A CHRONOLOGICAL HISTORY OF UVBI

By: Dr. Danilo Fernandez

Ultraviolet Blood Irradiation (UVBI) also called Phototherapy, Photoluminance, Blood Irradiation and Photonic Corpuscular Irradiation (PCI) is a science onto its self. The earliest date I could find in my research of any written material tales back to 1820. (2) This article authored by Percy and Laurent, "Phosphorescence of Wounds," Dictionaries des science medicals (Paris, 1812-1820). In this dictionary it describes the ability of light as a method utilized in wound healing. This is the true beginning of Light Therapy as we know it.

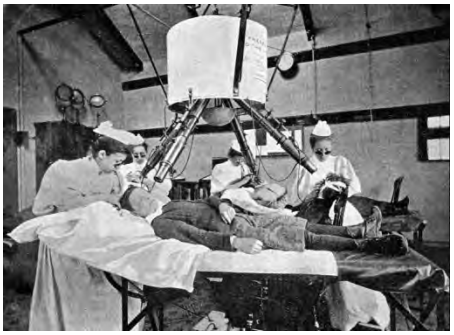
The science of UVBI stands on the premise that; "the exposure of a specific amount of blood to a particular time of exposure, at a precise intensity of irradiation, at a defined distance will cause an effect on certain molecules of our blood and said effect is one which makes our blood somehow capable of fighting viruses, bacteria's, fungi's and parasites that cause harm in humans and animals". How does this occur is open to great debate and volumes of literature exists which claim to answer this question.

What is known is; the blood is exposed to a certain frequency within the UV light spectrum via a closed conduit irradiation chamber known as a "Cuvette" and from there the blood is reinfusion to the patient via a closed system blood administration kit.

The known photochemical, biochemical and physiological effects on the blood are demonstrated and published in medical and scientific journals worldwide. The use of UVBI demonstrates a destructive effect upon multiples bacterial infections, as well as viral infections like Acute and Chronic Hepatitis, Poliomyelitis, Encephalitis, Toxemias, Rheumatoid Arthritis and Nephritis (Kidney Disease). All these studies where performed between 1930 to 1957.

Today we all give credence to the first modern application of UV therapy to the man that is known as the father of phototherapy Dr. Niels Ryberg Finsen.

Dr. Finsen set the course for the treatment of a destructive disease especially in children known as "Lupus Vulgaris"; a very disfiguring disease. Dr. Finsen demonstrated a 98% success rate and for his work was awarded a Nobel in Medicine in 1903 for his method of Photochemotherapy. https://jofnpw.wordpress.com/2013/04/21/



Although Dr. Finsen's work concentrated on Lupus Vulgaris he also researched tuberculosis and other infections of the skin and mucosal membranes. Dr. Finsen was so popular that he was conceded a stamp of his own The great work of Finsen is an application for a disease where the application is in a topical form. Finsen's application was not invasive; that method would take additional twenty two years before it is developed by a scientist from Portland Oregon in 1928.

The scientist is named Emmet Knott; who developed the first UVBI Irradiator that was to be used in hundreds of thousands of treatments in the US and Europe. Knott together with Dr. Hancock presented numerous cases to the medical society in Washington. Their first article was published in 1934 and dealt with UVBI as a treatment for different infections. (3).

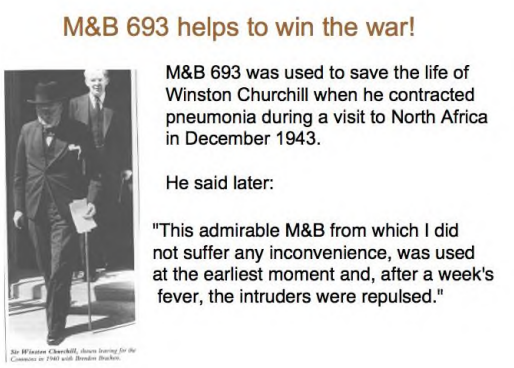
The Knott technique or method as it became known was the most widely utilized irradiator in the US and Europe. From 1928 to the 1960's the Knott irradiator was the method to use. It is calculated that several hundred thousand treatment where administered in these three decades and not one death was attributable to the UVBI method.

Immediately after the blood is exposed to the UV irradiation it demonstrates an increase in venous oxygen, a resistance to acute and chronic bacterial viral infections, a detoxification and anti-inflammatory effect and some regulatory influence on the autonomic nervous system.

Thus begins the most intense period of the study of UVBI. From 1934 to 1957 over 100,000 treatments were successfully administered for over 50 diseases.

The results are unparallel to even many diseases we have today. This process seemed to destroy everything you put in front of it; not one infectious process was able to mount a resistance to UVBI. It seemed to be the greatest discovery of our time.

This of course in a time when no antibiotics existed. The only known antibiotic of the 1930's was Sulpha (Sulfdine) and whose effectiveness was limited. It was not until 1942 that the first Penicillin was *developed* and Penicillin G was not *developed* until 1950.



This manuscript "the Chronological History of UVBI" is meant to be a teaching aid to anyone interested in knowing more about this form of treatment. All the information you'll need is in the bibliography I utilize in this writing. If you study every article I quote in this writing then you will be equipped with everything you need to know about UVBI.

I will mention names like Knott, Miley, Rebbeck, Christianson, Hancock, Wassen, Burke & Barger, Schwartz, Olney, Eldeson, Segal, Sirenko, Matsuyev, Neff, Bradley, Cinelli, Davidson, Lewis, Murray, Campbell to mention the top of the list of greats that have paved the way for those who dare venture. We start with one of the greats, Dr. Miley and Rebbeck.

In 1939 Miley (4) described a rapid increase in Oxygen concentrations in venous blood after a UVBI treatment with the Knott method. From 1941 to 1943 Rebbeck published their initial findings concerning the use of the Knott method in Puerperal Sepsis (5) and Incomplete Septic Abortions. (6) In the case of Incomplete Septic Abortions it was noted that UVBI also demonstrated to be an effective pre-operative adjunct. (7)

The use of UVBI proved to be a tremendous asset in regards to Septic Abortions; which was illegal in those times and women who subjected themselves to back alley clinics would end up with Septicemia due to massive infection. If it were not for UVBI many a woman would have perished, yet they played a big role because tests performed on them also lead physicians to note that UVBI could also be an effective pre-operative adjunct to decrease post operative infection. (7)

In 1941 Miley (8) informed on the physiological effects he observed during two years and noted that no harmful effects were seen on erythrocytes, leucocytes and in the structure of hemoglobin. This was indeed encouraging news. Doctors could now be assured that no harm comes to any of the other elements that compose the blood or surrounding tissues.

In 1942 Hancock informs on cases of Septicemia (blood stream infection) which was controlled immediately with the application of UVBI (9). Meanwhile, Miley reports results utilizing the Knott method in 103 of case of multiple Pyogenic Infections (10).

This study of 103 *Pyogenic Infections* is one of the most remarkable articles on UVBI. The results were unparallel in a time when no antibiotics existed. Patients were classified into three groups; Early Stage, Moderately Advanced and Apparently Moribund. All cases that were in the early stages (20 patients) 100% recovered. In the Moderately Advanced cases (47 patients) 98 % recovered. Of the Apparently Moribund (36 patients) 47% recovered.

Imagine a time period when all these people would have died without today's antibiotics and yet they survived some of the worst infectious diseases without one pill; just by the stimulation of one's blood with a light bulb and letting one's own blood do the rest; hard to believe but true, such a simple procedure has such tremendous curative effects.

In 1942 Cinelli, presents results of the use of UVBI in *Posterior Cerebellar Artery Syndrome* (11) while Rebbeck describes the efficacy of UVBI in one case of *Post Surgical Septicemia of the Prostate* (12).

In 1943 Miley y Rebbeck presented results of 72 cases of *Peritonitis.* (13). Miley Seidel y Christensen presented results of 80 cases with *Bronquial Asthma* (14) and Miley presented results on the control of *Acute Thromboflebitis* with the Knott method (15). In the same year Rebbeck publishes two articles concerning the use of UVBI and its ability to control infections in *Peritonitis* (16) and in the treatment of *Septicemia by Echaría Coli* (17).

In 1944 Miley published an article on the use of UVBI in *Acute Poliomyelitis* (18), Bradley, H.A. published an article on the effects of Auto transfusion of Irradiated Blood (19), and Davidson, W.M. of the Naval Armed Forces of the US., reported on the utilization of the Knott method for Associated Anoxia and Bends Susceptibility (20). In 1944 Miley also presented results of the efficacy of UVBI in *Staphylococcus Infections* (21) and on the use of UVBI for *Non Healing Wounds* (22).

In 1946 Seidel studied 160 cases of *Bronchial Asthma* (23) and Miley presented results of *Botulism* and its recuperation after the use of UVBI (24). Olney presented results on the use of the Knott method in *Biliary Infections* (25).

Then in 1947 Olney published an article presenting results of 600 cases of *Pelvic Cellulitis* treated with only UVBI and with complete recovery of all patients (26) and Miley y Christensen (27) presented results on 74 cases of *Acute Viral Infections*. These are awesome publications and the results were unparallel for their time.

In 1948 Knott, E.K. published his first article on the *Development of Ultraviolet Blood Irradiation* (28) and it was published in none other than the American Journal of Surgery. The most followed and prestigious surgical journal in America at the time. A home run for Knott and the believers in UVBI or so one would think. At about the same time as Knott published his 1948 article; Miley and Christensen presented results on the efficiency of the Knott method in the treatment of *Acute Virus & Virus Like Infections* (29); this publication was a follow up to their 1947 publication on the use of UVBI in *Acute Viral Infections* (27).

In 1949 the American Journal of Surgery published an article; The Knot technique of ultraviolet blood irradiation in acute progeny infections (30) and Lewis, H.T. utilizes UVBI in *Atypical Viral Pneumonia* (31). While in the same year Miley y Dunning, P.M. published an article on the use of the Knott method in *Thrombophlebitis* (32). Rebbeck presented results on UVBI in *Typhoid Fever* (33).

In 1950 Wasson, Miley, G.P. and Dunning (34) commenced a preliminary investigation which lasted 18 months, wherein they reported on 67 consecutive cases of Rheumatic Fever in Children who were in acute episode of the disease and who were completed and quickly controlled by the use of UVBI. All signs and symptoms in all 67 children with Rheumatic Fever had disappeared. (Photo of the New York Herald Tribune)

From the *New York Herald Tribune*, April, 1949

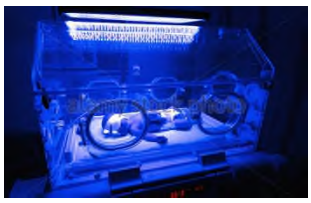
New York Infirmary Uses New Ally in Research Against Rheumatic Fever

In the same year Burke, Laverne, A.A., Barger, G.J.P treated *Acute Poliomyelitis* and presented an improvement in symptoms and signs of the disease (35) and Rebbeck publishes on the use of the *Knott method in Surgery of the Biliary Track* (36) and in 1951 Neff, Floyd & Anderson published a very interesting article on the use of *UVBI in the treatment of Bursitis and Tendinitis Calcareous* (37).

In 1952 Schwartz, S.O. published an article in the Journal of the American Medical Association (JAMA) titled *Ultraviolet Irradiation of Blood in Man*(38). Schwartz and many doctors in the association were very excited that finally a treatment modality existed that could offer some relief to the many plagues of diseases that afflicted many around the world.

In 1955 Olney (39) published an article on *Treatment of Viral Hepatitis with the Knott method of Blood Irradiation,*" American Journal of Surgery. This article is a must read and demonstrated beyond a shadow of doubt the efficacy of UVBI.

At the same time Murry publishes in the JAMA the "*Effect of Ultraviolet Radiation on the Infectivity of Icterogenic Plasma*" (40), opening the door for what is in common use today in all Neonatal Wards for Icteric Babes; that babies cannot conjugate bilirubin and therefore become Icteric (Yellow Skin Color) also known as Jaundice. They are placed inside an Incubator, the baby's eyes are covered and the UV Lights are turn on to allow the conjugation of bilirubin and away goes the Yellow Baby Syndrome.

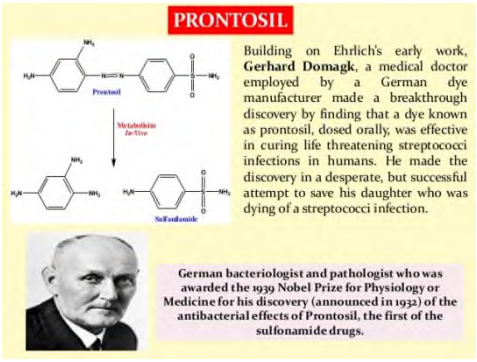


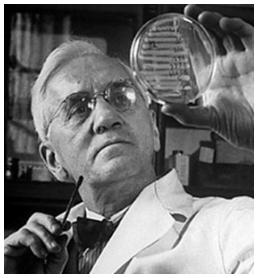
By 1942 more than 6,520 patients had been treated with UVBI with an approval rate of 95% without the complaint of any collateral adverse effects. By 1955 more than 100,000 UVBI treatments had been administered for more than 40 diseases, conditions and syndromes with a 90% efficiency rate. A difficult concept to grasp when one thinks about the collateral effects caused by the existing medical protocols.

Amazingly all these tests and studies were conducted in a time when we had very little knowledge of our vascular and immune system and how UVBI would affect us. Still today, in dispute is the therapeutic mechanism by which UVBI functions or its mechanism of action and its effect on our immune system; only by clinical observation where results measured.

The 1930's 40's and 50's where the heyday decades of UVBI. Everything changed with the development of the Salk Polio Vaccine in 1952 and the continued developments by 1961 of Antibiotics; herein mentioned by year of development.

In 1935-Prontosil (an oral precursor to sulfanilimide), the first sulfonamide, in 1942-benzylpenicillin; the first penicillin and gramicidin S, the first peptide antibiotic, in 1944 - streptomycin, the first aminoglycoside, in 1948-chlortetracycline, the first tetracycline, in 1949-chloramphenicol, the first amphenicol, and neomycin, in 1950-penicillin G procaine, in 1952-erythromycin, the first macrolide, 1955-vancomycin, in 1958-colistin, the first polymyxin, in 1960-methicillin and metronidazole, the first nitroimidazole and by 1961 ampicillin.



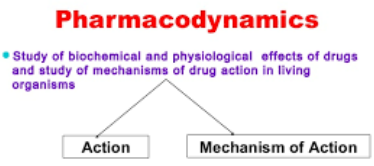


Alexander Fleming

The rapid increase in the development of medications and the economic lobbying machinery behind them mounted a campaign against UVBI and the doctors that performed these treatments.

By1960 the American Medical Association and other medical and surgical associations who had previously welcomed UVBI as the discovery of the century were now openly lobbying for the disuse of the very therapy that had saved thousands of lives and which promised great future accomplishments in multiple fields of medicine.

The birth of a new field in medicine was emerging and it promised the cure to all diseases, conditions and maladies that could affect mankind; the pharmaceutical industry.



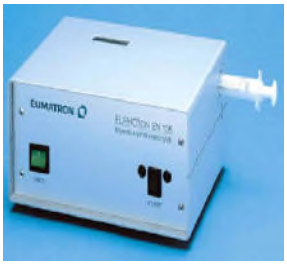
The new field; Pharmacodynamics, the way all doctors in the world would and still treat diseases today; with a prescription pad and an arsenal of chemicals at their command.

Yet medications around the world are coming under fire; bacteria's have become resistant to many of the antibiotics available today, viruses are the greatest threat on many people's minds, Fungus have now invaded every aspect of our lives and parasite continue to cause havoc in many underdeveloped and developing countries..

The pendulum swings back the other way as it's supposed to do, and after almost three decades the 60's, 70's and most of the 80's the medications are now the ones in disfavor. The Pharmaceutical Industry is scrambling to keep up with the ever changing evolution of diseases.

One can sense a change in the ambient, in the form of various different modalities of treating diseases. I say modality because it is the "mode" of action that determines the treatment type. As doctors we primarily treat our patients with medications but in the near future a doctor may be treating many diseases in his/her office with UVBI or some other form of therapy.

I could not find any article on UVBI from the mid 1960's till 1987 and from 87 till 1993 most of the publishing are of Russian and German Scientist who did stay with UVBI throughout the time of disfavor in the US. Have you ever wondered, how the Russian and East German Olympic Athletes of the 70's & 80's which they dominated recovered quicker from injury and there athletes never got sick?



The Russians and the Germans studied UVBI intensively and utilized multiple types of irradiators for different diseases and conditions. The Russians and East Germans had positioned themselves as the authority on the subject of UVBI and its applications of UV Light and Lasers. With the fall of Communism in Russia and Germany so was the loss of many scientists and studies performed. But we have faith in the renewed interest in UVBI in the US and another 46 countries.

In 1986 Ganelina y Samoilova published an article on Mechanisms of the Influence of Blood Irradiated with Ultraviolet Rays on the Organisms of Humans and Animals (41).

In 1987 Edelson published an article on the Treatment of Cutaneous T-Cell Lymphoma by Extracorporeal Photochemotherapy," New England Journal of Medicine (42).

This study and the continuation of additional trials conducted culminated in FDA approval for UVBI as the treatment of choice for T-Cell Lymphoma in 1992.

The company that was granted this approval is none other than Johnson & Johnson (J&J), who sponsored Eldelson and bought out his company Therakos.

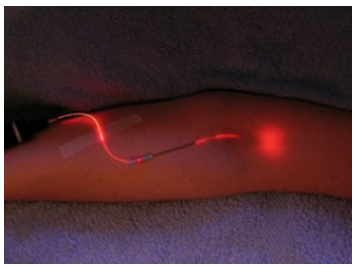
In 1988 Michailovich, V.A. published an article, Statement of Clinical Practice, Leningrad Advanced Training Institute for Doctors. About 1,275 contacts of AUVBI on 353 patients suffering from stomach, duodenum ulcer diseases, obliterating atherosclerosis, vessel peritonitis, septicemia, pneumonia, phlegmonas, osteomyelitis, furunculosis, thrombophlebitis; March, 1988 (43).

En 1989 Leitman S. published an article on Use of Blood Cell Irradiation in the Prevention of Post transfusion Graft-vs.-Host Disease; Transfusion Science (44). This publication once again proved pivotal in the reemergence of UVBI and Dr. Eldelson. Once again J&J would seize this opportunity and sponsor Dr. Eldelson to develop a process for Graft-vs-Host Disease in Post-Transplant Tissues and Organs. The nineties where looking good for J&J and UVBI.

In the nineties everything changes with the introduction of lasers by the Russians. Until now the development of UVBI was limited as a therapy applied by the Knott method and known as Extracorporeal Blood Irradiation.

Now the Russians and Germans develop a process involving irradiation via lasers. The frequencies on the electromagnetic spectrum are from 337nm to over 800nm; the light is directed in concentrated form hence the name, laser irradiation. The Russians then proceeded to develop the introduction of a laser catheter directly in the vein of the patient.

The blood would now be irradiated as it passes around the lodged laser catheter in the patient's vein. The catheter is similar to those of IV catheters except they have a second entry to the catheter.



Several difficulties were noted from the commencement of laser blood irradiation (LBI) such as the need for re sterilization of the catheters. Manufacturing costs prohibit the catheter from being disposable.

Second was the reporting of 3rd degree burning of the intra-lumen of the veins resulting in severe scaring with complete sclerosing of the vein. These incidences pretty much put an end to irradiating directly into the veins for the time being.

The Russians though had their fall back machine the reliable and efficient "Isolde" which utilizes precisely the Emmett Knotts method and has been the Russians and Germans go to machine for decades.

Used for Obliterating arteriosclerosis of the main arteries of extremities. Studies also included Ischemic heart disease, Hyperlipimia, Cerebral arteriosclerosis, Acute and chronic purulent diseases (purulent peritonitis, relapsing furunculosis, erysipelatous inflammation, pyoderma), Acute exogenous poisonings (for preventative maintenance and treatment of infectious complications), endogenous intoxications

In 1990 Bisaccia, E. publishes an article Extracorporeal Photopheresis in the Treatment of AIDS-Related Complex: A Pilot Study," Annals of Internal Medicine (45).

This article presents results of 7 patients with HIV/AIDS Related Complex. All seven patients where in the advance acute stage of the disease and all had received 5 to 19 treatment of UVBI.

Of the 7 patients, 3 retired from the study for personal reasons during the first 6 months. The other 4 remaining patients presented with "Sero Negative Culture in Blood of the HIV virus" , the closest we have ever come to a cure for HIV. The company that undertook this study is Therako's a subsidiary of J&J.

In 1990 Marchenko published The Possibility of Using UV-Irradiated Blood in the Prophylaxis of Serum Hepatitis during Hemotransfusion in Surgery (46), Matsuyev demonstrated the benefits of UVBI in Obstetrics & Gynecology procedures (47). and Sirenko, Yu, Malinovskaya and Krasnitskii publish On the Treatment of Patients with Severe Coronary Insufficiency with Ultraviolet Blood Irradiation (48).

Then in late 1990 Segal, Jakob & Gunther Seng also publish their article and in this treatment of UVBI they give it a twist and add ozone to the blood (49). As its well known, ozone has many bactericidal and virucidal properties and is utilized commonly in sterilization processes.

This method has had its critics delineating the long term effects of ozone upon a person is not well known. It is stated that ozone leaves behind a waste by product that once again may be harmful. To date no literature exists that inform us as to the exact procedure, it is my opinion that if ozone where to be used as an adjunct in UVBI therapy; specific controlled clinical trials must be carried out to prove the hypothesis and to assure the public of its safety and efficacy.

Also in 1991 Berdichevskii publishes on the Effectiveness of the Complex Treatment of Cerebrovascular Disorders by Ultraviolet Irradiation of Autologous Blood (50) while Corash demonstrated the Photo inactivation of Viruses and Cells for Medical Application (51).

Then in 1992 Taylor and Gasparro publish their article on Extracorporeal Photochemotherapy for Cutaneous T-Cell Lymphoma and Other Diseases (52).

This article became famous and assured the approval by the FDA of UVBI for Cutaneous T-Cell Lymphoma.

This is the only disease approval by the FDA, for the invasive form of Extracorporeal Photopheresis (UVBI).

In 1993 Ibadov demonstrated *The Effect of Auto transfusion of UV-Irradiated Blood on Liver Function in Patients with Ulcerative Pyloric Stenosis* (53), and Mrazek, Jancarek, Vymola & Gavrilov publish on the *Enhancement of Immunity by Intravenous Irradiation of Blood Using 337nm Laser* and its ability to mount a immunological response (54).

En 1994 Benade, Shumaker, Chen y Dodd published an article on the "*Inactivation of Free and Cell-Associated Human Immunodeficiency Virus in Platelet Suspensions by Aminomethyltrimethylpsoralen and Ultraviolet Light*" (55). Now in this study they proved that UV can be applied without damaging the platelets which are the most fragile elements in the blood. It stands to reason that if you don't damage the platelets then all the other elements should be unaffected and until the time of this writing all laboratory tests performed have once and again proven no adverse affect to any elements in the blood or surrounding tissues.

In 1994 Iakovlev publishes on "*The Mechanisms of the Therapeutic Action and the Basis for the Frequency of Performing Sessions of Ultraviolet Blood Irradiation in Treating Acute Pneumonia*" (56), and Mumladze publishes on "*A Comparison of Different Methods for Quantum Hemotherapy in Treating Complicated Forms of Acute Cholecystitis in Middleaged and Elderly Patients*" (57), and Veligotskii publishes on "Use of Different Methods of Quantum Hemo-Therapy in the Treatment of Suppurative Wounds in Middle-aged and Aged Patients" (58) and Zvereva, Gladkova, Grunina y Logunov publishes on "The Choice of Method of Intravascular Laser Therapy in Rheumatoid Arthritis" (59). The Russians are having a field day and their not through yet.

In 1995 Bednarskii publishes on *The Use of Intravascular LBI in the Combination Therapy of Preeclampsia* (60), Uzerskii publishes on *Ultraviolet Irradiation of Blood in Acute Sinusitis* (61), Bukhari, & Masudi publish results on *Irradiated Blood Re-infusion—a New Technique for Clinical Therapy of Multi-drug Resistant Human Cancers* (62) and Snopov publishes a very interesting article on *Molecular Dosimetry by Flow Cytometric Detection of Thymine Dimers in Mononuclear Cells from Extracorporally UV-Irradiated Blood* (63)

In 1997 Ovsiannikov publishes on the Analysis of the Low-Energy Laser Treatment of Some Cancers and Infectious Diseases (64).

In 1998, word started to circulate that there where substances that reacted similarly as the blood does when exposed to irradiation; specifically UV (65).

These substances became known as "Light Activated Drugs" (LAD) and they were to be introduced by the pharmaceutical industry. The objective was to demonstrate the concomitant use of UVBI and LAD.

To date advances have been made in this regards in Dermatology; where the patients takes by mouth 2 hours earlier a syrup of a photoactive substance and then expose their lesions be it Psoriasis, Eschema, Eryipsela or others to a light source. With one or two treatments, lesions disappear in 24 to 72 hours.

This is exactly what Johnson & Johnson (J&J) utilizes in their Photopheresis Process. Edelson of Therakos, is contracted by Johnson & Johnson to conduct a 1990 study in 7 patients with HIV/AIDS where 4 patients became Sero-Negative in Culture for the HIV Virus (45). Unfortunately for J&J the chemical they utilize MOP-8 is the synthetic form of Psoralen and has been found to cause cancer; yet the natural form of Psoralen is completely harmless.

The problem for pharmaceutical companies is they are not able to patent a natural substance so they really need their synthetic formulas to work. What they did not appreciate as in the case of J&J with MOP-8; is it throws a wrench into everyone's plans and J&J has had to cancel certain studies and withdraw on several others; as demonstrated on clinicaltrials.gov; a site where anyone conducting clinical trials register's their trials information.

The efficiency of UVBI against the HIV Virus has been more than proven within the medical community, it's getting the rest of the academia community to listen that's been an issue. The costs and the logistics involved are often the main deterrents to many a scientist undertaking the mission of conducting clinical trials. I have been at it for over twenty years and although approved to conduct Phase II Controlled Clinical Trials in HIV/AIDS the amount of paperwork and funding required makes progress slow.

I became interested in UVBI in 1996. Between 1996 and 2000 I read and studied every document you see me quote in this manuscript and many more related in one form or manner with UV & UVBI. In 2002 I constructed a prototype of a machine that treats the blood in such a way that it eliminates all diseases from the blood. In 2004 I received a patent for my product and its ancillary parts.

In 2004 in the Dominican Republic we performed government approved, Phase I Controlled Clinical Trials on 36 patients with acute and chronic HIV/AIDS. During this study, not one patient was on any retroviral medication. In this study we reduced patient viral loads by 85 to 99%, stabilized the reduction of CD4 cells (T-helper cells) and most importantly, eliminated 100% of opportunistic infections in 100% of the patients.

Between 2006 and 2009, we performed an additional pilot study on 7 patients, in order to prove and repeat the results achieved in Phase I. We not only surpassed our earlier results, but we also showed that the 7 Chronic HIV patients (who had been hospitalized between 5 to 7 times a year in the past) did not require hospitalization or any antiretroviral medications, for the duration of the 29-month study.

We not only demonstrated successful results in phase I clinical trials, but no one has come as close as we have with our treatment modality, to providing a cure for HIV/AIDS. Our treatment is not only effective against HIV/AIDS but also reduces costs associated with keeping HIV patients alive by 90%, something every underdeveloped and developing country desperately needs.

We are currently approved to perform Phase II and III Government Approved Controlled Clinical Trials internationally.

Not only can our system be used to treat HIV/AIDS as described above, but it will have similar efficacy against all viral diseases including influenza and Ebola, Staphylococcus (Staph infection) such as MRSA; necrotizing fasciitis (flesh eating bacteria), Avian Flu, Swine Flu and some 75 other diseases as well as 60 veterinary diseases like Laminitis (second leading cause of death in horses and cattle).

As in all articles or books concerning history, the occurrences of today becomes the history of tomorrow and the history of UVBI is nowhere finished and I hope to have the honored of being able to contribute to its future.

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