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Basil WAINWRIGHT
Ozone Therapy

See also : Ozone Therapy

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http://www.whale.to/v/oxygen.html

Oxygen Therapy - The Empire Strikes Back

Basil Wainwright has categorically invented a process to purify whole donor blood in the bag, and his invention of polyatomic aphaeresis ozone technology has created the most significant breakthrough in the treatment of AIDS and degenerative diseases found anywhere in the world to date. -- Richard Bernhard (Polyatomic Apheresis Inc.)

GN = Gary Null // SAT = Sue Ann Taylor// BW = Basil Wainwright

GN: This program is Natural Living, and I'm Gary Null of WBAI, a public-supported radio station.

Tonight I'll be talking to Sue Ann Taylor, an investigative journalist, and Basil Wainwright, a scientist and inventor of a particular ozone machine. Why is he in the Metropolitan Correction Center in Miami—the jail? Why hasn't he had a trial in three years? Why does the government not want his story to get out? More on that later.

Is HIV the cause of AIDS?

HIV has never been found in any scientific studies anywhere in the world to be the sole cause of AIDS. No one can prove it. It is speculation. It is political and economic.

The man who said in 1982 that HIV was the probable cause of AIDS (instantly it became dogma that it was)—did he also inform the public he was the primary beneficiary of a test for HIV, that he owns the patent and that millions of dollars have gone to him and his associates? No.

Did the press vigorously explore all the allegations of fraud and corruption? No.

The alternative press did.

We're the ones that brought you that information. They tell you don't challenge orthodoxy. We challenge you not to believe that but rather to believe the experience of those who are the ultimate authorities: the patients who are alive and well, having had the opportunity to

intelligently review the best of both and see what works, and that's what we bring you.

You've heard previously from patients successfully treated using non-toxic therapies, you've heard from the physicians who've treated them. Now today, in this segment, Sue Ann Taylor, investigative journalist, welcome to our program.

SAT: Hello!

GN: Sue Ann, you recently returned from the Philippines where you observed and recorded the effects of ozone treatment and a polyatomic aphaeresis therapy on a group of HIV-positive and AIDS patients. Would you give us the background of this and why it is so important that the people hear this story?

SAT: Well, I was researching for a documentary that I had been working on, called Living Proof—People Walking Away From AIDS Healthy, because I was finding more and more evidence that there were things that were in fact working for some AIDS cases and/or HIV-positive cases. In doing that research I came upon ozone therapy, and I also came upon all the controversy that surrounds it. So when I was offered the opportunity to actually watch a trial happen first hand, in the Philippines, I jumped at the chance.

I went to the Philippines and I was stunned with what I saw, because I was expecting the entire thing to take place in a sort of wing of a hospital, or something that looked a little bit more like what I expected medicine to look like. It was actually a clinic that was set up rather ad hoc to provide space to do justice to this trial, so I started out a little on the skeptical side, not knowing what I was getting into.

There were nineteen HIV-positive people there, five of whom had full-blown AIDS. Over the course of about three weeks I watched the patients, or participants as they preferred to be called—six of whom were in pretty bad shape—watched them go through some pretty remarkable transformations and I saw it happen before my very own eyes. There's no amount of journalists or medical people who can tell me that what I saw I didn't see. I saw people who were unable to walk, be able to walk again. I saw people who were very, very ill just get considerably better and all of the treatment was cut short by a raid by the government.

The Philippine government came in and shut down the entire operation, after only about one-third of the prescribed amount of treatment had been accomplished. It was a trial, so remember there wasn't an absolute number on how much treatment they were going to need —that was part of what they were there to establish—but one-third of what they were expecting would be close to the magic number of hours on the machine, had been accomplished, and in that period of time remarkable reversals in these people's conditions were evident.

GN: Alright, describe the clinic.

SAT: The [Cebu] clinic itself was an upscale home in the Philippines. An upscale home in the Philippines looks kind of like an upscale home in America. It was a very large home, two storey, fairly large lot, and behind the home they had built grass huts, but it wasn't as crude as that makes it sound; it really had a vacation resort feel to it. It was not really unacceptable—and by Philippines standards it was just fine. I had an opportunity to go to one of the Philippines hospitals, and the cleanliness within the clinic beat the cleanliness of the

Philippines hospitals that I visited.

All the Filipino staff were excellent—I would pit their training against any training of any nursing staff anywhere in the world. But some of the things we take for granted, like refrigeration and insect control, they just have really come to learn to live without those things. The clinic was, by our own standards, crude, but it was, you know, acceptable also. The materials were all new; it's just, again, it didn't meet my preliminary expectations.

GN: Who was working there?

SAT: There was a group from Australia—the clinic was actually owned by a couple named Bob and Rosanna Graham. The second group was PAI, the polyatomic aphaeresis unit group, and all they did was supply the equipment and people to train the Philippine staff to use the equipment; and the third group was the Philippine staff which consisted of two Philippine doctors and eleven nurses.

GN: And who were the patients?

SAT: The patients were twenty Australians, nineteen with HIV, one with multiple cancers.

GN: Is it illegal to enter the Philippines if you are an HIV-positive person?

SAT: My understanding is that it is illegal to go in HIV-positive, but Immigration does not question you; there is no testing and I don't know that the patients realized that it was illegal.

GN: Could you tell us of some the success stories of the patients?

SAT: The most dramatic success story was a man named Paul. Paul is 42 years old, he had been HIV-positive since 1984, has full-blown AIDS and Kaposi's sarcoma. The lesions, the Kaposi's sarcoma lesions on the bottom of his feet, were so great when he left for the Philippines that he couldn't walk. He was in slippers for over a year. He could not wear shoes. He gingerly walked on the outsides of his feet and it was very difficult for him to get around at all.

After eleven hours of treatment on the machine, Paul's lesions went away. He was able to wear leather shoes and, most importantly to Paul, he was off morphine for the first time in four years. Prior to his going to the Philippines, the cancer hospital had told him that he had reached the maximum amount of radiation that he could receive safely, and he would have to simply continue to increase his morphine to deal with his increasing pain.

Paul believed that he had experienced just miraculous treatment, that in eleven hours of that treatment the lesions on his feet went away and he could wear shoes and walk normally again.

GN: Describe what the treatment consisted of.

SAT: The polyatomic aphaeresis looks like the following: a patient sits in a chair that looks a little like a dentist's chair. It's a comfortable chair. There are intravenous needles inserted in both of their arms, the blood coming out of the left arm is pulled through a pump that is in synch with the heart rate, and a circuit of blood is created between the left arm coming out

and the right arm coming in. The blood goes through a series of tubes, goes down through a cascade tube where it is met with ozone under pressure, and at that point that's where the viral kill happens.

The blood continues down through an escape tube, through a filter, back into their right arm. What you see visually is the blood exiting the left arm is a very black color; it is black. It goes down through this cascade tube, which is a wide bore cascade tube, about an inch in diameter, and it goes back into the arm, the right arm, a bright cherry-red color. It comes out looking alarmingly different—this is with the HIV patients—alarmingly different from what you would expect.

Now, the first patient I saw on the machine was a person without HIV. She was a normal prison who had an infected foot, and her blood came out looking like yours and mine would, and went back in only slightly differently than it came out; so what I witnessed was that the HIV patients' blood was considerably blacker than a normal person's and went back considerably lighter. That's, in a nutshell, what it is.

GN: Alright, now, what other parts of the therapy were included with this ozone treatment, and how does this ozone treatment differ from, let's say, one which would be done in New York where you pull out about, oh, a half pint of blood, ozonate it and put it back in the arm over a fifteen-to twenty-minute period?

SAT: I've never witnessed any of the other treatments that you're talking about. The only two ozone treatments that I've seen actually operate are the polyatomic aphaeresis and, using the same equipment, a process called rectal insufflation where the ozone gas is put in through a catheter into the rectum, which becomes an ozone enema, so to speak. Those two were used at the clinic and in conjunction with one another. Some of the participants in the study had experienced the treatment that you are talking about and had some success with it. What they believe from their own experience, what they told me, is that it was the difference between a Volkswagen and a Rolls Royce, from what they felt with the treatment, you're talking about getting in New York versus what they got in the Philippines.

GN: So, it was far more productive in the Philippines?

SAT: Correct.

GN: Now, what happened to these twenty patients? Where are they at now and have there been any additional protocols for these people to follow?

SAT: The turning point of everything was on March 19. The youngest participant was a 23-year-old woman named Jodi, and she had full-blown AIDS. It was a real tragedy because she really kind of represented all of our daughters, and her courage was phenomenal. She died in the clinic and that's when things started to tumble very quickly.

She died from a series of complications. I'm not a medical expert but I believe she received two insufflations too close together and her body had trouble coping with the amount of ozone that she had taken in. She also received those against doctor's orders, so I guess it would have to be chalked up to human error rather than anything to do with the equipment. She received the ozone via the rectal insufflation.

GN: You mean the Philippine doctors had suggested she not take those?

SAT: Actually, it was the American doctor, the expert on the ozone, who had said this girl shouldn't have another until she recovers a little bit. She had remarkable success on the equipment, though. When I first arrived I was afraid Jodi was not going to make it until the equipment arrived. There were all kinds of customs hang-ups that prevented the equipment from getting into the country and getting set up on time. So the patients arrived ahead of the equipment, which was a real management error because it just added too much stress to the patients.

GN: By the way, who raided the clinic?

SAT: It was raided by the Department of Immigration.

GN: Was there any evidence the FDA had been involved in the raid?

SAT: There wasn't any evidence that the FDA had been involved; but what I was told was that the story really got underway when Australia's version of A Current Affair did a scathing story on the clinic and what the patients were about to experience, just as they were getting on the plane. I was told by another journalist in Australia whom I trust, that ACA is the one who went in to the Department of Immigration and tipped them off. I was also told that the producers were directed by their upper management to do a 'chuck job' on the ozone therapy. And no matter what they were told, no matter how much positive information they were given, it never aired; and I watched this happen time after time.

GN: So, in other words, there was a gross bias in the media, from your interpretation, to prevent positive stories about the success of ozone from getting back to the general population?

SAT: It's not even a question of interpretation. I watched it happen; I watched the participants give interviews; I gave interviews myself. We would turn on the TV and we would be shocked at what actually would show up. Paul, whom I was telling you about, would tell his entire story; he would show his feet, all of those things; and he made a comment in one of the television interviews where he said,

"After I got going I could just feel it in my heart that this was working."

That little snippet is the only thing that they would use, and then they would cut to the doctor saying, "Well, you know, there's a certain amount of mind over matter," and all that kind of stuff. So they were completely dismissing the science of it and trying to make it sound like their improvements were all in their own minds; but fifteen patients had improved T-cell counts, one as high as a 70-percent increase.

GN: I would like to shift gears, now, and bring in another individual to share a different perspective on this, and one that we haven't talked about in the past. Basil Wainwright, welcome to our program.

BW: Thank you very much, Gary. I must congratulate you on running a super program, and a very courageous one too.

GN: Basil, you are now incarcerated in Florida?

BW: That's right, so if any of your listeners hear any background effects, I must apologize for that. I am currently incarcerated down here in Miami.

GN: From what I understand, you are a scientist and you are the inventor of this polyatomic machine, this ozone machine, and that you have been incarcerated without trial for three years. Is that correct?

BW: Yes, I'm now well into my third year without trial and some seven violations of my basic human rights.

GN: What are those violations?

BW: Well, there's the 4th amendment and the 5th amendment, the 6th amendment has been violated, and the 8th, and 14th. So . . .

GN: What has happened to your attorney filing proper motions to get a fair and speedy trial? That's one of the constitutional provisions for people who are incarcerated. I haven't heard of people waiting three years except this particular political detainee who was here in New York, the IRA supporter who was held for some seven years.

BW: That is absolutely right. Well, it all started that—really, I suppose I should give you and your listeners a brief synopsis. I was working with Dr. Viebahn in Germany and I was brought into this project along with Medizone, and then got very much involved in the process. And I was somewhat intrigued to find that nobody had really done any specific testing i.e., looking at the cytotoxic levels or, that is, the concentration of ozone, looking at the specific atomic structures of that, and also the contacting time; so there were an awful lot of areas that particularly interested me. I worked with the University of Medicine and Dentistry and also the Mt. Sinai Hospital with Dr. Weinburg and with Dr. Michael Carpendale, and started to get very, very involved in the course.

It was very evident there were some phenomenal results being seen in the AIDS area and I started to look at it more in-depth. There were sever-al controversies going on as to whether it was a function of free radical reaction or oxidation—but of course both of those functions occur extensively—and also this ionization; and I wanted to determine the specific parameters of that, because when people refer to ozone you might just as well refer to a vehicle being involved in a collision because you're not really defining the atomic structure of ozone which can be multifold. There can be many aggregate combinations of molecules which can have very specifically different responses, and I wanted to determine this.

GN: Since 1985 you have been working with some German doctors including Dr. Viebahn that you talked about. Now, you had a way of deter-mining that the ozone being used back then was not as effective as the way you could create a better ozone; they were using O2 but you also saw O3 and O4.

BW: Yes.

GN: Now tell us about what you found with what you created concerning viral inactivation.

BW: Well, of course, I think it's very important for your listeners to know that the reason scientists refer to retroviruses' inactivation as opposed to being killed is because normal micro-organisms have metabolic mechanisms, whereas a retrovirus could almost be considered a piece of genet-ic material drifting around in the bloodstream. And so, it's rather difficult to kill a non-living thing, hence scientists refer to inactivation. We looked at these various techniques and procedures, including the study which we did with Biotest in Miami.

We determined that the German process worked but wouldn't be dramatically effective because they were not treating high enough volumes of blood. We wanted to see that once some-one had been taken back to HIV negative using polyatomic oxygen or ozone, they indeed remained negative. I think there is only one case that actually went back to positive so that was rather unique because all the doctors were saying, Okay, so what? You get somebody to negative, but in a couple of months' time they're going to go back to positive.

Well, that was proven not to be the case, which I think even surprised the Germans. And it might well be that the immune system kicks back in, and when we say negative we're looking at nucleic acid response or PCR work to deter-mine that; but certainly the patients were not going back to positive—that was very interesting.

So we thought, okay, if these patients are going to use auto-hemotherapy which you referred to earlier, Gary, where you take out half a pint of blood, treat it with ozone, and then re-infuse it back into the patient, that was taking typically eleven months, of course combined with a very rigid nutritional control as well. But using that process it was very evident that it's like chipping away at a mountain with an ice pick when you're looking at the view of this pandemic facing mankind; and it became very apparent in 1987 that the best way to go was with dialysis or a dialysis-type procedure. So I worked with dialysis equipment and in fact filed my first dialysis patents using ozone in 1988.

However, using ordinary dialysis equipment which is a hollow fibre membrane, we discovered there was too much homolysis occurring as a result of that; also, the thing that we refer to as mechanical shear. The very fact of pumping the blood round outside the body can cause all sorts of trauma to cells—there are thermal reactions, there are pressure zones, the pumping head itself can actually crush cells—so we had to look at a number of factors. And then, when we did more research, we found that O4 in particular had some very unique responses.

It has a phenomenal amount of electrons; as a matter of interest, in O4 you have 40 electrons, and that makes it a very powerful negative ionizing platform drifting around in your bloodstream. It was also far more stable than O3 which again was completely the reverse of what everyone was projecting.

It was very evident that O3 had a better oxidative effect, and that was very effective in eliminating infected cells, but O4 had the ability because of its ionization to break down, we believe, the RNA, and of course uracil, which is a very important sugar combination—the 5-carbon sugar in the virus RNA—was actually being broken down. Well, when we actually achieved this, we did our first study down at Biotest Laboratories here in Miami—hence my incarceration down here.

We did this study and as far as I know, for the first time in history, using aphaeresis we successfully converted HIV-positive to negative, and we could do this time and time again

using PCR. That's the reason we came here, actually, because Biotest Laboratories in conjunction with Miami University had this latest state-of-the-art equipment; and from that very moment, the FDA witch hunt started.

We tried to keep a relatively low profile but of course the word soon got around the system, and then one night I came home and the SWAT team descended, guns drawn, and eight of them sort of crashed in the front door. I was arrested and charged with practicing medicine without a license, which of course is complete nonsense. But the SWAT team, instead of looking for anything that might indeed have been relevant to my practicing medicine without a license, all they did was dig out all my patent specifications, technical data and intellectual mechanisms.

So they came with a very specific directive from the FDA, to seize all my intellectual property rights. From there I was thrown into prison. Eventually I had charges from the FDA which boil down to sending and selling ozone generators from inter-state—interstate trading laws, etc. Unfortunately, a couple of months after I was in prison, it was discovered that I had a very severe heart condition. In fact, if this radio show had been yesterday I doubt very much if I could have done it. It's progressed to a point now where I'm collapsing and having blackouts and stuff, but still hanging in there. I've just recently done a technical paper.

Well, from that episode this series of things went on, and as you quite rightly say—and I certainly won't bore your listeners with the phenomenal list of violations against me—I'm now into my third year; come October I'll be commencing my fourth year without any trial. I've just recently been appointed some new attorney who is hopeful of trying to get me bond. In fact, Dr. Michael Carpendale and other doctors very courageously were flying into Florida for a major hearing in front of the judge.

Everything was scheduled but at the very last moment the FDA stepped in again and the hearing was cancelled, and my research team had to frantically phone around and cancel everyone coming in. I did get bond, much to the amazement of the FDA, which was really an administrative error, and I was out for a few months. During that time we managed to get a number of aphaeresis systems put together and out into studies.

Most of the studies which were conducted in and around the United States of course have already had the FDA SWAT teams descend on them, close them down and seize equipment. And we've had things reported like seven P24-antigen negatives, a couple of PCR negatives, but at no time have we ever been able to get into the real completion of a study. In every case, I think the doctors would tell you they've seen absolutely dramatic results, and that's not from me because this information has been fed back to us.

They are very concerned that they're prevented from pursuing this, since the process does really show some pretty dramatic potential. The only way we are ever going to get this out there is if the AIDS groups get up and demand polyatomic aphaeresis so that we can get these studies up and running. We've got a group working with two very, very prominent stars who hope to apply sufficient pressure to be able to get this achieved.

During our studies we managed to determine that protein aspects in the blood, in other words, high protein levels would have an inhibiting effect on the success of the procedure. The normal procedure that has been adopted by the Germans, i.e., introducing antioxidants—which is very popular over here too—was also negating the effects of ozone.

Everyone in the United States can enjoy the wonderful efficacy of ozone; there is nothing against the law that you can't use it, and there are several ways of applying it. In our protocols, prior to treatment the patients will be receiving no antioxidants so that we get the maximum oxidative effect from the O3 component which we use 2 percent by weight, and 6 percent by weight of O4; and we have a pretty rigid nutritional program too.

GN: So let me see if I can put this into perspective. Basil Wainwright is now in a jail in Florida for developing a special form of ozone machine that puts an O4 into the body. There are a number of patients, estimated as high as 200, who have undergone this polyatomic aphaeresis treatment so far. These have included HIV, environmental and degenerative diseases, approximately thirty persons with AIDS. Of those thirty people, all show dramatic improvement, seven are P24-antigen negative, and two are PCR negative, meaning there is no HIV viral DNA found in their bodies, and the P24 means there is no active replication—all replication of the HIV is done.

For the effort, you have been put in prison without trial. When the doctors did come to testify on your behalf, the FDA saw that the hearings were postponed. On a technical glitch you were allowed out, and then when they found out the technical glitch they put you back in; and you have been in violation of several due processes including a speedy trial. Why weren't the other doctors put on trial or arrested? Why were you the only person involved in this?

BW: Well, because I was the primary motivating force and the one that indeed held the patents in the United States office for polyatomic aphaeresis, which is quite unique. The only reason that I can think of is that I enjoyed the energy in working in the process. We have a wonderful team, they're all terribly dedicated to helping people, and we would like to think we are motivated in attempting to do God's work.

Sue Ann and everyone else who have been involved have expressed love and compassion to all these patients, so it's been more than just a research project for me. I thoroughly enjoyed working with the patients. Of course, the pharmaceutical companies cannot file a patent on ozone, and you can only file patents on the intellectual property rights or the designs of the delivery mechanisms to the patient; and being as we have those, I suppose the best thing they could do and their only reaction was to throw me in prison, hoping that it would completely bring everything to a halt. It hasn't done that.

There's been a dedicated bunch of people out there; they definitely need more support. We would certainly provide equipment for AIDS groups on the United States if they would only get up and demand poly-atomic aphaeresis and demand studies which they could do. We would be only too pleased to provide the equipment and, indeed, a number of very top doctors are prepared to come along and offer their services and monitor and support these test studies.

You undoubtedly know that Ed McCabe has been doing some tremendous work in trying to open people's horizons on these issues, and Ed of course has been very supportive and he's become very supportive because he's been seeing the successes. Unfortunately, a lot of the doctors that have been involved in the research have had terrible pressure applied to them; in fact, their very jobs and livelihoods have been threatened by the FDA, which is very, very sad. I must admit when I first came to the States in 1987 on this particular project, the people told me this sort of thing existed in the United States and I thought it was all James Bond stuff, but of course I soon learnt to the contrary that indeed it was fact, and here I am.

All I want to do in fact is get out of here and research and work for the betterment of mankind and just simply conduct God's work. In fact, I've just finished two scientific papers while I've been incarcerated, and I've been working very, very hard. A lot of good things: we've got a Middle East project which has been confirmed which will be up and running very soon; the Canadian government with NATO of course, as you've probably read, indicated great interest.

Well, they've actually approached us and we've had talks with them about structuring a very special process which we've developed. It's from the blood bag to the patient, so for the armed forces, if they get injured out in the field and they're having delivery or transfusion of a unit of blood, there's this process we've developed which goes in series or in line with the IV to the patient, which actually purifies the blood with polyatomic structures before it goes into the wounded soldier.

So, despite my various bouts of illnesses and I must admit it's been a bit touch and go at times, I've certainly been keeping myself active, Gary, and as I've said I've certainly been following your program with intent and your work with intent, and I hope your listeners out there realize what a super person you are and how you're projecting this work and making this awareness to the people out there.

GN: Thank you Basil Wainwright, and let's hope for the best and that justice will be served by being fair and by seeing that your machine is tested. I want to thank you also for being on today, Sue Ann Taylor. Any closing thought for us?

SAT: Well, the closing thought that I have is, after the raid the mayor of the city gave the Department of Health the opportunity that if they wanted the study to continue, he would make space available in a hospital and make the patients the guests of the city. For them to turn down that offer and shut it down without looking at the patients' records, of which the blood tests all showed improvements, or watching a demonstration— that's when I started to believe that there was some level of a conspiracy happening right before my eyes, because they had made up their minds in the face of an offer from the mayor and said let's finish it right here.

The only other point that I wanted to make, that I found alarming, is that people who have the ability to make those decisions were that closed-minded about the patients' pleas that this could save our lives, that they shut the door in their faces.

GN: Sue Ann Taylor, you learned a good lesson, and that lesson unfortunately is a bitter one: not always do the patients count when there is a political or economic agenda ahead of their interest. Thank you very much.

I am Gary Null, the program is Natural Living.

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http://www.independent.co.uk/life-style/health-and-families/health-news/quack-doctor-faces-jail-for-discredited-aids-cure-634163.html

Quack doctor faces jail for discredited Aids 'cure'

by
Declan Walsh in Nairobi

26 October 2000

Basil Earle Wainwright claims to have found a cure for Aids and wants to share it with the suffering people of Kenya, his adopted country. But first the Briton must concentrate on helping himself as he faces the possibility of a lengthy stretch in jail for promoting his discredited cure.

Basil Earle Wainwright claims to have found a cure for Aids and wants to share it with the suffering people of Kenya, his adopted country. But first the Briton must concentrate on helping himself as he faces the possibility of a lengthy stretch in jail for promoting his discredited cure.

On Tuesday Mr Wainwright, also known as Dr Stone, was charged in a Nairobi court with making "polyatomic oxygen" - a concoction he claims has cured over 500 Aids victims but which has been outlawed by Kenyan health authorities and slammed by the medical establishment.

Former patients said that the unorthodox treatment - which involves pumping ozone directly into the patient's bloodstream - was expensive, costing up to £2,000 per case, traumatic, and ultimately it was ineffective.

The 66-year-old Wiltshire man has denied all charges and was released on a bond of 200,000 shillings (£1,730) on Tuesday. Yesterday he doggedly defended his controversial treatment. "They call me a crook and a conman but that is the greatest compliment I could receive," he told The Independent from his office in a Nairobi suburb, "because it puts me in the same category as Galileo and Edison".

If found guilty he faces a maximum sentence of seven years or deportation. But jail is nothing new to Mr Wainwright, who has already spent several years in prison over the last two decades.

In 1983 he was convicted of cheating the television personality Noel Edmonds of £70,000 over a deal involving a speedboat engine. Then in 1990 he was imprisoned in the United States for four years on charges of fraudulently holding himself out as a doctor. He fled the US in the early Nineties while still on probation. A US embassy spokesman in Nairobi confirmed last night that he was wanted by both the Federal Bureau of Investigation and local police authorities in Florida.

In 1996 Wainwright was enthusiastically welcomed to Kenya for promising his "polyatomic apheresis" treatment would provide a solution where conventional medicine had failed. An estimated 750,000 Kenyans have died of Aids and at least two million more are carrying the HIV virus.

Mr Wainwright's work won public support from certain church figures and even from Winnie Madikizela, former wife of South Africa's former president Nelson Mandela. But reports soon filtered out of failed treatment of patients who had paid massive bills to the Briton, known as "Dr Roderick Stone".

Mildred Wambui brought her HIV-infected daughter, Brenda, to Mr Wainwright in May 1997. For five months the five-year-old girl received daily treatments of ozone at a cost of 7,000 shillings (£60) per week. But the uncomfortable treatment - administered using an oxygen mask, needles and an tube inserted in the anus - failed to turn the disease around and Brenda died the following November.

"Brenda was terrified during every session but we were ready to try anything," said Mrs Wambui. The treatment was her husband's idea. "He was convinced it would work We wanted to take it as a family but we didn't have the money. So we chose our daughter because she was the most precious."

Mr Wambui died of Aids last year.

After receiving a series of similar complaints, the Kenyan health authorities deemed Mr Wainwright's operation illegal in 1998. They have made a number of attempts to close it down. Last January police and health officials raided a private clinic operated by Mr Wainwright in an affluent neighbourhood of the coastal town of Mombasa. The "doctor" had fled but they found a 10-bed hospital ward and medical equipment. A nurse confirmed to police that patients had been receiving the outlawed treatment. Months later the police caught up with Mr Wainwright and arrested him.

"I don't want to say anything except that we are very happy he is in court," said Dr Richard Muga, the director of Kenya's medical service yesterday.

But Mr Wainwright stands by his controversial treatment. Speaking from his home in the suburb of Karen, he said he had 519 "fully documented and proven" cases of HIV reversal thanks to polyatomic apheresis treatment.

"If they want to get rid of me they should test it and disprove it. I am the only person in the world who holds a patent for the inactivation of HIV," he said, quoting the patent number as 6027688.

The court case was being brought by senior Kenyan medical figures who were "quaking at the knees" out of fear that his treatment would be seen to be successful, he said. He refused to elaborate any further, excusing himself because he had "important studies to do". The website of his Kenyan company, Polyatomic Apheresis Research Limited, (www.polyo2.org) offers further information. It says that polyatomic apheresis not only reverses HIV but also cures a wide range of life-threatening conditions including cancer, tumours, hepatitis, tuberculosis multiple sclerosis and pneumonia.

According to the biographical information, Mr Wainwright was nominated for the Nobel Peace Prize for Medicine three times. He worked as a research consultant for the General Motors, Ford and Chrysler car companies in the US during the Seventies. In the late Eighties he worked in the Ministry of Defence, developing an electrical "stinger" device for riot-control use by the Royal Ulster Constabulary in Northern Ireland.

A British embassy spokesman in Nairobi could not comment on whether Mr Wainwright had worked for the MoD. However, he said the embassy wished to speak to the man about a second passport he is understood to hold in the name of Roderick Edward Stone. "We have

asked Mr Wainwright for clarification on who exactly he is. He has yet to come back to us," said the spokesman.

A report in the Daily Nation newspaper last week said Mr Wainwright had claimed that the second passport was provided by MI5 to help him escape the US, where his life was under threat.

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http://www.miaminewtimes.com/1993-03-31/news/king-con-returns/full/
Mar 31 1993

King Con Returns

A bumbling justice system has allowed self-proclaimed AIDS miracle worker Basil Wainwright to continue peddling hope -- with harrowing results

By

Steven Almond

Adam Von Furstenberg remembers seeing the hypodermic needle taped to his right arm pop upright like a jack-in-the-box and knowing he was in big trouble. The machine that was supposed to be converting his blood from HIV-positive to HIV-negative had malfunctioned. Rather than returning ozone-treated blood to his body, the device was pumping ozone gas directly into his bloodstream, and the technician in charge of the procedure was nowhere to be found. For a full five seconds the bubble of gas pushed through his system, depriving his heart of blood and causing him to go into cardiac arrest. His right lung partially collapsed.

Von Furstenberg, a 32-year-old nurse from Melbourne, was one of twenty terminally ill Australians who had paid $3000 for what was billed as a life-saving four-week trip to an innovative clinic on the Philippine island of Cebu. What the patients had in fact endured since their arrival in late February, he says, was an unmitigated nightmare: The conditions at the "clinic", a small two-story home replete with cockroaches and open sewage drains, were squalid. The no-protein diet amounted to starvation by degrees. Most chilling, the machinery intended to cleanse patients' blood was so unsanitary that those who suffered from cancer were worried they might contract AIDS from HIV-tainted equipment. The meager staff didn't appear troubled about using unsterile tubing to transport blood into cancer patients. The magical ozone gas, clients were assured, would kill both ailments, anyhow.

"We lived in a place worse than the gutter," Von Furstenberg recalls. "A concentration camp, we took to calling it."

The day after his heart failure, Von Furstenberg watched a cancer patient hobble into the so-called insufflation room, where ozone was piped into her rectum. The woman, 22-year-old Jody Baker, returned looking ashen, her belly distended. Less than three hours later, she was dead.

The next day Von Furstenberg fled the Cebu facility, returning to Melbourne. Within a week news of the unlicensed clinic, which was subsequently raided by Philippines authorities, hit the Australian papers. A scandal was born. Headlines roared. TV anchors spoke in grisly detail.

On this side of the Pacific the fiasco would have been just another macabre tale for the tabloids, were it not for one strange circumstance: The man who invented the machine that came close to killing Adam Von Furstenberg, the man who championed the process that apparently killed Jody Baker, was none other than South Florida's con man supreme: Basil Earle Wainwright.

It was Wainwright who reportedly leased clinic operators two of his "Polyatomic Apheresis" machines for a total of $45,000. Wainwright who sent technicians to the Cebu clinic. Wainwright who advised that the terminally ill Australians be put on a no-protein diet. Wainwright who personally guaranteed a doubting Von Furstenberg that he would return from the Philippines HIV-negative. "I called him three times before I left for Cebu," Von Furstenberg says. "He kept pressuring me to buy one of his insufflation units for $2500." A unit similar to the one used on Jody Baker before she died.

The same Wainwright who in the past year has lured a handful of South Floridians into bankrolling his operations, all while he was under federal indictment. The same Wainwright who currently boasts to reporters of running seven "successful studies" with the devices.

The same Basil Wainwright profiled in an April 1992 New Times cover story. When that article was published, the 59-year-old British citizen appeared destined to spend the next dozen years in prison. Jailed in Florida in 1990 on state charges of practicing medicine without a license, he was also awaiting trial on federal fraud charges stemming from his sale of machines he claimed could cure AIDS.

But Wainwright, a chubby, blue-eyed inventor chased from England after being found guilty of 22 counts of fraud, theft, and forgery in that country, has always said he loves America for its "encouragement of the entrepreneurial spirit." Where else can an ex-con allegedly launch yet another fraud from his prison cell?

That's precisely what Wainwright seems to have done last year. While serving his six-year state prison sentence at Florida City's South Florida Reception Center, he organized a new company called Polyatomic Apheresis Inc. (PAI), and enlisted J. Claybrook Lewis, a softspoken disciple, as his partner. Even as Wainwright consented to plead guilty to the state charges in exchange for his freedom, he and Lewis had laid the groundwork for PAI. Within weeks of his release this past May, he was back researching and marketing his revamped cure for AIDS.

And he had plenty of help. Not only was Wainwright aided by a cultish following of ozone believers, but also by a progression of federal judges who unwittingly fostered his activities by freeing him on a $100,000 bond and consenting to delay his federal fraud trial for nearly two years.

PAI's chief product was the Polyatomic Apheresis machine, which, according to the company's literature, uses ozone to cure AIDS. Unlike Wainwright's previous invention (the one that inspired the first round of charges), which piped ozone through a tube and into

people's rectums, the new machine was designed to draw blood from patients, treat it with ozone, and then pump it back into the bloodstream.

Both processes rely on the curative value of ozone. The bluish gas, composed of three oxygen atoms bonded together, is best known as the atmosphere's fast-decaying protective layer. The Food and Drug Administration forbids its use on humans in the United States, unless the user is granted a waiver. In Europe, however, clinicians used ozone for decades to treat a variety of ailments ranging from yeast infections to cancer. Despite tomes of anecdotal evidence, the gas has yet to be scientifically proven as a cure for anything. In fact, because ozone is a powerful killer of cells, it can prove lethal in high dosages.

In recent years holistic practitioners in the States have looked to ozone as a miracle cure for the AIDS epidemic. They, along with greedy investors, have proved easy pickings for Wainwright's messiah charm and uncanny way with technobabble.

"Basil hit the ground running, that's for sure," says former associate Bill Delp. "He wasn't a month out of prison and he had his whole plan mapped out." That plan included setting up a storefront in a Pompano Beach strip mall, where Wainwright oversaw the assembly of his new apheresis machines and coordinated the leasing and sale of units to clinics worldwide. More important, he and Claybrook Lewis set about recruiting investors for the venture, which was detailed in slick promotional literature.

Delp, an electrical engineer specializing in health technology, met Wainwright through an investor and was quickly enlisted as an unpaid technician. Three weeks after meeting Wainwright, Delp traveled to Nassau to install apheresis machines at a Bahamian holistic health-care center. Over the next six months he would return to Nassau seven times and travel with Wainwright to Nevada to set up machines there. As in his former days as a self-proclaimed automotive guru, Wainwright apparently used the cash drawn from investors to fuel a lavish, jet-setting lifestyle. "We always went first class," Delp says.

Though Delp personally oversaw only a few installations, he says Wainwright claimed to have sent his machinery to more than a dozen clinics around the world, including San Francisco, Toronto, and Juarez, Mexico.

Wainwright himself refuses to speak with New Times "until the paper is prepared to tell the truth," as one PAI official phrased it. Lewis declined comment for the same reason. But his wife Mary, PAI's secretary and treasurer, insists that both her husband and Wainwright "are guilty of nothing," and affirms that PAI is involved in the Cebu clinic. "Some pretty good things are happening," Mary Lewis notes, "according to the press we get from over there."

Delp says he agreed to help Wainwright because he was compelled by the possibility that ozone could cure AIDS. "That was before I saw the lab results on Basil's patients." By October, data from the blood tests commissioned by Wainwright had made Delp leery. "I started to press Basil for more patent information, more technical, medical, and financial data," Delp says. "I started getting calls from investors who wanted to know if this guy was for real. Basil's response was always, 'We've got to fast-track this thing. I've no time for these questions!'"

Most unsettling of all was the inventor's religious manipulation of his minions. "Basil was constantly playing this whole martyr role," Delp recalls. "Clay Lewis and the others

worshipped the guy. It reminded me of this cult stuff out in Waco. It was always, 'Basil's doing God's work.' The investors were like churchgoers as well. The 'God Squad,' I called them. And Basil knew his part by heart. I actually saw him make two investors feel guilty for taking time from his mission of saving lives to ask for something as mundane as financial information."

In December Delp began urging investors to ask for their money back. Wainwright countered by accusing his technician of trying to steal his technology. "He claimed I was a murderer, that I was running a clinic myself. He even threatened my girlfriend," Delp says.

At least one investor did lose faith in Wainwright. Susan Hilton, a senior citizen from Delray Beach, remembers being given a grand tour of PAI's tiny headquarters last November. The way Lewis and Wainwright told it, her $100,000 investment would return a healthy profit and earn her a place in Heaven. "I thought of the machines being sent to Africa," Hilton says. "After I wrote the check, I felt I'd done this wonderful thing. Basil said, 'God bless you, you've just helped humanity so much.' I must have had a big sign on my forehead that read SUCKER."

Hilton says she was told her money had purchased stock worth four percent of PAI. But over the next two months, PAI officials ignored her demands for more detailed financial statements. In February, at Delp's urging, she went to state authorities. On Friday, March 12, police arrested Wainwright and Lewis on four counts apiece, including grand theft and fraudulent sale of unregistered securities. Though still awaiting his fraud trial in federal court, Wainwright posted bail in state court and again went free. Lewis also posted bail and is currently residing at his home in Plantation.

Despite the arrests, many PAI followers maintain Wainwright and Lewis are the victims of a nefarious conspiracy hatched by the big pharmaceutical companies to keep ozone from assuming its rightful place as a wonder drug. "I think Wainwright's honestly trying to help people," says William Cave, a Fort Lauderdale man who manufactures a machine he says destroys cancerous tumors with microwave heat. "Why don't you write an expose about the American Medical Association?"

Billy Austin, who loaned $10,000 to PAI's cause this past June, agrees. "I've used Wainwright's machine on animals and I've seen the results with my own eyes," the South Miami veterinarian insists. "But of course I'm concerned I won't get my money back. Especially if the government doesn't let Wainwight do his work."

One Coral Gables pediatrician, who says he routinely uses ozone to treat patients, believes Wainwright's most recent arrest is merely evidence of the powerful forces aligned against him. The doctor, who put $50,000 into PAI in July, threatened to sue New Times if his name appeared in print.

Delp contends investors aren't the only ones Wainwright has duped. "Basil used to laugh about how he has fooled the doctors into believing he has a bad heart," Delp recalls. "He got himself appointed a free lawyer in his [federal] fraud case by claiming he was indigent. Indigent? He's got a $50,000 speedboat that costs $300 a month just to dock."

Indeed, the federal government is proving to be Wainwright's choicest rube. Thanks to judicial dawdling, the defendant, who was indicted two years ago, has yet to stand trial on the

ten pending federal counts of fraud, which could send him to prison for twenty years. Wainwright's voluminous court record shows that he has been granted half a dozen new trial dates by four different judges. On two ocassions, federal prosecutors endorsed the delays. The case has languished for so long that one of the government's primary witnesses has suffered a relapse of her cancer, which caused yet another postponement.

Faced with the embarrassment of Wainwright's most recent arrest, federal prosecutors did finally haul him back into custody at a March 19 bond revocation hearing. The inventor sighed pitifully as Assistant U.S. Attorney Debra Herzog presented Judge Ursula Ungaro-Benages with credit card records that documented his trips to California, Texas, Nassau, and beyond. Loyal investors might have been intrigued to learn that the American Express bills averaged more than $10,000 per month. Wainwright, Herzog added, was more than two years overdue on his tourist visa.

Unrepentant, the tortured inventor insisted that he never knew his bond agreement forbade him to leave South Florida A a stance he maintained even after Herzog showed him his very own signature on a form detailing the conditions of his bond.

"I don't think there's much of an argument," Ungaro-Benages said. "The defendant's claim of ignorance in this situation is a little disingenuous. Bond is remanded."

Wainwright made one last, gasping effort: "I swear to you, your honor! I swear by Almighty God I had no idea!"

The judge cast him a tired look, as she banished him to the custody of the Bureau of Prisons. "I would suggest to you, sir, that this is willful ignorance," she announced. "If it's ignorance at all.

Apparatus and method for inactivation of human immunodeficiency virus
United States Patent 6027688

[PDF]

Wainwright, Basil E. (Fort Lauderdale, FL)

An apparatus and method for the inactivation of infectious organisms such as viruses, bacteria, fungi and protozoa, and especially for the inactivation of human immunodeficiency virus in proteinaceous material such as blood and blood products, without adversely affecting the normal physiological activity of the material, by contacting it for a time interval of only about 16 seconds with an ozone-oxygen mixture having an ozone concentration of only about 27 μ/ml. The apparatus includes a gas-liquid contact apparatus through which the material and ozone-oxygen mixture flow in contacting, counter-current relationship, and an ozone generator which produces an ozone-oxygen mixture having a resonant frequency of about 7.83 Hz. The apparatus and method of the invention provide precise control of the concentration of ozone and the contact time between the material to be treated and the ozone-oxygen mixture.

5052382 Apparatus for the controlled generation and administration of ozone October, 1991 Wainwright 128/202.25
4986968 Ozone generator January, 1991 Hirth et al. 422/186.07
4632980 Ozone decontamination of blood and blood products December, 1986 Zee et al. 604/4
4372914 Blood oxygenator February, 1983 Raible 435/2
4314344 Method and apparatus for generating selected gas concentrations February, 1982 Johns et al. 204/176
3727612 DIALYSIS METHOD AND APPARATUS April, 1973 Sayers et al. 422/44

FIELD OF THE INVENTION

This invention relates to an apparatus and method for the treatment of blood and blood products to inactivate infectious organisms, such as viruses and bacteria, and especially to inactivate the human immunodeficiency virus (HIV) in human blood and blood products.

BACKGROUND OF THE INVENTION

Infectious diseases which once decimated entire populations are now largely controlled by modern drugs and sanitation methods. One virus, however, has remained elusive to medical science, and is infecting the human population in epidemic proportions. The human immunodeficiency virus (HIV), the etiologic agent of acquired immunodeficiency syndrome (AIDS), once generally regarded as a malady of homosexuals and intravenous drug abusers, has become a threat to all strata of society. In most instances, this virus leads to AIDS, and eventually death. Prior to the present invention, there was no known cure, nor were there any effective treatments for controlling the virus without causing unwanted side effects.

Some scientists believe that HIV may have been introduced into the human population through use of polio vaccines made from the tissue of infectious African green monkeys, many of which have been discovered to be infected with a retrovirus related to HIV. The rapid spread of this disease, however, is generally believed to be transmitted through infected blood and blood products, and through sexual contact. Drug abusers sharing used intravenous needles, persons receiving blood transfusions, and homosexuals and heterosexuals engaging in "unsafe" sexual contact are particularly vulnerable.

Intense efforts are being made to reduce the infectious risk of human blood products, and to control the spread of the virus among the human population.

Most efforts have been directed toward the development of drugs for controlling or killing the virus, but unlike most viruses, HIV becomes part of the genetic code of the cell. In order to kill the virus, it is necessary to destroy the cell. Moreover, the virus changes from individual to individual, and even within one person it can mutate in a matter of hours. This makes it virtually impossible to develop a drug specific to the virus, although some drugs, such as AZT, have shown promising results in neutralizing the virus. Unfortunately, AZT also produces serious side effects in many people because of its toxicity, and its use is therefore limited.

Because of these difficulties, other treatments have been tried or proposed, including thermal inactivation of viruses in blood derivatives, gamma-irradiation, porous membrane filtration,

and solvent/detergent mixtures. However, these methods generally produce deleterious side effects and have achieved only limited success.

The prevailing view has been that by carefully screening blood and blood products to detect and eliminate contaminated materials, and by preventing the sharing of used needles among intravenous drug users, and by practising safe sex, the risk of transmission of the disease can be minimized. All of these methods are effective and do help reduce the rate of spread of the disease, but they do not offer a treatment or cure for the disease once a person becomes infected.

Moreover, lax and ineffectual screening of blood donors, and unreliable methods for detecting contaminated blood supplies, result in numerous instances of infected blood being made available for use in patients needing blood transfusions. Further, intravenous drug abusers generally do not pay heed to the dangers of sharing a needle; and passion, rather than prudence, usually controls sexual behavior.

Recent studies also indicate that the virus may be transmitted in ways other than previously believed. For instance, some scientists now believe that the HIV may be transmitted through mucous membranes, or even the skin. Dendritic cells move through the skin and mucous membranes searching for foreign proteins like bacteria and viruses. They pick up these foreign proteins and carry them to the lymph nodes, where T4 cells are stimulated to multiply and migrate into the blood to destroy the foreign invader. T4 cells are primed to die once they are infected, and over time the reduction in the number of T4 cells available to fight infection leads to collapse of the immune system.

Regardless of how the disease is transmitted, people are becoming infected at an alarming rate and an effective treatment is needed.

Ozone, the triatomic allotrope of oxygen, is a potent oxidant that has been shown to possess broad spectrum anti-microbial activity. It has been widely used in the treatment of sewage and in the purification of water, and was used medically in the treatment of wounds at least as early as World War I.

Advancements made by scientists in recent years using ozone to inactivate viruses, bacteria, fungi and protozoa have been well documented. It has reportedly been successfully used in several countries, most notably West Germany, in the treatment of AIDS, and specifically to inactivate HIV. In these treatments, ozone is generated from medically pure oxygen by electrical corona arc discharge. Blood from the patient being treated is then exposed to the ozone for a predetermined period of time, and at predetermined ozone concentrations to inactivate the virus.

In these prior art systems, the patient is treated with ozone by rectal insufflation, or by minor or major autohemotherapy. Much of the existing technology relies upon bubbling techniques to contact the blood or blood components with ozone/oxygen mixtures.

These methods offer inferior surface contact between the gas and blood, with little or no absorption controllability. Blood cells are also mechanically damaged by the bubbling techniques or porous membrane filters used in such methods, and it is difficult to control the concentrations of ozone necessary to inactivate the virus without adversely affecting normal biological and metabolic functions of the remaining blood components.

Further, treatment times are excessively long in prior art methods, taking up to eleven months for a full treatment protocol. This long treatment time makes conventional methods impractical for global treatment of the HIV epidemic. Moreover, excessively long treatment times cause discomfort and stress to the patient.

In addition, ozone is produced in accordance with prior art methods by using either low frequency (typically 50-60 Hz) or other, higher frequency generators. These methods of generation induce corresponding resonant frequencies in the ozone molecules, which, when exposed to the blood, expose the DNA to unnatural frequencies. Some research indicates that exposure to such frequencies can produce abnormal DNA activity and cell growth (cancer).

Consequently, even though ozone has shown promise in the inactivation of HIV, the shortcomings of prior art apparatus and methods have limited its use and hindered its acceptance as a viable medical tool.

There is thus need for an apparatus and method for using ozone in the treatment of blood contaminated with HIV, which enables accurate control over the process and in which treatment time is very short. Preferably, the apparatus and method should inactivate HIV but not adversely affect normal biological or metabolic activity in the blood, and should not involve the use of filters, bubblers, and the like, which can cause mechanical damage and trauma to the blood cells.

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide an apparatus and method for using ozone in the treatment of blood and blood products, wherein precise control is maintained over the concentration of ozone, and blood-ozone exposure time is very short, so that infectious organisms are destroyed while normal biological and metabolic activities in the blood and blood products are not adversely affected.

Another object of the invention is to provide an apparatus and method for the inactivation of HIV by exposure of infected blood and/or blood products to ozone, in which mechanical damage to the blood and blood products is avoided.

A further object is to inactivate viruses, bacteria, fungi and protozoa by exposure of infected blood to ozone gas that has been produced with a generator operating at about 8 Hz, thereby approximating the natural resonant frequency of human biologic material.

Yet another object is to provide a new device for generating ozone from oxygen by using electric corona arc discharge, and then subjecting the ozone molecules to a low resonant frequency to approximate the natural resonant human biological frequency.

A still further object of the invention is to provide a device for counter flow of ozone gas and blood or blood products, in which substantially complete contact is made between the ozone gas and blood during a very short time period, without causing mechanical damage to the blood cells.

Yet another object is to provide an apparatus for gravity flow of blood or blood products in counter-current relationship with an ozone/oxygen gas mixture, in which the apparatus is automatically adjusted to maintain a constant flow rate to thereby insure a predetermined

contact time between the ozone and blood; or which may be adjusted to different blood flow rates in dependence upon the characteristics of the blood and/or requirements of the patient.

These and other objects and advantages of the invention are achieved by a simple and relatively inexpensive apparatus which uses some commercially available components and some unique components in an extra-corporeal loop for the treatment of blood and other materials with precisely controlled concentrations of ozone over very short periods of time. Blood or blood products may be withdrawn from a patient or other source and caused to pass through the apparatus in a continuous process to destroy infectious agents in the blood or other material to be treated.

The apparatus preferably includes a mobile cart on which the treatment apparatus is mounted, so that it may be easily moved about. The treatment apparatus includes an oxygen tank containing medically pure oxygen that is supplied through a gas regulator to the ozone generator of the invention, where the oxygen is subjected to an electric corona arc discharge at a specific frequency to produce ozone. An ozone-oxygen mixture of precisely controlled concentration is then caused to flow from the ozone generator and upwardly through a gas-liquid contact apparatus, where the mixture makes thorough and intimate contact with a counter-flowing thin film of blood or other material to be treated flowing downwardly through the gas-liquid contact apparatus.

A pair of pumps may be operated proportionately, and the angle of inclination of the gas-liquid contact apparatus adjusted to achieve an essentially constant flow rate of blood through the contact apparatus, depending upon the consistency of the blood and the requirements of a particular patient.

The ozone generator of the invention comprises a tubular structure of silica glass or similar material, having an inlet for oxygen and an outlet for the ozone-oxygen mixture. In this generator, dual oscillators drive two sets of electrodes which alter the structure of oxygen and produce a mixture having predetermined proportions of O2, O3 and O4. The mixture flowing from the ozone generator is subjected to a frequency of 7.83 Hz.

It has been found in experiments using the apparatus and methods of the invention that exposure of HIV-infected blood to an ozone-oxygen mixture having an ozone concentration of no more than about 27 .mu.g/ml, or 2.0% by weight, and a surface pressure of about 2.2 psi, for a time period of only about sixteen seconds, resulted in inactivation of up to approximately 99% of the HIV, with no deleterious effect on cellular metabolism or DNA replication.

The invention is particularly adapted for the extra-corporeal treatment of human blood in a continuous process, wherein blood is withdrawn from a patient, circulated through the treatment apparatus of the invention and returned to the patient. Although the specific conditions of the treatment process may vary from patient to patient, depending upon the general health of the patient and the condition of the blood, satisfactory results are generally obtained when the blood is caused to flow through the gas-liquid contact apparatus at a flow rate of about 65 ml/min, typically achieved when the gas-liquid contact apparatus is inclined at an angle of about 27 DEG to the horizontal, and the concentration of ozone in the ozone-oxygen mixture is no more than about 27 .mu.g/ml and is at a surface pressure of about 2.2 psig.

The gas-liquid contact apparatus of the invention is non-foaming, whereby it is not necessary to reconstitute the blood after treatment, and treatment with the apparatus of the invention is virtually free of mechanical damage to blood components, especially in view of the variable onclusion pumps used to pump blood through the apparatus. Moreover, quick-connect/disconnect fittings are used to attach blood lines to the apparatus, whereby all components which might be contaminated with infected blood can be quickly and easily replaced between treatments, so that more treatments can be effected in a shorter amount of time than with conventional apparatus. The invention also provides means for detecting and proportionately adjusting blood flow rate and ozone concentration. Thus, if restriction to flow should occur, a flow sensor detects the reduction in flow and proportionately reduces the drive to the high and low frequency generators to thereby reduce the concentration of ozone.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects and advantages of the invention will become apparent from the following detailed description when considered in conjunction with the accompanying drawings, wherein like reference characters designate like parts throughout the several views, and wherein:

FIG. 1 is a view in elevation of an apparatus according to the invention;

FIG. 2 is an enlarged view in elevation of the unique cascade tube of the invention used to contact blood with ozone;

FIG. 3 is a further enlarged, fragmentary sectional view of a portion of the cascade tube of the invention;

FIG. 4 is an end view of the cascade tube of FIG. 3, looking in the direction of the arrow "4" in FIG 3;

FIG. 5 is an enlarged longitudinal sectional view of the silica cell ozone generator according to the invention, with a portion of the apparatus for inducing a desired wave form and resonant frequency on the ozone molecules;

FIGS. 6 and 7 are transverse sectional views of the ozone generator of FIG. 5, taken along lines 6--6 and 7--7, respectively in FIG. 5;

FIG. 8 is a schematic circuit diagram of the means for energizing the coils in the ozone generator and for inducing a predetermined wave form and frequency of 7.83 Hz on the ozone generated by the ozone generator;

FIG. 9 is a schematic circuit diagram for the high frequency generator in FIG. 8;

FIG. 10 is a schematic circuit diagram for the low frequency generator in FIG. 8;

FIG. 11 is a schematic circuit diagram of the swamp field generator used in the circuit of FIG. 8 for minimizing undesireable field effects and spurious signals in the working environment; and

FIG. 12 is a schematic diagram of a typical dialysis system used in the prior art.

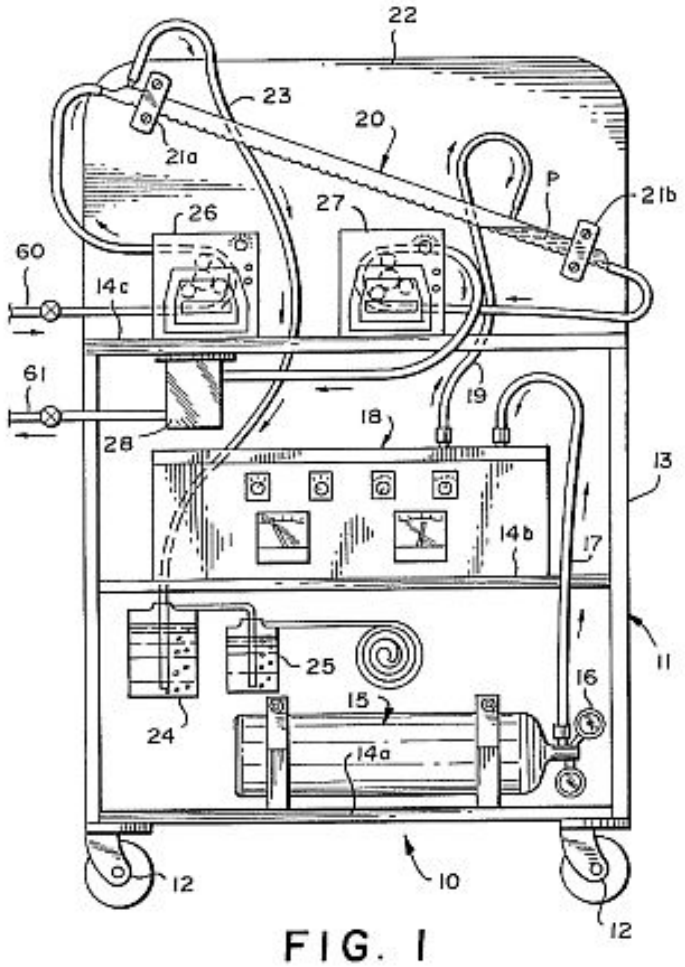


FIG. 1

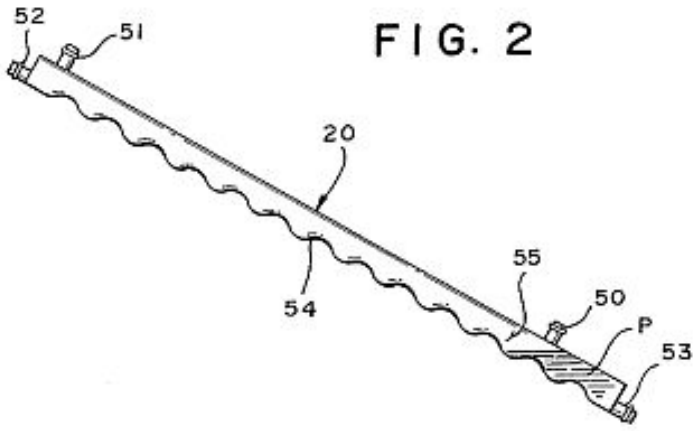


FIG. 2

FIG. 3

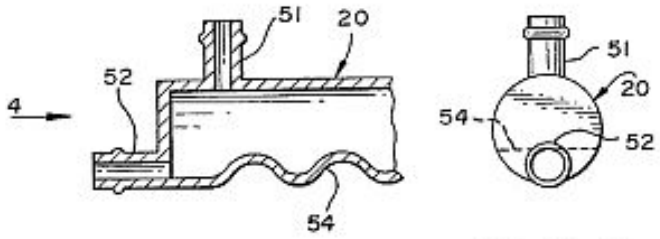


FIG. 4

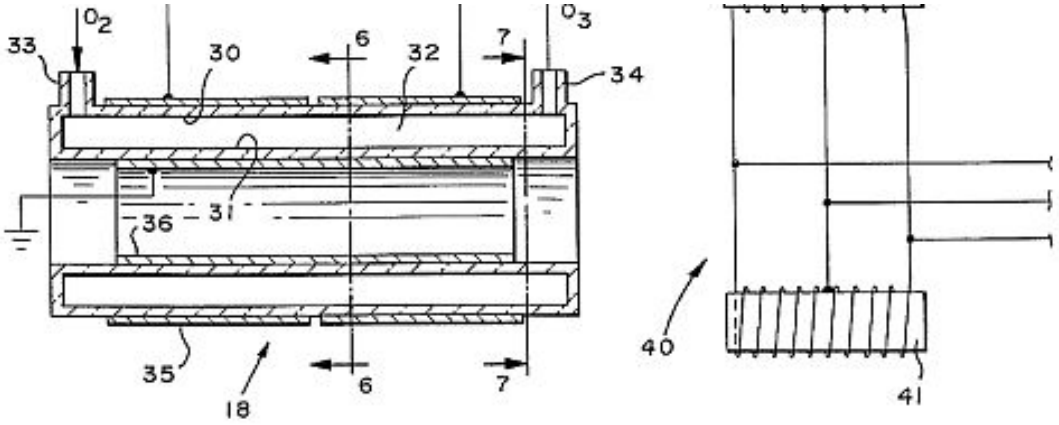


FIG. 5

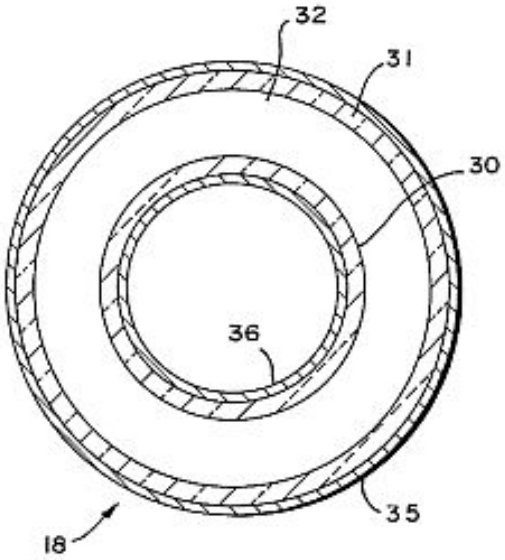


FIG. 6

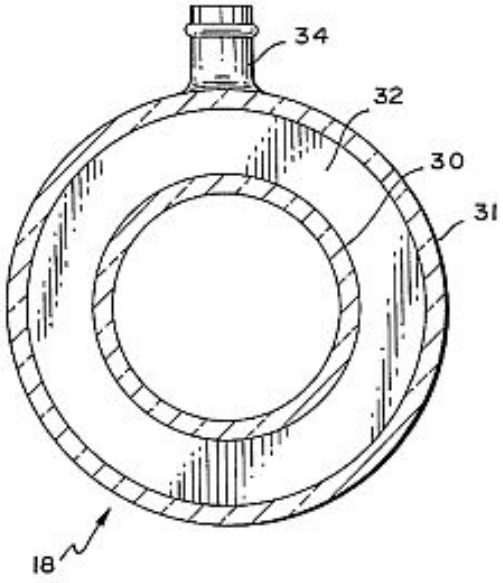
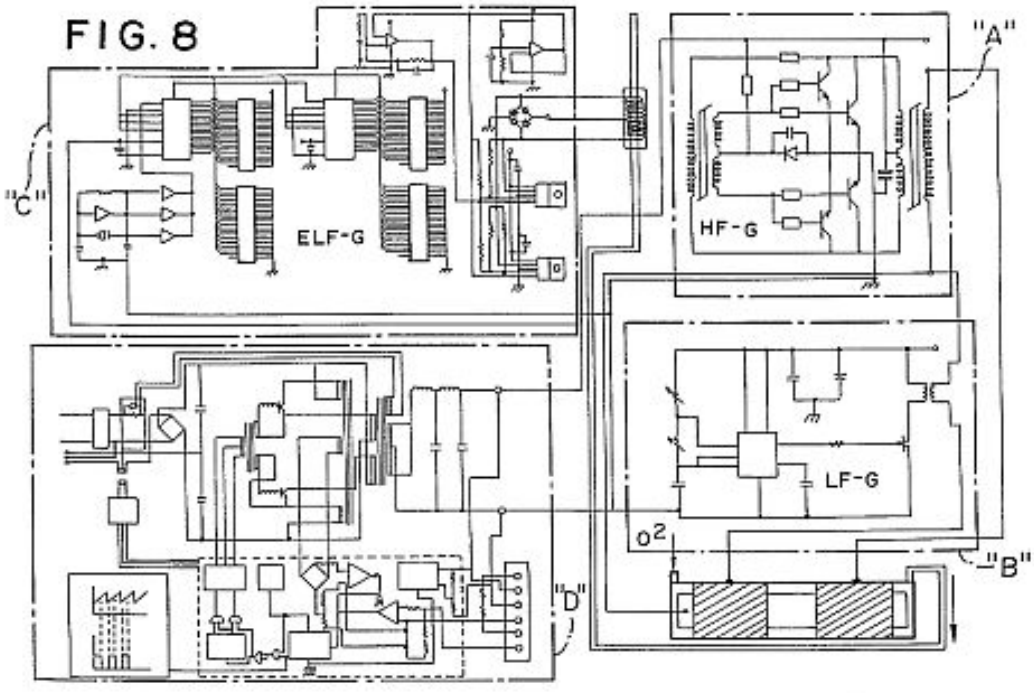


FIG. 7

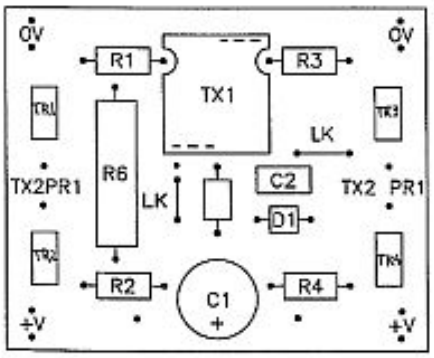
FIG. 8

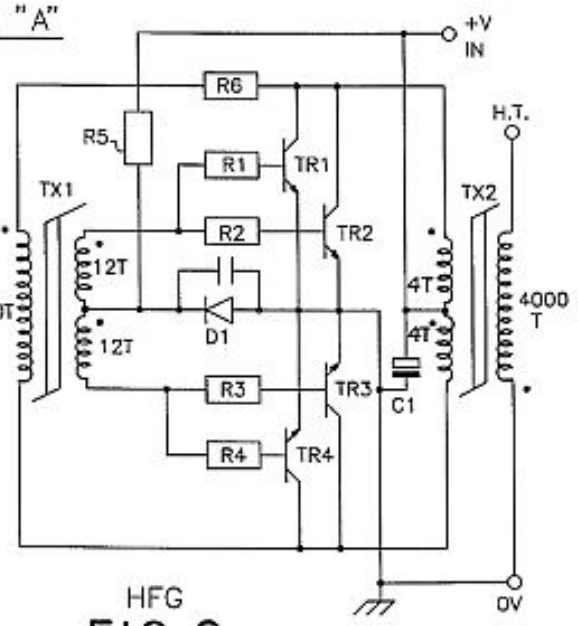


TRI-4: Transistor TIP 35C

D1: Diode IN5401
C1: Capacitor 1000mF 25v
C2: Capacitor 1mF 100v
R1–4: Resistor R47 2.5w
R5: Resistor 180r 1w
R6: Resistor 47r 11w
TX1: Drive Transformer FX3720
TX2: Output Transformer FX3750
Misc.: Heatsink for Transistors
: Tab Transistor Mounting Kit (4–off)
: Inverter P.C.B.

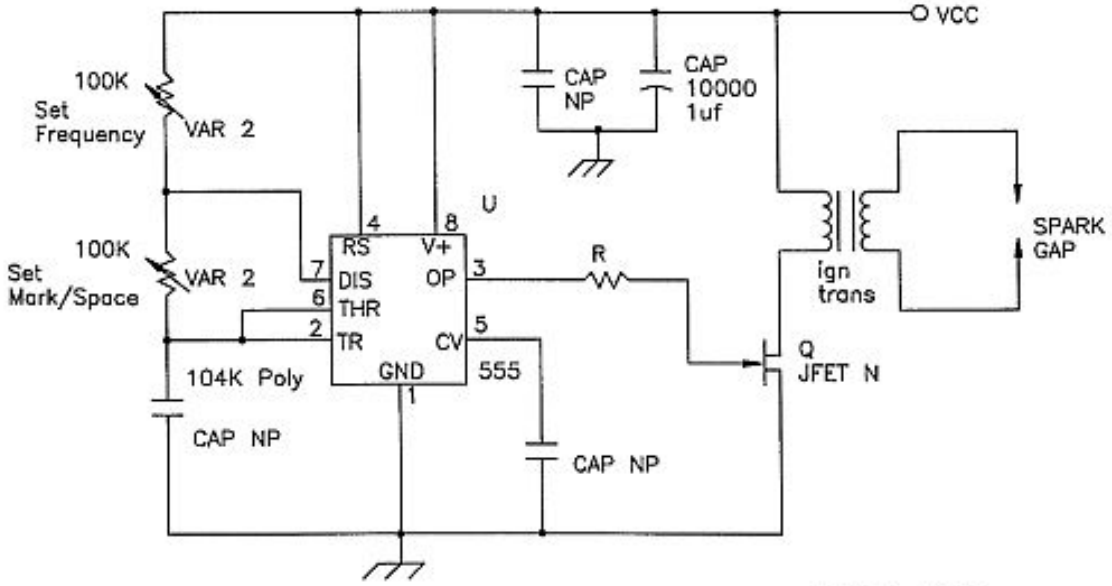
Circuit "A"





HFG

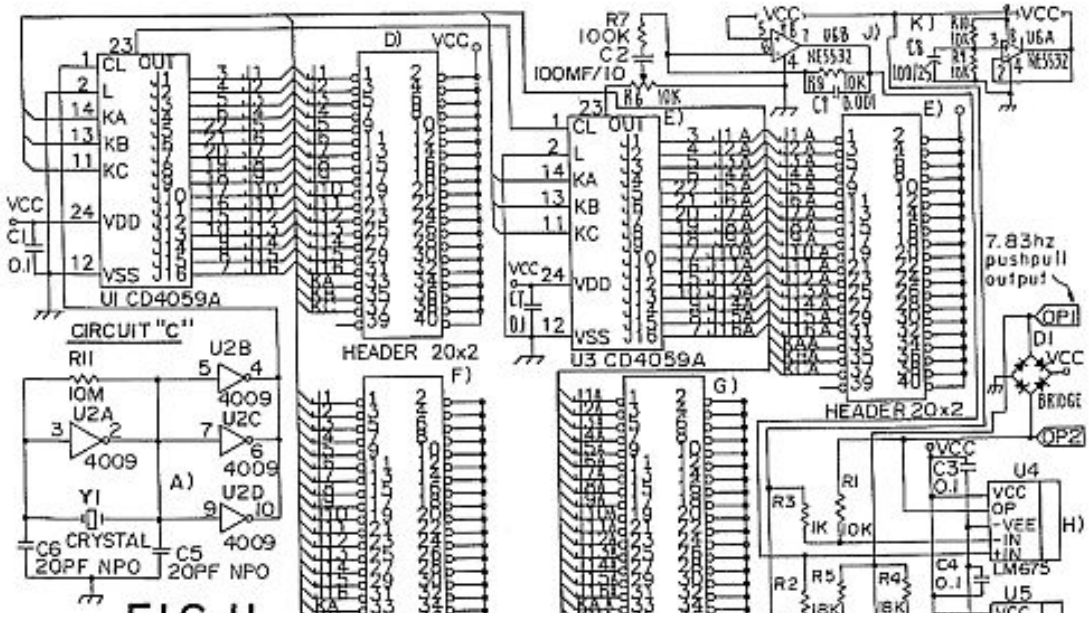
FIG. 9



LFG

FIG. 10

Circuit "B"



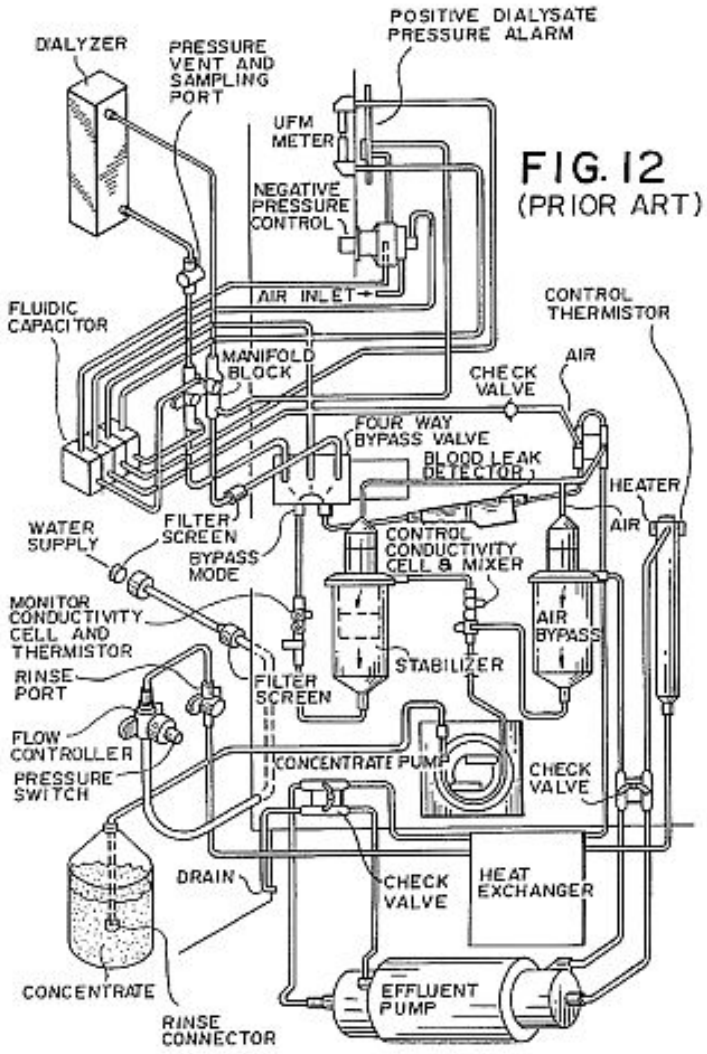


FIG. 12
(PRIOR ART)

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring more specifically to the drawings, a blood treatment system in accordance with the invention is represented generally at 10 in FIG. 1.

In a preferred arrangement, the system 10 comprises a mobile cart 11 having wheels or casters 12 mounted on the bottom so that the cart can be easily moved about. The cart includes a frame 13 having three transversely mounted shelves 14a, 14b and 14c on which are supported the operative components of the invention.

An oxygen tank 15 is strapped on the bottom shelf 14a, and contains medically pure oxygen whose discharge is regulated through a conventional gas regulator valve assembly 16. A length of tubing 17 leads from the regulator 16 to an ozone generator 18 mounted on shelf 14b, where the oxygen is subjected to an electric corona arc discharge to produce ozone. An ozone-oxygen mixture from the ozone generator is then supplied via conduit 19 to the lower end of an inclined gas-liquid contact apparatus 20 supported on brackets 21a and 21b mounted on back plate 22. The ozone-oxygen mixture flows upwardly through the apparatus 20 to an outlet conduit 23 and thence to the atmosphere through a pair of serially connected ozone destructors 24 and 25, which permit variation in the back pressure imposed on the

mixture.

Blood or other fluid to be treated is introduced through a first pump 26 into the upper end of the gas-liquid contact apparatus 20, for gravity flow downwardly through the apparatus in a cascading, thin film sheet to the lower end, where a pool P of the blood or other fluid is permitted to accumulate, and thence outwardly through a second pump 27 and filter 28 back to its source. Thorough and intimate contact between the ozone-oxygen mixture and blood occurs as they flow in counter-current relationship through the apparatus 20, thus exposing essentially all of the blood to the ozone-oxygen mixture.

The pumps 26 and 27 are preferably triple roller peristaltic pumps with adjustable onclusion. By minimizing the extent of onclusion exerted by the pumps on the tubing carrying the blood, the degree of potential mechanical damage to the blood cells can be minimized.

Ozone Generator

The ozone generator 18 comprises a pair of concentric tubes 30 and 31 of silica glass or other suitable material, connected and sealed at their adjacent ends to define an annular chamber 32 having an inlet 33 for oxygen and an outlet 34 for ozone-oxygen mixture. A first conductive sleeve or electrode 35 is disposed concentrically on the outer tube 31 at its inlet end, and a second conductive sleeve or electrode 36 is disposed concentrically on the outer tube 31 at its outlet end in axially spaced relationship to the first electrode.

The first electrode 35 is connected with the low frequency generator circuit B (see FIGS. 8 and 10) for producing a frequency of approximately 1.7 kilocycles on the gas as it enters the ozone generator to commence alteration of the incoming oxygen to O3 and O4.

The second electrode 36 is connected with the high frequency generator circuit A (see FIGS. 8 and 10) for producing a frequency of approximately 8.25 kilocycles on the O2, O3 and O4 mixture as it leaves the silica cell, and stabilizes the O4 component.

A third electrically conductive sleeve or electrode is disposed inside the inner tube 30 in concentric, radially inwardly spaced relationship to the two electrodes 35 and 36 and serves as a common ground.

The two tubes 30 and 31 and the annular space defined by them are thus located between the electrodes so that gas passing through the space is subjected to an electric corona arc discharge produced by the electrodes, converting oxygen to ozone.

The circuitry includes means for regulating the concentration of ozone produced in the silica cell, or generator, as determined by blood flow rate, preset values and other parameters. This may be accomplished by adjusting the flow rate of oxygen supplied to the ozone generator, and/or by adjusting the outputs of the high and low frequency generators.

The ozone-oxygen mixture produced in the ozone generator is subjected to an extremely low frequency in the range of about 7.83 Hz, developed by the swamp field generator circuit C of FIG. 8. This extremely low frequency generator controls the resonant molecular structure of the gas leaving the ozone generator. This circuit also minimizes undesireable field effects and spurious RF signals in the working environment.

The circuit is driven from an extremely stable power supply unit D, as shown in FIG. 8.

As shown in FIGS. 5 and 8, for example, the swamp field generator 40 may comprise a laminated core 41 with oppositely wound coils thereon connected with complemental coils wound about the conduit carrying the ozone-oxygen mixture. These coils are energized from circuitry including the power supply unit D, connected through the 7.83 Hz generator, a push-pull phase lock loop generator and a driver power amp, further details of which are shown in FIGS. 8-11.

An example of suitable circuitry for generating a 7.83 Hz frequency signal is shown in FIG. 11 (circuit C), wherein a base frequency generator A is connected through first division pre-selectables B and C with jumper interface blocks D, E, P and G and operational amplifiers H and I to phase splitter J and central voltage generator K.

Gas-Liquid Contact Apparatus

The gas-liquid contact apparatus 20 comprises a length of Pyrex or glass tubing, preferably about 24 inches long and 20-25 mm in diameter, with a gas inlet fitting 50 in one side, spaced approximately 20 mm from one end, and a gas outlet fitting 51 in the same side of the tube but spaced about 20 mm from the other end. These fittings are each about 20 mm long and 7 mm in diameter.

Axially oriented and aligned inlet and outlet fittings 52 and 53, respectively, for flow of blood or other fluid into and from the tube are formed on opposite ends of the tube at its periphery on the side diametrically opposite that on which the gas fittings are provided. These fittings may be approximately the same size as the gas fittings previously described and are connected with conduits 60 and 61 (FIG. 1) for flow of blood or other material from and to a patient or other source.

The underside of the tube is formed with an undulating configuration 54, with the undulations having an amplitude of approximately 4 mm. These undulations define a relatively wide bottom surface over which the blood or other fluid spreads and tumbles as it cascades downwardly along the tube, creating a thin film of the fluid and exposing all parts of it to the gas passing in counter-current relationship through the tube.

The speed of operation of the pumps 26 and 27 may be proportionately adjusted so that a pool P of the blood or other fluid being treated forms in the lower end of the tube. This pool is permitted to form to a depth or level indicated by a mark 55 on the tube, or as sensed by a level sensor (not shown) provided in association with the tube. The level sensor may be connected through a suitable control means (not shown) to automatically adjust the pumps to maintain a desired level of fluid in the tube. This pool of fluid forms a liquid barrier or seal to prevent gas from escaping through the outlet 53.

Further, the angle of inclination of the tube may be adjusted to achieve a desired speed of flow of the blood or other fluid as it cascades down the undulating surface of the tube. For instance, fluids having different viscosity will flow at different speeds, and if blood is permitted to flow too slowly it may clot or coagulate. For instance, blood should flow through the tube 20 at a desired flow rate of about 65 milliliters per minute. To achieve this flow rate for fluids having different viscosity, or to adjust the flow rate to other values depending upon the requirements of a patient, one end 56 of the tube is pivotally supported

on stanchion 22 and the other end is supported on stanchion 21 by an adjustment mechanism 57. This adjustment may be automatically accomplished by providing a flow rate detector (not shown) and suitable control means (not shown) responsive to the flow rate detector and operable to adjust the angle of inclination of the tube and/or to adjust the proportional speed of the pumps until the desired flow rate of blood or other fluid is obtained.

Other means, such as a densitometer or calorimeter 58, may be positioned to detect the condition of the blood or other fluid flowing from the tube 20, and connected through a suitable control means (not shown) to adjust the flow rate of the blood or other fluid and/or the flow rate and/or concentration of the ozone-oxygen mixture to maintain a desired condition of the blood or other fluid.

Although the invention is described herein as applied to the treatment of infectious diseases in humans, it should be understood that the principles of the invention are equally applicable to animals. Further, the invention could equally as well be applied to the treatment of blood supplies and to the extracorporeal treatment of patients.

While the invention has been illustrated and described in detail herein, it is to be understood that various modifications may be made therein without departing from the spirit and scope of the invention, as defined by the appended claims.