

Bacteria, Cancer & the Origin of Life: Part 1

By Alan Cantwell, Jr., M.D.

Is new life merely just the beginning of eventual death, as scientists believe? Or is death the beginning of “eternal life,” as religions teach? Or could life be a never-ending cycle of life/death/life/death reincarnations? Can new life develop from non-living things? Or was all life and the universe created eons ago by the Creator, or through some freak accident of the cosmos? Where did I come from? What will happen to me after death? These are questions human beings have attempted to answer for centuries.

Nanobacteria, NASA and Astrobiology

Robert Folk is a geologist who specialises in microscopic examinations of limestone. Working in Italy in the 1980s with a new scanning electron microscope (SEM) with magnifications up to 100,000X, he repeatedly came across “hordes of tiny bumps and balls” entombed within the rock that he initially passed off as artefacts or laboratory contamination, as had every other geologist using the SEM.

However, after a year of doubts and some reading in microbiology, Folk learned that exceedingly small cells called ‘ultramicrobacteria’ did in fact exist. With further microscopic work, he realised the enormous numbers of tiny grape-like and chain-like clusters were indeed bacteria. Most amazing was these “nanobacteria” could be easily cultured as common forms of bacteria, known as cocci, bacilli, staphylococci and streptococci.

His first scientific presentation of these astounding findings was met with “stony silence” and “howls of disbelief” from many microbiologists. To this day, some scientists contend these so-called nanobacteria are simply too small to contain the necessary genetic material for life.

In microbiology, the ultramicroscopic bacteria are regarded as stressed or resting forms of big bacteria, and are thought to be both rare and dormant. Geologists prefer the spelling “nannobacteria” to conform with the spelling of extremely tiny “nannofossils”, a common term in geology dating back to the nineteenth century.

But Folk claims nanobacteria are enormously abundant in minerals and rocks and they form most of the world’s bio-mass. If so, how could they have been missed for so long? Folk says microbiologists have little or no interest in bacteria found in soils or rocks; and for fifty years it has been standard microbiological dogma that bacteria smaller than 0.2 micrometers cannot exist.

Size does matter, even when discussing the tiniest forms of life. The term “ultramicroscopic” is applied to bacterial cells smaller than 0.3 micrometers. At this size, bacteria are still barely visible as the tiniest of dots discernable with the light microscope. The ordinary light microscope can magnify objects up to 1000X and objects smaller than 0.25 micrometers cannot be seen. The electron microscope is able to photograph objects at magnifications of 300,000X, or higher.

Nanobacteria are the smallest of living creatures, measuring in the 0.05 to 0.2 micrometer range (a micrometer is 1/1000 of a millimeter). This puts nanobacteria as an intermediate life-form between normal bacteria and viruses. Viruses are around 0.01 to 0.02 micrometers in size and cannot be seen with the ordinary light optical microscope.

The size of bacteria, nanobacteria and viruses is exceedingly important to bear in mind because it is connected to more than a century of microscopic study into the germ origin of infectious disease. Furthermore, the “dividing line” between bacteriology and virology has been the customary “filter pore size” of 0.2 micrometers. Microbiologists have always assumed such a filter pore will catch all bacteria, and fluid running through a 0.2 micrometer filter pore would be bacteria-free.

When geologists photographed 0.1 micrometer “bumps” they passed them off as contamination, never believing they could be living bacteria. Folk says, “You see what you are looking for and what you have faith in!”

By the early 1990s these nanobacteria were investigated by a team of biologists in Finland, headed by Olavi Kajander. Since that time nanobacteria have been found in kidney stones, dental plaque, the gall bladder, in calcified arteries and heart valves, and in certain skin diseases. Kajander’s team also reported nanobacterial forms as small as 0.05 microns in human blood, and have retrieved DNA on particles as small as 0.2 microns. Most disturbing are reports showing nanobacterial contamination of fetal bovine serum used in the production of many viral vaccines. This adds concern to the controversial problem of “vaccine-induced illness” and the fear some people have of contaminated vaccines.

Are nanobacteria connected with the origin of life on Earth? Nanobacteria-like “fossils” have been observed in several meteors, such as the Martian meteorite found on the Antarctic ice shelf in 1984. This meteorite is believed to be 4.5 billion years old, and is thought to have left Mars 16 million years ago. Supporters of nanobacteria research insist these bacteria have implications for how life began on Earth and other planets like Mars.

NASA, the US space agency, has an Astrobiology Roadmap program, which consists of more than 200 scientists and technologists. Astrobiology addresses three basic questions: How does life begin and evolve? Does life exist elsewhere in the universe? What is the future of life on Earth and beyond?

According to Roadmap, there are revolutionary changes going on in the world of microbiology.

“Our ongoing exploration has led to continued discoveries of life in environments that have been previously considered uninhabitable. For example, we find thriving communities (of microbes) in the boiling hot springs of Yellowstone, the frozen deserts of Antarctica, the concentrated sulfuric acid in acid-mine drainages, and the ionizing radiation fields in nuclear reactors. We find some microbes that grow in the deepest parts of the ocean and require 5000 to 1000 bars of hydrostatic pressure. Life has evolved strategies that allow it to survive even beyond the daunting physical and chemical limits to which it has adapted to grow. To survive, organisms can assume forms that enable them to withstand freezing, complete desiccation, starvation, high levels of radiation exposure, and other physical and chemical challenges.”

In addition, astrobiologists tell us that huge amounts of bacteria and possibly viruses are contained in Earth’s upper atmosphere. It is estimated a ton of these organisms arrive on Earth every day!

Quorum Sensing and Communication Between Bacteria

In an amazing discovery, scientists have learned that bacteria can communicate with each other. When enough microbes gather to form a “quorum”, they release a hormone (a pheromone) which allows them to “talk” to one another and plan strategies, and even make some genetic changes to allow survival. Not only do similar bacteria talk to each other, they also talk between species.

Barbara Bassler, a molecular biologist at Princeton University, is a leading pioneer in quorum sensing. Writing about her work for *Wired* magazine (April 2003), Steve Silberman says that communicating microbes are able to collectively track changes in their environment, conspire with other species, build mutually beneficial alliances with other types of bacteria, gain advantages over competitors, and communicate with their hosts - the sort of collective strategizing typically ascribed to bees, ants, and people, not to bacteria.”

Quorum sensing has profound implications in the war against disease, particularly now that so many bacteria are becoming resistant to antibiotics. According to Silberman, “Bassler’s research points to new ways of fighting disease that will aim not to kill but to scramble data in the bacterial network. One approach would be to block the receptors that receive the molecular signals so that cells never become virulent; another would target the DNA-replication mechanisms set in motion inside cells when the signals are received.”

Not everyone in microbiology is convinced bacteria can communicate. But if some clairvoyants can talk to dead people, why can’t bacterial cells

talk to one another? And don't all the cells in our body "talk" to each other in some way?

Viruses, Bacteria, and the Beginnings of Life

Charles Darwin's **Origin of the Species** was published in 1859 and is the seminal book giving rise to biology, as well as to the scientific and religious controversies that continue to this day. People were incensed to think humans could have arisen from monkeys and apes. Now some scientists think we developed side-by-side along with bacteria.

Every human, plant and animal cell has genetic material inside a nucleus. Surrounding the nucleus is a jelly-like cytoplasm which contains the "mitochondria", which are considered to be tiny chemical factories that process the nutrients which provide energy to the cell.

Evolutionary biologist Lynn Margulis of the University of Massachusetts believes the ancestors of all life are the bacteria, which fused into higher forms of life. Margulis follows in the footsteps of American biologist Ivan Wallin, who in 1927 first claimed mitochondria originated as free-living bacteria. Wallin thought ancient bacteria and their host cells evolved together to establish an inseparable symbiotic partnership. He even claimed to have removed mitochondria from cells and to grow them. Needless to say, Wallin's ideas were ridiculed and almost universally rejected.

But Margulis also theorises the origin of the mitochondria in our cells is derived from separate organisms that long-ago moved into other cells and entered a symbiotic (sort of a co-dependant) relationship with multi-cellular forms of life. Remarkably, the DNA in the mitochondria is totally different from the DNA in the rest of the cell, which lends support to this idea.

Margulis subscribes to the vision that the Earth, as a whole, is a living being. In **What is Life?** (1955), co-written with Dorion Sagan, she maintains all life is bacteria - or descends from bacteria. In short, life *is* bacteria. And, as such, bacteria are closer to immortality than animals with bodies.

Bacteria account for the vast majority of life forms on Earth, and are essential to maintain the conditions for life on the planet. They are the smallest living cells that can replicate without a nucleus, and are indeed the building-blocks of life. In comparison, the fertilised human egg is about 150-200 micrometers in size - about the size of a grain of sand and barely visible with the naked eye.

What can microbes tell us about our origin and our destinies? And could we be immortal like our one-celled ancestors?

Creating "life" in the Laboratory

What is the lowest form of life? And can life be created from non-life? Some scientists believe viruses are the lowest form of life. We are told

viruses need to penetrate a cell and use the cell's genes to survive. In the process, disease can be produced. But are viruses "alive" or "dead"? Scientists can't agree.

In 1991 Eckard Wimmer and his associates created a polio virus for the very first time - outside a cell and in a test tube. They extracted a soup of proteins from human cells, and then added genetic material from a polio virus. After a few hours, assembled polio viruses appeared in the mix.

According to a *New York Times* report (Dec. 13, 1991), Wimmer was asked, is the product in the test tube living or nonliving? Some consider viruses to be simple living organisms, others consider viruses to be very complicated chemicals, said Wimmer. But "when it hits the cell it is very much alive. Some argue that one attribute of life is that it can reproduce itself. Well, that is what viruses do when they get into the cells. The debate on whether viruses are alive has been going on since they were discovered 100 years ago."

Although the cause of most cancers remains a mystery, research over the past half-century has focused on cancer viruses as a probable cause. With research focused on viruses, it would seem ludicrous to ask - can bacteria cause cancer?

The mere thought of bacteria causing cancer drives most cancer experts up the wall! However, with the recent interest in nanobacteria and their discovery in the blood and in various diseases of unknown origin, the question should not be so easily dismissed.

Furthermore, in the past decade physicians have come to accept the fact stomach ulcers can be produced by bacteria (*Helicobacter pylori*), and some ulcers eventually lead to stomach cancer. For many decades, it was dogma that bacteria could not live in the acid environment of the stomach. Also, pathologists could never see or detect bacteria in the stomach lining around ulcers. With the discovery of Helicobacteria and special staining techniques, doctors can now demonstrate bacteria in many ulcers - proving that microbiologists and pathologists were unable to "see" microbes, even though they are now clearly visible once they accepted the possibility microbes might be present.

Cancer, New Life, and Reich's "T-Bacilli"

Although the origin and cause of cancer is mysterious, there is no doubt cancer is the body's futile and often fatal attempt to create new life and new growth. That is why cancer is so intimately connected with theories about the origin of life.

One of the most controversial physicians of the last century was Wilhelm Reich (1897-1957), a psychiatrist and cancer researcher who claimed to discover "orgone energy" - an energy that pervades the world and is intimately connected with our physical and mental well-being.

In **The Cancer Biopathy** (1948), he wrote that cancer is a systemic disease caused by emotional despair and resignation and the chronic thwarting of natural sexual functioning. And this was just a few of his highly unorthodox beliefs based on his many observations and experiments.

Reich also uncovered infectious “T-bacilli” (bacteria) in cancer that resulted from the degeneration of cancerous tissue. In his view, these bacteria formed a bridge between the living and the non-living. The T-bacilli were present in the blood and tissue *before* the cancer tumour developed; and these microbes were intimately connected to “bions” and the loss of biological energy. Reich’s heretical bions were the carriers of biological energy; and the staphylococcus and streptococcus germs he found connected to cancer were actually formed from the degeneration of the bions.

Just as there is no clear dividing line between life and non-life, there is no clear boundary between healthy and diseased individuals. Reich claimed the cancer cell developed as the body’s attempt to resist the build-up of the T-bacilli in energy-depleted tissue.

“The first step in the development of the cancer tumour is not the cancer cell... it is the appearance of T-bacilli in the tissue or in the blood.” But T-bacilli were not only found in cancer; they were also present in the blood and tissues of both healthy and sick non-cancerous individuals. However, sick and cancerous patients showed a larger number of these forms, and Reich developed a blood test to show this. T-bacilli were always found where there is degeneration of protein, and in that respect, Reich wrote: “All humans have cancer.”

The orgone energy of the body determined the resistance of the body to these microbes. As long as the tissues and blood are “organotically strong, every T-bacillus will be destroyed and eliminated before it can propagate, accumulate, and cause damage”, wrote Reich. Because cancer germs were present in healthy people, Reich knew this would be a very difficult concept for physicians to consider and accept.

Reich wanted scientists to look at science in a new way and to try and see it from the point of view of “energetic functionalism.”

For example, “The bacteriologist, for instance, sees the staphylococcus as a static formation, spherical or oval in shape, about 0.8 micron in size, reacting with a bluish coloration to Gram stain, and arranged in clusters. These characteristics are important for orgone biophysics, but are not the essentials. The name itself says nothing about the origin, function, and position of the blue coccus in nature. What the bacteriologists calls ‘staphylococcus’ is, for orgone physics a small energy vesicle in the process of degeneration. Orgone biophysics investigates the origin of the staphylococcus from other forms of life and follows its transformation. It examines the staphylococcus in connection with the processes of the total

biological energy of the organism and produces it experimentally through degenerative processes in bions, cells, etc.”

Through his scientific experiments with orgone energy, Reich hoped to harness orgone for the treatment of disease and the good of humanity.

Needless to say, Reich’s entire life’s work was considered hogwash, and a scientific inquisition eventually ensued. Branded a menace and a quack, he ran afoul of the US Food and Drug Administration (FDA) which claimed his experimental “orgone accumulator” was being used illegally to treat cancer - and that it was nothing more than a perverted sex box.

Refusing to obey a court injunction, Reich was sentenced to prison. His books were burned, his equipment destroyed by FDA agents, and he died at the federal penitentiary at Lewisburg, Pennsylvania, in March 1957, at age 60.

His research into the origin of life, and his belief orgone energy contained within the tiniest forms of life that could not be destroyed, make him one of the most misunderstood and hated physicians of the twentieth century.

But, as we shall discover, there are other heretics in medicine, now mostly ignored and forgotten, who also believed cancer was connected with bacteria of human origin. Like Reich, they claimed a study of these microbes would not only lead to the infectious cause of cancer - but to a cause of life itself.

Continued in Part 2

Dr. Cantwell is a researcher on AIDS, cancer, and biological warfare. His book on man-made AIDS, **Queer Blood: The Secret AIDS Genocide Plot**, is available through the New Dawn Book Service. Many of his writings can be found on google.com and the New Dawn web site. His published medical papers are listed on PubMed.

Bacteria, Cancer & the Origin of Life: Part 2

By Alan Cantwell, Jr., M.D.

After a century of “modern” medical science, we still don’t know the cause of cancer, heart disease, and many other chronic diseases that kill millions of people every year. The reason for this, in my view, is that medical science refuses to recognise the role that microbes (smaller than bacteria and larger than viruses) play in these diseases.

Much of the fault lies in the dogma left over from the nineteenth century by such scientific icons as Louis Pasteur and Robert Koch, who are revered as fathers of microbiology and bacteriology. At a time when viruses, nanobacteria and astrobiology were unknown and when “the germ theory of disease” was in its infancy, both scientists held rigid views as to what was possible and not possible in biology. And neither Pasteur nor Koch could fathom the concept that living organisms might arise from non-living sources.

Unfortunately, Pasteur (1822-1895) had no medical training. He was consumed with fermentation experiments and with proving “air germs” were the basis for human disease, although he provided no explanation for the origin of atmospheric germs or how life began on Earth. Koch (1843-1910), who discovered the bacteria that caused tuberculosis, was obsessed with classifying microbes grown in the laboratory into exact species, depending on their size, structure, physical, and chemical properties. He insisted the species that were created were pure and stable; and that species were unable to change back and forth between each other. According to Koch, each species of bacteria produced a separate and distinct disease. Each germ also had to originate from similar “parent” germs - which reproduced by dividing in half by “binary fission.”

Not every physician of that era believed all the pronouncements of Pasteur and Koch. A few physician-scientists challenged them because they knew what was often “proven” in laboratory experiments might not always be applicable to what was going on with bacteria hidden within the human body.

Antoine Bechamp (1816-1908) was no slouch in the science department and was well-known as a scientific rival of the famous Pasteur. The Frenchman was not only a Doctor of Medicine and Science, but at various times was also Professor of Medical Chemistry and Pharmacology, and Professor of Physics, Toxicology, and Biological Chemistry. There is also some evidence that Pasteur plagiarised much of Bechamp’s original research.

Pasteur, however, is credited in history with saving the French beer and wine and silkworm industries, and with pasteurisation and vaccine research.

Bechamp, despite his brilliance, was eventually eclipsed by the younger man. The details of the scientific controversy and plagiarism accusations are chronicled in E. Douglas Hume's book, **Bechamp or Pasteur?: A Lost Chapter in the History of Biology** (1923), remarkably still in print.

Bechamp had his own ideas concerning the origin of life and the germ theory of disease. In animal and plant cells he observed infinitesimal microscopic "granulations" that he considered the incorruptible elements of all life. After many laboratory experiments and microscopic examinations of these granules, the physician-scientist claimed these so-called "microzymas" were capable of developing into common living organisms that go by the name of bacteria.

In his view, Pasteur's "air germs" had nothing to do with the origin and appearance of these microzymas in tissue. In fact, Bechamp wrote that Pasteur's air germs most likely derived from dying life-forms. Like Folk a century later [see Part One of this article], Bechamp found barely visible microzymas/bacteria in chalk and limestone that he interpreted as survivor life-forms of past ages. Although all the microzymes looked similar, they varied in their chemical abilities. Each tissue, or organ, or gland had microzymas that differed from each other.

Hume claims Bechamp and his colleagues showed these tiny microzymas were, in reality, "organised ferments" with the potential to develop into bacteria. In this development, they passed through certain intermediary stages. Some of these intermediate bacterial stages were regarded by people like Koch as different species, but to Bechamp they were all related and derived from microzymas. Adding more heresy to Pasteur's dogma, Bechamp wrote that without oxygen, microzymas do not die - they go into a state of rest. Bechamp preached, "Every living being has arisen from the microzymas, and every living being is reducible to the microzymas."

Like Bechamp, Henry Charlton Bastian's (1837-1915) studies investigating the origin of life were closely tied into his understanding of the origin of infectious disease. He was also the last of the great scientists to uphold the theory of "spontaneous regeneration", by concluding that life could come from non-life. Like Reich a century later, he argued that microorganisms were produced as by-products of the disease process, not as opportunistic infections, but from degenerating tissue by a process Bastian termed "heterogenesis." Heterogenesis is the idea that living organisms can arise without parents from organic starting materials - an idea certainly not in accord with Pasteur and Koch.

Bechamp and Bastian's research was also a threat to the followers of Charles Darwin (1809-1882), whose evolution theories revolutionised science. Like Pasteur, Darwin was not a medical doctor and had no training in human pathology. And while doctors like Bechamp and Bastian and others were discovering new forms of life emanating from human diseased tissue and from the bowels of limestone, Pasteur, Koch and the Darwinians simply disregarded all this in favour of their own research and pronouncements.

Bastian paid dearly for his unorthodoxy (and for some well-publicised but failed experiments) and his once-famous name is largely forgotten. Microbiologist and science professor James Strick has recently revived interest in Bastian's books and research and his books on the origin of life; and a six-volume set reprinting much of his work has been recently published. Strick is also the author of **Sparks of Life** (2000), which chronicles the famous nineteenth century scientific and bacteriologic debates over Darwinism and spontaneous generation.

Pleomorphism and the Classification of Bacteria

Koch, famous for his tuberculosis discoveries, was rigid in his belief that a specific germ had only one form (monomorphism). And he opposed all research showing some germs had more than one form (pleomorphism) and complex "life cycles." Thus, from the very beginning of bacteriology there was conflict between the monomorphists and the pleomorphists, with the former totally overruling the latter and dominating microbiology to this day.

In the attempt to "classify" bacteria as the lowest forms of life known at that time, there was no consideration given to any possible "connection" between the various species of bacteria. The dogma was that a coccus remained a coccus; a rod remained a rod; and there was no interplay between them. There was no "crossing" from one species to another, and the research of the pleomorphists suggesting otherwise was ignored.

When viruses were discovered they were made separate from bacteria, although bacteria are also known to be susceptible to viral infection. Viruses were put in one box; bacteria in another. As a result, the spectacular number of "filterable" pleomorphic microbial forms that form a bridge between the "living" bacteria and the "dead" viruses are still largely unstudied and considered of no great importance in clinical medicine.

Most doctors simply want to know the name of the microbe, if any, cultured in the lab from their specimens; and what antibiotics the germ is "sensitive" to. Thanks to Pasteur, common "skin" bacteria like cocci and bacilli are often viewed as suspicious "contaminants" or "secondary invaders" or "opportunistic infections" of no great importance as etiologic agents.

Koch's postulates became dogma to prove that certain bacteria cause disease, but the postulates did not work very well for viruses. And even when "filterable" pleomorphic bacteria were shown to cause disease and Koch's postulates were fulfilled, the research was still generally ignored because such germs were not considered "valid" life-forms.

As a result of all this dogma and rigidity, medical thought was completely turned off to the possibility cancer was caused by bacteria. But to the minds of some medical heretics, these century-old scientific beliefs were wrong, wrong, wrong.

Cancer and the “Cancer Microbe”

As some scientists are finally realising, there is a large realm of microbial life-forms that lie between “bacteria” and “viruses.” It is this relatively uncharted never-never land of microbiology that lies at the heart of life, disease, cancer, death, regeneration, and perhaps even immortality.

In the life of every researcher there is a person or group of people to whom a great debt is owed. In my scientific life as a practising dermatologist and as a clinical researcher, there are four women who are my icons in medical science. All four I knew personally as valued friends, and each contributed greatly to my understanding of the greatest mystery of medical science: the origin and cause of cancer.

The combined reported research of Virginia Wuerthele-Caspe Livingston (a physician), Eleanor Alexander-Jackson (a microbiologist), Irene Diller (a cell cytologist), and Florence Seibert (a chemist famous for developing the TB skin test), is indeed a treasure-trove for anyone seeking to learn about “the cancer microbe” and the heretical microbiology of cancer. I wrote about these now deceased women in my book, **The Cancer Microbe** (1990), and I connected their cancer research to Bechamp’s and Bastian’s discoveries in the nineteenth century, as well as to Wilhelm Reich’s condemned cancer and orgone research.

In 1950, Wuerthele-Caspe Livingston and Alexander-Jackson, along with John A. Anderson (head of the Department of Bacteriology at Rutgers), James Hillier (head of electron microscopy at the RCA Victor Laboratories at Princeton), Roy Allen (a cell histologist), and Lawrence W. Smith (author of a well-known pathology textbook used in medical colleges), all combined their talents to write a paper entitled “Cultural Properties and Pathogenicity Obtained from Various Proliferative and Neoplastic [cancerous] Diseases,” published in the December issue of *The American Journal of the Medical Sciences*. The characteristics of the cancer microbe in blood, tissue, and culture, were described in detail; and the extreme pleomorphic nature of the organism was revealed in photos taken with the electron microscope at a magnification of 31,000X.

The cancer microbe (which she later called Progenitor cryptocides) was filterable through a pore designed to hold back bacteria. But in the filtrate were “virus-sized” microbial forms, which grew in time to the size of conventional bacteria. For the next two decades these four women and their colleagues continued publishing details about the microbiology of cancer. Livingston’s two books, **Cancer: A New Breakthrough** (1972) and **The Conquest of Cancer** (1984) are unfortunately now out-of-print.

Livingston believed everyone carried cancer microbes in their blood and tissues. And the microbe was essential for life. In 1974, she discovered some cancer-associated bacteria produced an HCG-like hormone - the human chorionadotropin hormone, which is an essential hormone needed to start life in the womb. But she also thought the microbe was the germ that did

most people in as they aged. The microbe was Mother Nature's built-in terminator to force old people off the planet and to make room for new life on the planet.

At the time of her death in 1990, Livingston was widely regarded among the cancer establishment as a quack. Even though her research was published for three decades in reputable medical journals, the American Cancer Society still claims her "cancer microbe" does not exist. An ACS-sponsored Internet web page states: "One report on the bacteria Progenitor cryptocides, which Dr. Livingston-Wheeler claimed caused cancer, found that the bacteria does not exist but is actually a mixture of several different types of bacteria which Dr. Livingston-Wheeler labelled as one." Who was the author of the report claiming her microbe did not exist? According to the ACS, the author was "anonymous."

Over the past four decades I have tried to keep this research alive by showing pleomorphic cancer bacteria in human cancer and in certain other diseases of unknown origin. For readers with Internet access, some of my photos of cancer microbes are presented on the web site of the on-line *Journal of Independent Medical Research* (www.joimr.org); and abstracts of my medical publications can be found on the National Library of Medicine's "PubMed" web site (www.ncbi.nlm.nih.gov/PubMed/). Simply type in "A Cantwell + cancer bacteria".

In my research I have observed germs grown in the lab from cancerous tissue. Frequently they grow as simple round cocci, or as a mixture of cocci and rod-shaped bacilli, and rarely as streptococci. From diseases like scleroderma, I have seen "old" cultures evolve into peculiar and highly pleomorphic fungus-like "actinomycete" organisms, or evolve into bacteria resembling tuberculosis-type bacteria. Not infrequently, expert microbiologists could not agree on what to name these pleomorphic bacteria.

I have seen microbes change from one species to another, depending on what they are fed in the laboratory - staphylococcus germs that turn into rod-forms of corynebacteria and back again to "pure" staphylococcus, depending on the lab media for growth. But most importantly, I have seen these bacteria in specially-stained (acid-fast stain) tissue sections made from cancerous tissue, indicating these microbes are not contaminants falling out of the air. And decade after decade all cancer microbe research remains forgotten, ignored, and overlooked because physicians cannot conceive of such bacteria as causing cancer.

Milton Wainwright at the University of Sheffield, UK, is a rare microbiologist who has written sympathetically about the bacteriology of cancer, titling some of his recent publications: "Nanobacteria and associated 'elementary bodies' in human disease and cancer" (1999); "The return of the cancer germ; Forgotten microbiology - back to the future" (2000); "Highly pleomorphic staphylococci as a cause of cancer" (2000); and "Is this the historical 'cancer germ'?" (2003).

In, **Can Bacteria Cause Cancer?: Alternative Medicine Confronts Big Science** (1997), David J. Hess charts the history of bacteria as etiological agents in cancer. An anthropologist at Rensselaer University, he claims this research has not only been forgotten or disregarded, but actively suppressed. Hess cites financial and professional interests, as well as more general cultural factors to help explain the suppression.

Body Blood Bacteria

The idea that the blood contains bacteria related to cancer has been repeatedly raised by various cancer microbe researchers. But the idea was never taken seriously because bacteria grown from cancer patients were never considered anything more than inconsequential bacteria like staph, strep, and various common bacilli of no etiologic significance. Furthermore, these bacteria are believed to be frequent laboratory 'contaminants.' Physicians still expect disease-causing bacteria to be of a specific species type and to cause a "specific" disease. And medical doctors believe each form of cancer is "different." The variety of different species of pleomorphic bacteria recovered from various forms of cancer makes physicians highly dubious about a bona fide cancer microbe specific for cancer.

In a series of papers (1970-1979) using the electron microscope and various testing procedures, an Italian team of researchers headed by Guido G. Tedeschi showed that the erythrocytes (red blood cells) and the blood platelets of both normal and diseased patients are cryptically infected with pleomorphic bacteria. Electron-dense "granular bodies" were found within the erythrocytes, and a variety of microbial forms and species were reported as mycoplasma-like and corynebacteria-like L-forms of bacteria, staphylococcus epidermidis, micrococci, cocci, and cocco-bacillary forms.

Such microbes are similar to what various cancer microbe researchers have reported over the past century. Some of Tedeschi's microbes were acid-fast, a staining quality characteristic of Livingston's cancer microbe.

All of this indicates that human blood is definitely not sterile, and should raise suspicion these tiny blood bacteria could be involved in the production of disease - a conclusion Wilhelm Reich came to a half-century ago. Like Reich, Tedeschi's team suggested the evolution of cocci and diphtheroids taking origin from cell-wall-deficient forms seems not to be related to a particular state of illness, but to be the consequence of a generalised crypto-infection.

A more recent study entitled "Are there naturally occurring pleomorphic bacteria in the blood of healthy humans?", by R.W. McLaughlin and associates in the *Journal of Clinical Microbiology* (December 2002), confirms the presence of a wide diversity of microorganisms within the blood of healthy people. And with new research showing nanobacteria in the blood, it is apparent there is much to learn about the bacteriology of the blood and what it contains normally and what it contains in disease.

As they have done for a century, microbiologists will undoubtedly quibble about what to name these organisms. But what is much more important than a name is to determine what they “do” - not in the laboratory, but in the human body. What is the energy force that allows these microbes to exist in harmony with us? And what turns them into killers?

Science, Soul, Spirit, and Immortality

Helena P. Blavatsky (1831-1891) is the controversial founder of the science of Theosophy, a philosophical and spiritual group with a keen interest in the origin of life. In researching this article, I came across her name on a web page connected to Bastian’s nineteenth century studies on tiny bacteria in limestone. Her ideas about the origin of life are amazingly prophetic in light of current findings of nanobacteria in microbiology and geology, and her idea of a “vital force” seems similar to Reich’s “orgone energy.”

Blavatsky wrote: “Life is not the expression of the organism, but, on the contrary, the organism is the expression of some prior and indestructible vital force. Nothing ever dies. Life’s opposite is not death, but latency. Indeed... one is compelled to ask whether all humanity, past and future is not imprisoned in latent form in the rocks and sands of our terrestrial sphere.”

In *The Secret Doctrine* (1888), she claims: “Everything that *is*, *was*, and *will be*, eternally IS, even the countless forms, which are finite and perishable only in their objective, not in their *ideal* Form. They existed as Ideas, in the Eternity, and, when they pass away, will exist as reflections.”

Science has little or nothing to say about spirit, soul, and the hereafter. And skeptics are always seeking “proof.” But if a disease like cancer is indeed caused by microscopic bacteria, it would indicate physicians have been unable to see what was quite plain for some nineteenth and twentieth century scientists to observe using simple light microscopy. And with powerful electron microscopes there is now little excuse for not “seeing” bacteria. With this in mind, it would behoove scientists, especially cancer experts, to do a little soul-searching (pun intentional).

In addition, scientists cannot seem to agree where life begins. So can we trust them completely to know when life ends? If human life continues after death, it must exist largely as energy. And can energy ever be destroyed? Einstein tells us matter and energy are interconnected and essentially different forms of the same thing. And physicists are excited about the possibilities of quantum physics, which is beyond my ken. Professor of Mathematical Physics, Frank Tipler, confidently proclaims physics will lead to the immortality of humankind. In his controversial book *The Physics of Immortality* (1994) he states, “Either theology is pure nonsense, a subject with no content, or else theology must ultimately become a branch of physics... The Goal of physics is understanding the

ultimate nature of reality. If God is real, physicists will eventually find Him/Her.”

In the Bible, God tells us we came from dust - and to dust we shall return, which is not terribly encouraging for those not confident about an afterlife. But what if dust contained elements and building blocks that could re-make life over and over again for all eternity? And isn't Earth basically a big pile of dust? And couldn't this be “God's little secret” He wants us to unravel?

And what is life if it is not pulsating with cosmic energy? If the tiniest of life forms can exist in meteors millions or billions of years old, and if we are composed and descended from the tiniest forms of life, why can't we live forever?

All we might need is a speck of dust and a little “faith” to ignite that spark of life that would get us going again.

Dr. Cantwell is a researcher on AIDS, cancer, and biological warfare. His book on man-made AIDS, **Queer Blood: The Secret AIDS Genocide Plot**, is available through the New Dawn Book Service. Many of his writings can be found on google.com and the New Dawn web site. His published medical papers are listed on PubMed.