I scream, "You're kidding me. You're causing cancer?"

**JM:** They do it all the time.

**DM:** That's how we're learning TET2. You could look at the cover of Time magazine where there's a young woman with cancer and she got so sick. What did she get? MEC/FS.

The same thing with Gardasil, you know, with all of these things. We're causing these diseases and we know it because we're using these as vectors. We don't need infectious viruses. That's one thing that's really important to know. You don't need infectious viruses if you're injecting the provirus, or the pieces and parts. You inject it, past your immunity, past your gut, past RNA cell, past everything. You bypass the immune system. They don't need to be infectious.

All you need is an envelope to cause that prostate cancer. That's a paper that was published. In most of our studies, all we detected was the envelope. The envelope alone causes vasculitis. Think of the strokes. Think of the heart diseases. Another gamma retrovirus was isolated by Gary Owens. Not isolated but identified by Gary Owens in another family member, from mice, associated with cardiovascular disease. This is just a nightmare that we've unleashed in our environment.

**JM:** Let's talk about the prevalence. I believe, in the chronic fatigue population, it was very high. It's 30 or 40 percent or even more. And then what is your best guess at this point on the prevalence in the general population?

**DM:** Six to 7 percent, 7 or 8 percent. Yeah. Because the studies in the general population, of course, family members have more of it. True MEC/FS is not what you call "tired people from the phone book." Everybody asked me, "Why did you say you didn't find it in the Lipkin study?" What I learned only last year was that the only real cohort in the Lipkin study, the Montoya cohort, was taken out of the study.

The study was stopped by Tony Fauci, who said, "Stop wasting the money." It was stopped because we found the only true cohort. I knew it was the Montoya cohort, because we had been treating several of them and they were getting well. By that, I mean in the instance by Dr. Peterson. I'm a Ph.D. and I don't treat.

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**JM:** Sure. The treatment consisted of primarily anti-retroviral therapies. Are there any other supportive interventions?

**DM:** Lots of supportive therapies as we've learned in HIV. If we look at the HIV literature – Naltrexone, some of the other things that help – You have to silence the other pathogens, so taking care of mycoplasma, taking care of mold, absolutely supporting the gut microbiome.

We learned with AIDS patients and cancer patients that if they don't have the diversity in the microbiome, just like in autism, just like in MEC/FS, it's because the retrovirus is causing the leaky gut, if you will, which is what, of course, the inflammation Andy Wakefield saw. The non-specific inflammation was the retroviruses. If you keep the gut healthy, you can heal. The primary is the diversity in the microbiome, or you can't respond to the drugs.

**JM:** Really, we could go on for hours, but you have to have a transportation issue coming up. We'll let you go now. I want to thank you for sharing with us all this exciting information, and the bravery you've exhibited all these years and the penalties you've encountered as a result of your perseverance. Thanks for everything you've done.

**DM:** You're welcome. There's a lot of hope. That's what we end the show with. There are therapies. We could fix this tomorrow. That's why I do it. I've had so many blessings from this the last eight years. I can't even tell you.

**JM:** That's great. Alright. It was great talking to you.

**DM:** Thanks, Joe.

*[END]*