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AIDS: 'It's the bacteria, stupid!'

The article "AIDS: 'It's the bacteria, stupid!'" by Lawrence Broxmeyer and Alan Cantwell, published here in readable form. The paper as originally published is kept as a download: Download the original paper (PDF).

AIDS: "It's the bacteria, stupid!" Lawrence Broxmeyer a,*, Alan Cantwell b a C/o Med-America Research, 208-11 Estates Drive, Bayside, NY 11360, USA b Kaiser Permanente Medical Center, 11668 Sherman Way, North Hollywood, CA 91605, USA Received 1 May 2008; accepted 4 June 2008 Summary Acid-fast tuberculous mycobacterial infections are common in AIDS and are regarded as secondary "opportunistic infections." According to the National Institute of Allergy and Infectious Diseases, TB is the major attributable cause of death in AIDS patients. Could such bacteria play a primary or causative role in AIDS? Certainly, In screening tests for HIV, there is frequent, up to 70%, cross-reactivity, between the gag and pol proteins of HIV and patients with mycobacterial infections such as tuberculosis. By 1972, five years before gays started dying in the U.S., Rolland wrote Genital Tuberculosis, a Forgotten Disease? And ironically, in 1979, on the eve of AIDS recognition, Gondzik and Jasiewicz showed that even in the laboratory, genitally infected tubercular male guinea pigs could infect healthy females through their semen by an HIV-compatible ratio of 1 in 6 or 17%, prompting him to warn his patients that not only was tuberculosis a sexually transmitted disease, but also the necessity of the application of suitable contraceptives, such as condoms, to avoid it. Gondzik's solution and date of publication are chilling; his findings significant. Since 1982 Cantwell et al found acid-fast bacteria closely related to tuberculosis (TB) and atypical tuberculosis in AIDS tissue. On the other hand molecular biologist and virologist Duesberg, who originally defined retroviral ultrastructure, has made it clear that HIV is not the cause of AIDS and that the so-called AIDS retrovirus has never been isolated in its pure state. Dr. Etienne de Harven, first to examine retroviruses under the electron, agrees. In 1993 HIV co-discoverer Luc Montagnier reported on cell-wall-deficient (CWD) bacteria which he called "mycoplasma" in AIDS tissue. He suspected these as a necessary "co-factor" for AIDS. Remarkably, Montagnier remained silent on Cantwell's reports of acid-fast bacteria which could simulate "mycoplasma" in AIDS tissue. Mattman makes clear that the differentiation between mycoplasma and CWD bacteria is difficult at best and cites Pachas's 1985 study wherein one mycoplasma was actually mistaken for a CWD form of a bacterium closely related to the mycobacteria. It is important to realize that the statement "HIV is the sole cause of AIDS" is just a hypothesis. There are unanswered questions and controversy concerning the role of HIV "as the sole cause of AIDS." And until they are resolved, a cure is not possible. This paper explores the possible role of acid-fast tuberculous mycobacteria as "primary agents" in AIDS. /C14c 2008 Elsevier Ltd. All rights reserved. Introduction In a startling new report, a team of Slovakian

researchers headed by Vladimir Zajac has found 0306-9877/$ - see front matter /C14c 2008 Elsevier Ltd. All rights reserved. doi:10.1016/j.mehy.2008.06.012 * Corresponding author. . E-mail address: medamerica1@verizon.net (L. Broxmeyer). Medical Hypotheses (2008) xxx, xxx–xxx www.elsevier.com/locate/mehy ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: ‘‘It’s the bacteria, stupid!’’, Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

genetic sequences of HIV (the human immunodefi- ciency virus) in various bowel bacteria cultured from AIDS patients [1]. It is well-known that HIV at- tacks blood cells of the immune system, but this is the first study indicating HIV can also infect bacte- ria naturally contained within the body. Gastrointestinal disturbances are universal in AIDS. Early in the epidemic, microbiologists Beca Damsker and Edward Bottone found frequent infec- tion with Mycobacterium avium in the colon and rectal tissues in gay men with [2] AIDS. It is not known if these mycobacterium contained gag-pol- env genes. HIV as the ‘‘sole’’ cause of AIDS Ever since HIV was isolated in 1984 by Robert Gallo, the scientific mantra has been that ‘‘HIV is the sole cause of AIDS.’’ However, since 1982 there have been reports by Cantwell et al. that ‘‘acid-fast bacteria’’, closely related to tuberculosis (TB) and to non-tuberculosis (atypical tuberculosis) acid-fast mycobacteria, might play a primary role in the pathogenesis of AIDS [3–8]. Cantwell’s re- ports of acid-fast bacteria in AIDS have been lar- gely ignored by the scientific community. However, a small but highly vocal group of scien- tists, called ‘‘the Perth Group’’, denies that HIV is the sole cause of AIDS. Other ‘‘dissident’’ scien- tists, headed by molecular biologist and virologist Peter Duesberg[9,10], claim that HIV is not the cause of AIDS and that the so-called AIDS retrovirus has never been isolated in a ‘‘pure state.’’ As one of the first to actually define retroviral structure, Duesberg’s opinion is not to be taken lightly. Tuberculosis and AIDS When viewed microscopically, mycobacteria are stained red by carbol-fuschsin, the color of the ini- tial stain used in the acid-fast staining procedure. All other bacteria are decolorized by an acid-alco- hol rinse, the next step in the staining procedure. Typical TB-causing bacteria are therefore referred to as ‘‘acid-fast’’. Tuberculosis (TB), caused by Mycobacterium tuberculosis, remains the most frequent cause of death worldwide from any single infectious dis- ease, and the numbers are increasing yearly. According to the National Institute of Allergy and Infectious Diseases. TB is the major attributable cause of death in HIV/AIDS patients. One out of every three people with HIV/AIDS worldwide dies of TB [11]. People who are HIV-positive and in- fected with TB are 30 times more likely to develop active TB than people who are HIV negative. TB acid-fast bacteria enhance HIV replication and accelerate the natural progression of HIV infection. In developed countries such as the U.S., the most common acid-fast species found in AIDS is a atypi- cal tuberculous bacterium called Mycobacterium avium, or fowl tuberculosis. These infections are often resistant to treatment with anti-TB medications. Figure 1 Microscopic tissue section of AIDS-related Kaposi’s sarcoma of the skin. Arrows point to variably-sized acid- fast coccoid (round) and granular forms in the tumor. Acid-fast (Fite) stain, magnification · 1000, in oil. 2 Broxmeyer and Cantwell ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: ‘‘It’s the bacteria, stupid!’’, Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

A half century ago only a few species of myco- bacteria were known to cause infection in humans. Leprosy is a well-known acid-fast mycobacterial disease caused by M. leprae. Using modern molecular biology techniques such as PCR, there are now more than 130 recognized species of tuberculosis-like mycobacteria. Myco- bacteria are found everywhere in nature, in soil, food and water. Cell-wall deficient acid-fast mycobacteria In laboratory culture and in tissue stained with an acid-fast stain, the red-stained and rod-shaped Figure 2 Microscopic tissue section of lung showing ‘‘interstitial pneumonitis’’ occurring in a fatal case of AIDS. Arrows point to round coccoid forms.

Compare the size and form of these tiny round bodies to those seen in Mycobacterium avium (Figure 3), which was cultured from bronchoscopic washings in this case. Acid-fast stain, · 1000, in oil. Figure 3 Laboratory culture of Mycobacterium avium cultured from a case of AIDS-related "interstitial pneumonitis". The culture is pleomorphic, in that it contains acid-fast rod forms and non-acid-fast round coccal forms, as indicated by arrows. Compare the size of these cocci with the tiny round forms observed in the lung in Figure 2. Acid-fast stain, · 1000, in oil. AIDS: "It's the bacteria, stupid!" 3 ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: "It's the bacteria, stupid!", Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

bacillus is the classic form of mycobacteria, easily identified by pathologists and microbiologists. (See Fig. 4). However, in AIDS, the acid-fast bacteria re- ported by Cantwell et al in AIDS-damaged tissue sections are primarily in the cell-wall-deficient (CWD) form, and since the integrity of their cell wall is disrupted, they are easily mistaken for mycoplasma or viruses. Such forms are "pleomor- phic" (i.e., they have many forms) and frequently appear as round coccal forms which are not stained a bright red, but rather a magenta color. Because these cell-wall-deficient forms of tuberculosis are generally not recognized, and not looked for by pathologists, they generally go undetected in dis- eased tissue. Beginning in 1982, these pleomorphic, acid-fast bacteria were reported by Cantwell in the enlarged lymph nodes of early AIDS, in the lesionsof AIDS-re- lated Kaposi's sarcoma and throughout the various organs and connective tissue of AIDS victims at au- topsy. (Figs. 1–4). Bacteria as a necessary co-factor in AIDS According to one website, 2610 scientists and edu- cators have expressed doubts that "HIV" causes AIDS (http://www.rethinkingaids.com/ quotes/ rethinkers.htm). Nevertheless, the mantra that "HIV is the sole cause of AIDS" is so well-known and accepted universally that any suggestion to the contrary is usually met with disdain by the AIDS establishment. One notable example of this disdain was provided by TIME magazine's Man of the Year in 1996, AIDS researcher David Ho MD[12], who fa- mously declared: "It's the virus, stupid!" Despitethis, in1993LucMontagnier, theoriginal discoverer of HIV at the Pasteur Institute in Paris, reported on bacteria (via culture and biochemical techniques) in the form of mycoplasma (CWD bac- teria) as a suspected necessary co-factor in AIDS [13]. And at the same time, remarkably, he re- mained silent on Cantwell's reports of acid-fast bacteria which could simulate "mycoplasma" in AIDS tissue. At present, the precise connection be- tween Montagnier's mycoplasma and Cantwell's cell-wall-deficient (CWD) acid-fast bacteria has not been established. In her classic text Cell Wall Deficient Forms-Stealth Pathogens, microbiologist Lida Mattman [14] makes clear that the differenti- ation between mycoplasma and CWD bacteria is difficult at best and cites a study by Pachas [15] et al which confirmed that one mycoplasma was actually mistaken for a CWD form of a bacterium closely related to the mycobacteria. Virus-like forms of mycobacteria in AIDS Lost in the history of microbiology is the concept of a "tuberculosis virus." A century ago, in 1908, Hans Much [16] first described the tiniest virus-like granules of TB bacteria, which eventually became known as "Much's granules," the precise nature of which remains controversial to this day. Two years later, A. Fontes proved the granules were fil- terable, meaning they were able to pass through laboratory filters designed to hold back bacte- ria.[17] As they were too small to be seen micro- scopically, they became known as the TB 'virus'. Figure 4 Microscopic tissue section of AIDS-related "immunoblastic sarcoma" tumor of the face showing 3 typical red-staining acid-fast rods. These rod forms were exceedingly rare. However, weakly acid-fast coccoid forms were more numerous in the tumor. Mycobacterium avium was cultured from this tumor. Acid-fast stain, · 1000, in oil. 4 Broxmeyer and Cantwell ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: "It's the bacteria, stupid!", Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

When injected into guinea pigs the granules and other forms of the filterable TB bacteria reverted and transformed back into their classic acid-fast, rod-shaped bacillus form and produced immune system disease, and even tuberculosis in the animals. Mellon and Fisher [18], appearing in The Journal of Infectious Diseases had actually warned that such filterable forms of M. Avium and M.Tuberculo- sis could easily be mistaken for both viruses and mycoplasmic-like forms, citing 'the common find- ing by French workers of acid-fast bacilli in the glands of guinea pigs into which viral-like (cell free) filtrates of tuberculosis material had been in- jected'. It is these tiny granular and coccal forms (not the typical bright-red-stained rod-shaped bacillus characteristic of the TB germ) that can be observed in acid-fast-stained AIDS tissue. Physician Virginia Wuerthele-Caspe Livingston [19] was the first to discover that the virus-like tuberculous CWD forms of pleomorphic bacteria that she found in cancer and other immunologic diseases were ''acid-fast'' at some stage of their growth, and that this staining reaction was the key to identifying these ''cancer microbes'' in can- cer and in tissue. To the extent that she also under- stood that these organisms could be sexually transmitted, she suspected the same type of organ- isms were implicated in AIDS. The specificity of the HIV test and the ''purity'' of HIV AIDS dissidents [20] question whether HIV is truly a virus, as well as the significance, accuracy and specificity of the HIV blood test. It should be noted that the manufacturers of the various HIV blood tests never claimed 100% specificity. A positive HIV test should be viewed as a starting point for physicians to follow-up with further blood tests to determine the immune system's status and the number of T cells in a patient suspected of having HIV. However, tuberculosis can also drastically de- crease the number of the body's T cells [21].A ''positive'' HIV test can be encountered in some- one who is not infected with HIV. This can be due to ''cross-reactivity''. According to Kashala [22], false-positive HIV tests can occur in up to 70% of patients infected with acid-fast mycobacteria such as TB or leprosy. AIDS dissidents [23] believe HIV has never been isolated in ''pure'' culture. HIV was originally iso- lated in Gallo's virology laboratory by pooling the blood of ten AIDS patients and seeding the mix into a cell-line comprised of leukemic (cancerous) blood cells. Although this might make some bacte- riologists cringe, this pooling of patients' blood en- abled Gallo to grow enough HIV to devise a blood test for the virus. The HIV test has been highly suc- cessful in screening out HIV-infected blood donors. But could ''pure'' cultures of HIV contain cellu- lar elements and/or CWD/bacteria such as those found in tuberculosis? Etienne de Harven, M.D., a renowned electron microscopist and authority on the microscopical appearance of retroviruses [24], thinks so. He insists that so-called HIV purified cultures are contaminated with cellular debris, and that he has never been able to visualize any retro- viral particle in the blood of an AIDS patient, even those with a very high ''viral load.'' But what about pictures of HIV widely promoted in the media? According to de Harven, ''These pic- tures are extremely attractive, and are frequently rich in artificial colors. They clearly exemplify the danger of misinforming the public with computer graphics. To publish such images brings to the attention of the general public, and of the medical profession as well, an apparently crystal- clear mes- sage: 'Yes, HIV has been isolated since one can por- tray it under the electron microscope.' All these images represent computerized rationalizations and embellishments of actual electron microscopic pictures....but not one of these pictures originated directly from one single AIDS patient! They all orig- inated from complex cell cultures prepared in var- ious laboratories, cultures that have been described as 'real retroviral soups'.'' De Harven, the first researcher to ever visualize a retrovirus under an electron microscope, concludes: HIV has never been properly isolated, nor purified, and consequently, the HIV/AIDS hypothesis has to be fundamentally reappraised. Microbiologist and electron microscopist Phyllis Evelyn Pease[25,26],

author of AIDS, Cancer and Arthritis: A New Perspective (2005), agrees with de Harven. She takes issue with the new techniques of molecular biologists and virologists, by stating, ‘‘Reliability has been placed on physical/chemical techniques, which are greatly favored by biochem- ists but which are not suitable for microbiological materials unaccompanied by microscopic meth- ods.’’ Biochemists, Pease says, usually have a poor understanding of microorganisms as living crea- tures. They tend to regard bacteria as laboratory tools – as bags of enzymes, or as culture media, for example – and to believe that biochemical techniques are all that are necessaryfor identifying and isolating viruses. The result of this simplistic approach is that it has been accompanied by the virtual abandonment of that sine qua non for a properly trained microbiologist, the microscope, AIDS: ‘‘It’s the bacteria, stupid!’’ 5 ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: ‘‘It’s the bacteria, stupid!’’, Med Hypotheses (2008), doi:10.1016/j.mehy. 2008.06.012

and in the case of filterable forms of bacteria and viruses, this means the electron microscope. With- out these aids and the controls that they offer, it has become apparent that what have passed as preparations of pure virions have in fact been con- taminated not only with filterable forms of bacte- ria, but also with cellular materials derived from the tissue cultures in which the viruses have been cultured. In a review essay of Pease’s book, former Lon- don Times science editor Neville Hodgkinson con- cludes ‘‘Pease’s book is the most authoritative and microscopically precise account to date of the failings of the HIV theory of AIDS.’’ (http:// www.immunity.org.uk/images/ Neville_H_Review. pdf). Could unrecognized elements of tuberculous acid-fast bacteria be present in the leukemic cell lines used to grow HIV? Largely unknown is the fact that acid-fast bacteria were identified and re- ported in leukemic, as well as in other forms of cancer, many decades ago by Seibert et al. As a biochemist, Florence Siebert Ph.D.[27,28], (1897–1991) contributed greatly to the develop- ment of the modern TB skin test, still in wide use. An expert on contaminants, she discovered ‘pyrogens’ in water for injection, the removal of which set the standards for injectable water. Hav- ing done such, her opponents were put on notice that Florence Seibert knew exactly what a contam- inant was. Seibert devoted the last years of her life to cancer microbe research and believed fully in bacteria as causative agents in cancer and leuke- mia. Along with dozens of other cancer microbe workers (including Pease), Seibert et al. reported on bacteria in leukemia at a New York Academy of Sciences symposium in 1969. Publishing her can- cer work in 1970, she was inducted into the Na- tional Women’s Hall of Fame in 1990, at the age of 92. Her discovery of virus-sized bacteria in leu- kemia suggests that it is unwise to grow a virus, such as HIV, in leukemic cells. In her privately-published autobiography Peb- bles on the Hill of a Scientist[29], she wrote: ‘‘One of the most interesting properties of these bacteria is their great pleomorphism...and even more interesting than this is the fact that these bacteria have a filterable form in their life cycle: that is, they can become so small that they pass through bacterial filters which hold back bacteria. This (ability to pass through filters) is what viruses do, and is one of the criteria of a virus, separating them from bacteria. But the viruses also will not grow live on artificial media like these bacteria do. They need body tissue to grow on. Our filter- able form, however, can be recovered again on ordinary artificial media and will grow on these. This should interest the virus workers very much and should cause them to ask themselves how many of their viruses may not be filterable forms of our bacteria.’’ (Italics ours). AIDS bacteria and viral bacteriophages Further complicating the precise role of bacteria in AIDS is the fact that bacteria can be infected with viruses called ‘‘bacteriophages’’ or phage for short. There is no evidence to suggest that HIV is a phage. However, the reality that viruses com- monly infect bacteria gives further credence to Za- jac’s discovery of

HIV genes in bacteria. Are tuberculous mycobacteria in AIDS patients infected with HIV, or do they generate the virus? No one seems to know. Could "phage therapy" be useful in treating AIDS? Phages are ubiquitous in the environment and have antibacterial properties. They were discovered to be antibacterial agents and put to use as such soon afterwards, with varying success. However, with the discovery of broad spectrum, easily manufactured antibiotics, phage therapy was largely abandoned in the West, but continued, unabated, in the former Soviet Union throughout the 1940's. Phage therapy is now seen as a hope against multi-drug-resistant (MDR) strains of many bacteria. Broxmeyer wrote about a proposed phage therapy [30] and was the lead investigator in a Journal of Infectious Diseases study to prove its efficacy.[31] Is HIV a virus-like form of tb-type mycobacteria? A quarter-century ago, Cantwell et al first reported on acid-fast bacteria in AIDS. More recently, in a 2007 paper, Cantwell explored research leading him to ask, whether TB-type bacteria caused AIDS? Previous to this, in 2003, Broxmeyer made a sim- ilar claim by suggesting that AIDS was not caused by "a virus", but was caused by infection with CWD forms of tubercular mycobacteria, in both a book [32] as well as his peer-reviewed Is AIDS Really Caused by a Virus?,[33] Broxmeyer reviews the lit- erature and presents his argument for AIDS as being caused by a mix of atypical and typical tuberculous mycobacteria. His conclusion was supported by among other things, Cantwell's repeated micro- scopic findings of acid-fast bacteria in AIDS-damaged tissue. How are cell-wall-deficient forms of mycobacte- ria created? Antibiotics can be used in bacterial 6 Broxmeyer and Cantwell ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: "It's the bacteria, stupid!", Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

cultures in laboratories to transform ordinary bac- teria into CWD forms. But supported by the previ- ous work of Nelson and Pickett [34], Broxmeyer thinks it is mycobacteriophages inside the body that attack the cell wall of bacteria, thereby trans- forming them into CWD forms. Nelson's study showed that it was only after phage activation that antibiotics and other agents caused CWD forms. In the process, genetic information can be trans- ferred from attacking phage to bacteria. How does Zajac's research fit into this? Brox- meyer suspects the gag-pol-env genes of HIV are mycobacterial in origin. He bases this, in part, on genomic phage studies reported by Lawrence [35] and others in The Journal of Bacteriology entitled Imbroglios of Viral Taxonomy: Genetic Exchange and Failings of Phenetic Approaches. Based upon this, Broxmeyer feels that molecular sequencing of CWD mycobacteria and their phages should be ascertained to determine if there are comparable genetic elements that could "cross-react" with those genes (gag-pol-env), presently attributed solely to HIV. However, to this date, no such study has been undertaken. In an attempt to make an AIDS vaccine, genetic engineers have inserted HIV genes into Mycobacte- rium bovis. In recombining HIV with a mycobacte- rium, Broxmeyer says HIV is acting more or less like a bacterial or mycobacterial phage. So far no recombinant AIDS vaccine has proved effec- tive. Efforts to vaccinate infants against TB at birth by use of the time-honored BCG vaccine (which contains an attenuated strain of M. bovis) have recently caused illness and even death in some HIV-positive infants. The fact that a "live" anti-TB vaccine made with a "harmless" strain of mycobacteria (M. bovis) can cause death is proof of how susceptible AIDS patients are to mycobacterial infections, even those thought to be totally benign. A proposed virus/bacteria hypothesis for AIDS It isimportant torealize thatthe statement "HIV is thesolecauseofAIDS"isahypothesis,andthatthis hypothesiswashastilythrowntogetherinthefaceof an epidemic emergency. However, most scientists still accept the HIV-AIDS hypothesis as fact. The ability of bacteria to pass through filters – andtheabilityofvirusestoinfectbacteria–suggest a close (if

not inseparable) relationship between viruses and bacteria. Tuberculosis mycobacterial infections are the ultimate cause of death in many AIDS patients. In African AIDS cases there is an ever-increasing associated epidemic of XDR (exten- sively drug resistant) TB. There is suspicion that HIVand M. tuberculosis mayhaveexchangedgenet- ic material to account for these resistant strains. However, drug resistant strains of TB are routinely found in patients who do not have AIDS or HIV. Bacterial cells and human cells routinely ex- change genetic material via "horizontal" trans-mission using their bacteriophage viruses. Nevertheless, scientists still seem content to re- gard viruses and bacteria as separate and distinct from one other. Yet there is still much to be learned regarding the pathogenesis of AIDS and health professionals should keep an open mind on the matter of retrovirus versus cell-wall-deficient mycobacteria. And we forecast the day when an important AIDS researcher will take the stage, with similar assur- ance and fervor to declare: "It's the bacteria, stupid!" Appendix A. Supplementary data Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.mehy.2008.06.012. References [1] Zajac V, Stevurkova V, Matelova L, Ujhazy E. Detection of HIV-1 sequences in intestinal bacteria of HIV/AIDS patients. Neuro Endocrinol Lett. 2007;28(5):591–5. [2] Damsker B, Bottone EJ. Mycobacterium avium-Mycobacte- rium intracellulare from the intestinal tracts of patients with the acquired immunodeficiency syndrome: concepts regarding acquisition and pathogenesis. J Infect Dis 1985;151(1):179–81. [3] Cantwell Jr AR. Variably acid-fast bacteria in vivo in a case of reactive lymph node hyperplasia occurring in a young male homosexual. Growth 1982;46(4):331–6. [4] Cantwell AR. Variably acid-fast cell wall-deficient bacteria as a possible cause of dermatologic disease. In: Domingue GJ, editor. Cell-Wall-Deficient Bacteria. Reading: Addison- Wesley Publishing Co; 1982. p. 321–60. [5] Cantwell Jr AR. Necroscopic findings of variably acid-fast bacteria in a fatal case of acquired immunodeficiency syndrome and Kaposi's sarcoma. Growth 1993;47(2): 129–34. [6] Cantwell Jr AR. Kaposi's sarcoma and variably acid-fast bacteria in vivo in two homosexual men. Cutis 1983;32(1): 58–61. 63-4,6. [7] Cantwell Jr AR. Mycobacterium avium-intracellulare infec- tion and immunoblastic sarcoma in a fatal case of AIDS. Growth 1986 Spring; 50(1): 32–40. [8] Cantwell AR, Rowe L. African ''eosinophilic bodies'' in vivo in two American men with Kaposi's sarcoma and AIDS. J Dermatol Surg Oncol. 1985;11(4):408–12. AIDS: "It's the bacteria, stupid!" 7 ARTICLE IN PRESS Please cite this article in press as: Broxmeyer L, Cantwell A, AIDS: "It's the bacteria, stupid!", Med Hypotheses (2008), doi:10.1016/j.mehy.2008.06.012

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