

## SCOTT-MUMBY ON LAETRILE – A REBUTTAL

Though Dr. Keith Scott-Mumby writes beautifully and well about subjects he truly comprehends, his article on Vitamin C being a splendid example, in his piece on Laetrile he has gone completely off the rails. The vehemence of his rage notwithstanding, almost every statement in the article is completely and absolutely untrue. As a journalist I have been studying Laetrile closely for nearly forty years, including three months' residence in 1977 in the then world headquarters of the Laetrile movement, and I can say with some assurance that no one has ever, nor ever will be, injured, let alone killed, by either the consumption of apricot pits, Laetrile tablets, or the administration of intravenous Laetrile, when these are used under physicians' directions according to proper procedure. Any medicine, of course, may be dangerous when used improperly.. Let us turn, then, to the references Keith offers to back up his accusations of lethal toxicity. Keith provides two [!] sources. The first, which he lists as the source for his statement "[Laetrile] is extremely toxic, and regularly kills people" is titled: "Cyanide poisoning after bitter almond ingestion". The bitter almond is a species quite different from the apricot, ingestion of more than three of which per day is most unwise, its kernel has much higher levels of cyanide, its cyanide-containing molecule [see below] is not the same as that found in apricot kernels, and it never been, to the best of my knowledge, used in cancer therapy. Although the bitter almond does in some ways resemble the apricot kernel, to utilize a report of bitter almonds' toxicity to seemingly support the statement that the medical use of apricot kernels or Laetrile, "regularly kills people" is sleight-of-hand, pure and simple.

As anyone who has taken a course in Toxicology 101 learns early on, cyanide is present in small amounts in the majority of human foods - in all animal-derived foods, including, in addition to meat, also fish, eggs, milk, etc., as well as in the majority of fruits and vegetables, notably the cruciferous vegetables broccoli, artichoke, etc., and most notably in cassava melon and, of course, bitter almonds. The human body is well equipped to deal with this common natural chemical by the means of the enzyme transulfurase, or rhodanase, which is present in goodly amounts in every cell, except in cancer cells, where it is found in much smaller amounts, on the average, at the level of 2 % of what normal cells have. Rhodanase detoxifies cyanide into the very mildly "toxic" muscle relaxant thiocyanate, which is ultimately excreted in the urine. The question of the toxicity of thiocyanate has been, in fact, the subject of an ongoing toxicological debate throughout much of the twentieth century, one researcher having deliberately consumed one gram, an enormous amount, of thiocyanate, daily for more than twenty years without finding any evidence of harmful effect.

Keith writes "Amygdalin is not Laetrile and vice versa. Laetrile is a patented scam by altering the molecule. So forget the propaganda it's somehow natural or "holistic". There's a little confusion here. The term Laetrile refers to any of a group of chemicals known technically as cyanogenic [or cyanophoric] glycosides, or nitrilosides, a family of molecules widely distributed throughout nature that share the property of releasing cyanide when cleaved by the appropriate enzyme. Amygdalin is the Laetrile or cyanogenic glycoside found in apricot kernels; Prunasin is the Laetrile found in prune kernels and nectarine kernels, and so on. When the human body ingests Amygdalin it must first convert it to the glucuronide form before it can be cleaved, hence, if it is converted to the glucuronide before ingestion, a slight increase in efficiency is thought to result. This form is apparently the one Keith refers to as a "patented scam". To return to Keith's statement : " [Laetrile] is extremely toxic and regularly kills patients", there is no evidence whatsoever that this has in fact ever happened. During the twenty-nine year period in which Laetrile was in legal use the clinics and physicians who used it were under constant, and often quite hostile, scrutiny by various government agencies both national and local, as well as state and local police, the press, including radio and TV news, agents of the pharmaceutical industry, the

American Cancer Society, and other medical organizations. Had a reasonable case for a charge of murder surfaced at any time during this period, the authorities would have jumped at the chance to discredit Laetrile. The physician(s) involved would promptly have been arrested for murder. Headlines around the country would have followed, as Laetrile was often front-page news, and the resulting trial for murder would have been a very hot news item throughout its duration. Yet, funny thing, this never happened. Yes, Laetrile physicians were often indicted and arrested, sometimes fined and even briefly jailed for the "crime" of using a treatment modality not legally sanctioned by the government. Not one of them, however, was ever seriously accused of murder. Yes, Laetrile patients did sometimes die during their time in Laetrile therapy, as many patients came to Laetrile after every other possibility of treatment had failed, indicating a late-stage situation in which survival can usually be, at best, prolonged. Furthermore, cancer takes many different forms, and has many different tissue-types, some of which are more and some less responsive to Laetrile. Moreover, full-blown Laetrile therapy includes dietary modification, detoxification routines, and other measures not always easy to adopt, or are fully adhered to. It should be borne in mind as well that Laetrile was never offered as a "miracle cure", but rather as a medicine useful against cancer with comparatively mild side-effects, as opposed to the notoriously debilitating, and not infrequently lethal, side-effects of conventional therapy. Laetrile's enemies, however, often found it convenient to attack Laetrile as though it had been promoted as an instant, infallible, sure-fire cure for cancer, which it most assuredly never was. The straw-man technique, in which an opponent is falsely accused of claiming the patently impossible and then condemned on that account, was often, and characteristically, employed by those attempting to arouse public anger against Laetrile. I can tell the reader that E.T. Krebs and Andrew R.L. Macnaughton, the two main Laetrile proponents, were two of the finest human beings I have ever encountered. The painting of them as criminals is as wide of the mark as wide can be. They gave their lives to the alleviation of human suffering.

One of the most imaginative, yet not ineffective, of these smear-artists was one Victor Herbert, whose fantasy-ridden article "Laetrile: the cult of cyanide: Promoting poison for profit" forms Keith's second reference source. Keith appears to have swallowed its preposterous misrepresentations hook, line, and sinker. In its opening we are told of the death in Australia of an 11.5-month old baby, who ingested five Laetrile tablets, and died of cyanide poisoning. As regrettable as this is, the blame for it cannot sanely be laid upon Laetrile, but rather on whoever carelessly left the tablets where the infant could reach them. [The usual adult dosage of the standard Laetrile tablet, by the way, is but two per day]. Then we are told of a 17-year old girl who died after swallowing more than three ampoules of Laetrile meant for intravenous injection..But again this represents the radically deranged misuse of a medicinal preparation. The difference between the oral form of Laetrile and the intravenous form is this: the enzyme that cleaves the Laetrile molecule, namely beta-glucosidase, [there is only one such enzyme, not many, as Keith appears to believe when he identifies beta-glucosidase as "one of the enzymes that catalyzes the release of cyanide from Amygdalin"] is present in saliva, in the human gut, in the tissues of the apricot kernel itself, and, most abundantly, in cancer tissue, which tends to excrete it into the body tissue around it. When Laetrile comes in contact with a cancer tumor, therefore, the beta-glucosidase opens up the molecule, releasing cyanide, and the cancer cells, in turn, almost entirely lacking rhodanase, fall victim to the cyanide. While there is, therefore, beta-glucosidase found in many places in the body, there is none of it in the bloodstream. Therefore very large amounts of pure Amygdalin/Laetrile can be safely given intravenously, counter-intuitive though this may seem. However, if this preparation is introduced into the digestive system, cyanide poisoning must necessarily result. Here we have yet another case of Laetrile being entirely incorrectly used. Yet Herbert presents these two cases as proof that Laetrile therapy, as administered by professional clinicians, "often" kills people by cyanide poisoning. And Keith writes "(A)nd doctors in ER dealing with stiffies who have been killed by Laetrile are

not conspirators either", and cites, to back this up, his reference number one - poisoning by bitter almonds! Sleight-of-hand redux.

Keith further writes: "Please don't write and tell me about the work of Dr. Kanematsu Sugiura; I know about it .If you know the full story, you will have read that he could not reproduce his own results, when asked to repeat the experiments under "blind" conditions. He proved himself wrong!". However, this is, once again, the mirror image of the truth. Which is this: by the mid-'seventies so many people had written to Memorial Sloan Kettering Cancer Center in New York about the favorable results they had had with Laetrile therapy, that the Center decided to find out once and for all what was going on. They put their best staff scientist, the internationally-reknowned Kanematsu Sugiura, to researching Laetrile. His results were positive - Laetrile worked. . MSKCC, for reasons we can only guess at, declined to release this information to the public. At that point a dissident group of MSKCC employees decided to release it themselves! Taking the name "Second Opinion", they held a press conference in which Sugiura's work was carefully explained, point by point, to the media. When word of this reached the FDA in Washington, the FDA ordered - that's right, ordered - MSKCC to discredit Sugiura. Whereupon MSKCC put five of their staff investigators to work fabricating experiments that appeared to the uninitiated to disprove Sugiura's work. But these "experiments" are, very clearly, fakes. Some of them could never have happened in the real universe. A case in point: two groups of rats who are bred to develop cancer, the CD8F1 strain, were caged side-by-side; the study group was given Purina Lab Chow, the standard lab fare, as their diet, with the addition of apricot kernels to be eaten "ad lib" - as desired. The second, control group, was given Lab Chow alone. At the end of the experiment all the rats were sacrificed, and their tumors cut out and weighed. And guess what: the two groups' collective tumor weight was exactly the same - to the third decimal place! This despite the groups having been of different size populations. And this was presented as having happened exactly the same in four consecutive experiments - four times in a row! One suspects that whoever wrote this fiction deliberately did so in such a way as to reveal its impossibility to any interested observer. The MSKCC then held a press conference in which an enormous volume of technical data, incomprehensible to any but those skilled in the art. to the press and the media. It was meant to, and did, look very impressive. Dr. Sugiura was present at the conference, and when he was asked by a reporter if, in view of the new "findings" he still stuck by his original work, he replied: "I stick!". Sugiura was then ordered not to speak to the press, and then hidden away in a part of MSKCC not accessible to outsiders. But they never told him not to talk on the phone, and I found his number, and called him up. We had several long and very interesting conversations, from which much of the information given above is derived. There is another source - the "Second Opinion Report: Laetrile at Sloan-Kettering", now out of print but not inaccessible with effort. Dr. Kanematsu Sugiura was regarded by his colleagues, the world over, as the equivalent to the field of animal chemotherapy research, that Albert Einstein was to physics.

By virtue of all of the above, plus much, much more within it, I find Keith's article on Laetrile to be completely misleading and, considering the subject matter, dangerously untrue. It should, in my opinion, be withdrawn from publication, as the reading of it could have unfortunate consequences for some. I personally know of one cancer patient who, on the basis of this article, has decided not to take the apricot pits she has in her possession. There are probably many others. And yet there can be no doubt that Keith is a well-meaning individual, a brilliant writer on the biology of health, and a strong and needed voice in the struggle to overcome the dominance in cancer therapy of a rigid system that, while a strong success financially, loses upwards of 97 per cent of its patients to cancer. Dear Keith: you've been badly fooled. Please turn your considerable powers of investigation to digging deeper!

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