

## Commentary

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# The Curious Case of Charles Darwin and Homeopathy

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In 1849, Charles Darwin was so ill that he was unable to work one out of every 3 days, and after having various troubling symptoms for 2–12 years, he wrote to a friend that he was ‘going the way of all flesh’. He sought treatment from Dr James Manby Gully, a medical doctor who used water cure and homeopathic medicines. Despite being highly skeptical of these treatments, he experienced a dramatic improvement in his health, though some of his digestive and skin symptoms returned various times in his life. He grew to appreciate water cure, but remained skeptical of homeopathy, even though his own experiments on insectivore plants using what can be described as homeopathic doses of ammonia salts surprised and shocked him with their significant biological effect. Darwin even expressed concern that he should publish these results. Two of Darwin’s sons were as incredulous as he was, but their observations confirmed the results of his experiments. Darwin was also known to have read a book on evolution written by a homeopathic physician that Darwin described as similar to his own but ‘goes much deeper.’

**Keywords:** Charles Darwin – homeopathy – homeopathic – homeopath – James Manby Gully – hydrotherapy – water-cure – naturopathy – naturopathic medicine – history of medicine – history of science – extremely small doses – *Drosera rotundifolia* – Sir Charles Hastings – William Court Gully

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## Introduction

The year 2009 is an auspicious year to the memory of Charles Darwin. It is the 200th birth anniversary of Charles Darwin (1809–1882), and the 150th anniversary of the publication of his seminal work, *On the Origin of Species* (1859). And yet few people know that, according to Darwin’s own letters, it is uncertain that he would have lived long enough to have written this important scientific work in 1859 if he had not received treatment in 1849 from Dr James Manby Gully, a homeopathic physician who also used water cure, homeopathic medicines and other unorthodox treatments. This remarkable series of experiences changed the history of science.

When Darwin was just 16 years old, he spent a summer as an apprentice to his father, who was a medical doctor. Later, he attended Edinburgh University to study

medicine. However, he was repulsed by the brutality of surgery and the primitive medical treatments of his day. He initially studied to be a naturalist, but his father insisted that he attend Cambridge University to become a clergyman (at that time, members of the clergy earned a better living than many other professions). After graduating from Cambridge in 1831, he began what became a 5-year journey on the HMS *Beagle* surveying the coast of South America. On board the ship, Darwin suffered from seasickness, and in October 1833, he caught fever in Argentina. In July 1834, while returning from the Andes down to the coast of Chile, he fell so ill that he spent a month in bed.

## The Serious Illness and Near Death of Charles Darwin

Since 1837, Darwin was frequently incapacitated with episodes of stomach pains, vomiting, severe boils, heart palpitations, trembling and other symptoms. Today,

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some physicians have speculated that Darwin caught Chagas disease from insect bites in South America, while others have suggested that he suffered from Ménière's disease, but the orthodox physicians of Darwin's day had no idea what his problem was, and all of their treatments simply made him worse. [Recently, some scientists have speculated that Darwin suffered from systemic lactose intolerance (1), but this remains speculation and may at best represent only one aspect of a more complex disease syndrome.]

In 1847, Darwin's illness worsened. Again he experienced frequent episodes of vomiting and weakness, but now he also experienced fainting spells and seeing spots in front of his eyes. In March, 1849, he was so sick that he thought he was dying. Darwin wrote to his good friend, J.D. Hooker, an English botanist, that he was 'unable to do anything one day out of three & was altogether too dispirited to write to you or to do anything but what I was compelled. I thought I was rapidly going the way of all flesh' (2).

It is indeed difficult to say that Charles Darwin would have been healthy enough to live another 10 years, let alone to work as diligently on the body of work that his seminal book required for its publication in 1859 unless some type of effective treatment significantly improved his health. Lucky for all of humanity, Charles Darwin sought out a different type of medical care and experienced a profound improvement in his health.

### Dr James Manby Gully: Homeopath and Hydrotherapist

It was Capt. Sullivan of the HMS *Beagle* who initially told Darwin about a different type of medical treatment provided by Dr James Manby Gully (1808–1883). One of Darwin's cousins, William Darwin Fox, told him that two friends had benefited greatly from Gully's care. Dr Gully, a medical graduate of the University of Edinburgh, was an unyielding opponent of the use of drugs of that era. Gully was particularly critical of poly-pharmacy, the common practice of using multiple drugs concurrent for a patient, a practice that continues today (3). Gully's medical practice did not simply provide water cure and dietary advice; he also prescribed homeopathic medicines and recommended medical clairvoyant readings. In 1846, he had authored a popular book entitled *Water Cure in Chronic Disease* (3) that Darwin was known to have read.

Darwin chose to go to seek care from Dr Gully, and decided to take the entire family with him (wife Emma

and their seven children) (4). Dr Gully and his health spa were situated in Malvern (just southwest of Birmingham), around 150 miles from the Darwin's home.

Virtually every biography of Charles Darwin references his health problems and acknowledges that the one physician who provided the effective treatment to him was Dr James Manby Gully. However, most of these biographies make reference to Dr Gully as a 'hydrotherapist', and only few mention that he was a homeopathic physician.

After being at Dr Gully's spa for just 9 days, Darwin lamented that Gully had prescribed homeopathic medicine to him: 'I grieve to say that Dr Gully gives me homeopathic medicines three times a day, which I take obediently without an atom of faith.' Darwin continued: 'I like Dr Gully much – he is certainly an able man' (5). The fact that Darwin saw Gully as being 'able' was still not enough to convince him that homeopathic medicines were effective.

The 1846 edition of Dr Gully's book was during his earlier stage of experience in using homeopathic medicines. In this edition of his book, Gully notes his use of homeopathic medicines, though he doubts its efficacy in certain chronic diseases. He wrote in the first edition of his book, 'although I might be induced to try to subdue a passing but troublesome *symptom*, I could not trust to remove the *essential nature* of a chronic malady by homeopathic means' (p. 83) (3).

However, by 1848, Dr Gully became a formal member of the British Society of Homeopathy (6), and he maintained his membership through at least 1871 (7). In subsequent editions of his book, his favorable experiences with homeopathy led him to change his writings on the subject. In the 5th edition of this book (1856), for instance, he writes that distinct from the use of conventional medicines in the treatment of chronic constipation where drugs do not cure and lead to relapse, it is significantly different with homeopathic care: 'In fact, cases abound in which homeopathic treatment alone has effectually and permanently cure habitual costiveness' (p. 48). In reference to the treatment of headaches, the use of homeopathic medicines is 'not only justifiable but desirable' (p. 48).

Finally, Gully continues by asserting, 'Homeopathic practitioners have observed that patients under the water cure are more susceptible to the action of their remedies than other persons, and that therefore the results may be more accurately calculated. I have found this assertion to be substantially correct; and it confirms the vivifying influence of the water cure over the bodily functions' (p. 48). Gully's observation that the use of concurrent treatment of water cure and homeopathic medicine

seems to echo the experiences of naturopathic physicians who have been known to use these treatments together along with nutritional advice since the 19th century.

And even though Darwin was extremely skeptical of water-cure and homeopathic medicine, just two days later (March 30, 1849) Darwin acknowledged, 'I have already received so much benefit that I really hope my health will be much renovated' (8). After 8 days a skin eruption broke out all over Darwin's legs, and he was actually pleased to experience this problem because he had previously observed that his physical and mental health improved noticeably after having skin eruptions. He went a month without vomiting, a very rare experience for him, and even gained some weight. One day he surprised himself by being able to walk 7 miles. He wrote to a friend, 'I am turning into a mere walking & eating machine' (9).

After just a month of treatment, Charles had to admit that Gully's treatments were not quackery after all. After 16 weeks, he felt like a new man, and by June he was able to go home to resume his important work. Darwin actually wrote that he was 'of almost perfect health' (p. 108) (8).

It is worthy to note that homeopaths have consistently observed that treatment with homeopathic medicines often leads to skin rashes, other externalizations of the disease process, or the re-experience of old symptoms prior to significant overall improvement in health. Homeopaths make reference to this healing process as 'Hering's law of cure', named by Constantine Hering, MD, the father of American homeopathy, who first wrote about it.

Despite Darwin's greatly improved health, he never publicly attributed any benefits directly to homeopathy. However, one must also realize that even though homeopathy achieved impressive popularity among British royalty, numerous literary greats, and many of the rich and powerful at that time, there was incredible animosity to it from orthodox physicians and scientists. Because Darwin was just beginning to propose his own new ideas about evolution, it would have been professional suicide to broadcast his positive experiences with homeopathy. Having to defend homeopathy would have damaged his credibility among his colleagues who were extremely antagonistic to this emerging medical specialty.

Serious antagonism to Dr John Forbes occurred when he expressed some positive remarks about homeopathy and its founder, Dr Samuel Hahnemann, in a book that he authored that was primarily critical of homeopathy. Even though Forbes was a distinguished Scottish physician, the editor of a leading conventional medical journal,

and the Physician to Queen Victoria (1841–1861), Forbes was viciously attacked for his minor praise of homeopathy, and many British physicians withdrew their subscription to his previously popular journal, leading to the fatal demise of this previously successful journal (10).

Eighteen months after first going to Dr Gully, Darwin showed his own skepticism of homeopathy when he wrote in a letter:

You speak about Homeopathy, which is a subject which makes me more wrath, even than does Clairvoyance [in reference to clairvoyance, the woman who Gully used was thought to be able to look directly into a person's body]. Clairvoyance so transcends belief, that one's ordinary faculties are put out of the question, but in homeopathy common sense and common observation come into play, and both these must go to the dogs, if the infinitesimal doses have any effect whatever. How true is a remark I saw the other day by Quetelet [a famous statistician of that time], in respect to evidence of curative processes, viz., that no one knows in disease what is the simple result of nothing being done, as a standard with which to compare homeopathy, and all other such things. It is a sad flaw, I cannot but think, in my beloved Dr. Gully, that he believes in everything. When Miss — was very ill, he had a clairvoyant girl to report on internal changes, a mesmerist to put her to sleep, an homeopathist, viz. Dr. —, and himself as hydropathist! and the girl recovered (11).

Along with his skepticism in this letter, he also noted the case of a specific woman who had been cured by Dr Gully and his team. Darwin may have been very skeptical of homeopathy, but he had observed its results on his own health and in that of others, and he remained surprised and unconvinced.

Darwin occasionally experienced relapses of digestive and skin symptoms over the years, so he returned to Dr Gully's clinic for more treatments, staying 2–8 weeks. Although Darwin complained during his first visit that he experienced 'complete stagnation of the mind', he did not have similar problems during later visits to Gully's clinic and spa. In fact, he asserted that his mind was alert and that his scientific writing was progressing well (p. 113) (9).

He lived for 33 more years, and it is surprising and confusing that the story of Darwin's successful experiences with hydrotherapy and homeopathy has not become an integral part of the history of science and

medicine today. After significant improvement in his persistent nausea and vomiting, frequent fainting spells, spots before his eyes, incapacitating stomach pains, severe fatigue, widespread boils, nerve-wrecking tremors and heart palpitations, he was considerably more able to do his seminal scientific work.

One of Charles Darwin's children, Annie, did not have good results with Dr Gully's treatment. In 1849, the same year in which the Darwin family stayed at Dr Gully's spa for 3 months, Annie contracted scarlet fever at the age of 8 years. There is no record of Dr Gully providing treatment for her at this time, but when she was 10, she became very ill. Dr Gully predicted that his treatment would lead to her recovery, but she died under his care. Although Darwin had experienced dramatically positive results from Gully's combination of treatments, Darwin felt less comfortable having his children receive some of such unorthodox care. There is no record of what treatments she did or did not receive, but in any case, Charles and his entire family were devastated by the loss of Annie.

Some other people of significant notoriety who benefited from Dr Gully's care include Charles Dickens (novelist and writer), Lord Alfred Tennyson (poet), Florence Nightingale (famed nurse), George Eliot (British novelist), Thomas Carlyle (Scottish essayist, satirist and historian), John Ruskin (art critic and social critic), Edward Bulwer-Lytton (British novelist, playwright, and politician), Thomas Babington Macaulay (first Baron Macaulay, poet and politician), and Bishop Samuel Wilberforce (12). Furthermore, three prime ministers sought Dr Gully's care, including William Gladstone, Benjamin Disraeli and George Hamilton-Gordon, as well as Queen Victoria herself. Hamilton-Gordon described Dr Gully as 'the most gifted physician of the age' (13).

Dr Gully was not the only homeopathic physician to provide clinical care to cultural elite of the 19th century. In fact, many of the leading politicians, clergy, literary greats, musical geniuses, royalty and wealthy classes were known patients and even advocates of homeopathy (10,14).

Although there is no evidence that Darwin knew that so many other well-known 'cultural heroes' sought the care of Dr Gully, Darwin was pleased to hear when other people he knew received treatment from Gully. When his second cousin, William Darwin Fox, the man who introduced Darwin to entomology and to Dr Gully, had seen the doctor, Darwin expected him to have benefited from water cure and to be much stronger (15). When one considers that Darwin had previously received much medical care without positive results, Darwin's

letter to Fox on December 7, 1855, confirmed a different experience with Dr Gully: 'Dr Gully did me *much* good' (his emphasis).

Some of Darwin's biographers never mention the homeopathic treatment he received. Those biographers who mention his longtime health problems tend to emphasize the hydrotherapy that Dr Gully's spa provided and that Charles Darwin followed up on this treatment by regularly self-treating himself with cold baths and self-percussion of his body. A recent acclaimed biography of Darwin suggested the benefits he received were from a placebo effect, despite the inability to experience a similar placebo effect from the many other physicians he saw and the various treatments he attempted. This biography asserted that, 'he persuaded himself that the water-torture was working' (p. 112) (9).

### Darwin's Continued Water Cure and Homeopathic Treatment

There is a long history of antagonism to homeopathic medicine from orthodoxy, and also a history of antagonism to water cure (16). While homeopathy has persisted internationally as a minority school of medical thought and practice (17–19), water cure as a medical treatment for chronic ailments has become marginalized or is hardly utilized today except by a minority of naturopathic physicians.

Darwin and many of his biographers have highlighted water cure in part because they simply could not believe that homeopathic medicines could provide any benefit. However, one must wonder if hydrotherapy alone could have provided these significant health benefits, especially in the first week of treatment that Darwin experienced. What is additionally intriguing about this story of Darwin is that it confirms an ultimately essential observation of truly effective healing methods: that they can and will be effective whether or not the person believes they will work.

Hardened skeptics insist that homeopathic treatment could not have helped Darwin (or anyone) and suggest that hydrotherapy must have been the method of therapeutic benefit. And yet, few orthodox physicians of that day or today would even consider using hydrotherapy for people with complex disease processes.

Despite the wide respect that Dr Gully received from his many illustrious patients, he was disliked greatly by select orthodox physicians. Sir Charles Hastings, a physician who later helped to found the British Medical Association, was Gully's most vitriolic antagonist.



Dr Hastings was so opposed hydrotherapy that he frequently wrote articles about its ‘dangers’, while he utilized a wide range of orthodox medical treatments that everyone would soon call simply barbaric (16). The additional drama to the lives of Gully and Hastings is that their sons were also antagonists to each other. Gully’s son, William Court Gully, became speaker of the British House of Lords (1895–1905), while Hastings’ son, George Woodyatt Hastings, became a lawyer and politician. Like his father, George Hastings was actively antagonistic to unconventional medical treatments.

Darwin’s letters also expressed his thoughts about conventional medicine of his time. He said emphatically that he had ‘no faith whatever in ordinary Doctoring’. And yet, after 12 years of persistent nausea and vomiting, Darwin acknowledged in 1856 that Dr Gully’s treatment in 1849 was successful enough that ‘never (or almost never) the vomiting returns’ (p. 238) (15).

When Dr Gully retired from his full-time practice in Malvern in the late 1850s, he chose Dr James Smith Ayerst (1824/5–1884) as his replacement. Not surprisingly, Ayerst was also a homeopathic physician. He served as assistant surgeon in the Royal Navy, was physician to Great Malvern, Worcestershire, ran a hydropathic establishment at Old Well House, Malvern Wells in conjunction with that of Dr Gully, and later, practiced homeopathy and hygienics in Torquay, Devon (20).

Darwin’s wife Emma wrote to W. Darwin Fox: ‘We like Dr Ayerst, tho’ he has not the influence of Dr Gully. Dr G. it is hopeless to try to see tho’ I must say he has been to see Ch. [Charles] twice & he quite approves of his treatment’ (Vol. XI, p. 643) (15). Darwin visited other hydrotherapy spas as well. In 1857 and 1859, he visited Moor Park, run by Edward Wickstead Lane, MD, a physician and hydrotherapist (not a homeopath). And perhaps not by happenstance, Darwin’s famed book *On the Origin of Species* was at the printing press, while he was at Ikley Wells, a spa operated by Edmund Smith, MD, another homeopathic physician (Vol. XI, p. 361) (15).

### Darwin’s Experiments with Homeopathic Doses

It is also fascinating to note that Darwin himself conducted several experiments evaluating the effects of small doses on an insect-eating plant (*Drosera rotundifolia*, commonly called sundew) that is commonly used in homeopathic medicine. He found that solutions of certain salts of ammonia stimulated the glands of the plant’s

tentacles and caused the plant to turn inward. He made this solution more and more dilute, but the plant still was able to detect the presence of the salt. On July 7, 1874, he wrote to a well-known physiologist, Professor F. C. Donders of Utrecht, Netherlands, that he observed that 1/4000000 of a grain had a demonstrable effect upon the *Drosera*, and Darwin was shocked and dismayed to write, ‘the 1/20000000th of a grain of the crystallised salt does the same. Now, I am quite unhappy at the thought of having to publish such a statement’ (11).

Astonished by his observation, Darwin likened it to a dog that perceives the odor of an animal a quarter of a mile distant. He said: ‘Yet these particles must be infinitely smaller than the one twenty millionth of a grain of phosphate of ammonia’ (21). Darwin said about this spectacular phenomenon:

The reader will best realize this degree of dilution by remembering that 5,000 ounces would more than fill a thirty-one gallon cask [barrel]; and that to this large body of water one grain of the salt was added; only half a drachm, or thirty minims, of the solution being poured over a leaf. Yet this amount sufficed to cause the inflection of almost every tentacle, and often the blade of the leaf. ... My results were for a long time incredible, even to myself, and I anxiously sought for every source of error. ... The observations were repeated during several years. Two of my sons, who were as incredulous as myself, compared several lots of leaves simultaneously immersed in the weaker solutions and in water, and declared that there could be no doubt about the difference in their appearance. ... In fact every time that we perceive an odor, we have evidence that infinitely smaller particles act on our nerves (p. 170) (21).

In Darwin’s book on his experiments with *Drosera*, he expressed complete amazement at the hypersensitivity of a plant to extremely small doses of certain chemicals: ‘Moreover, this extreme sensitiveness, exceeding that of the most delicate part of the human body, as well as the power of transmitting various impulses from one part of the leaf to another, have been acquired without the intervention of any nervous system’ (p. 272) (21).

Darwin also discovered that *Drosera* is not simply sensitive to every substance. He tested various alkaloids and other substances that act powerfully on humans and animals who have a nervous system but produced no effect on *Drosera*. He concluded that the ‘power of transmitting an influence to other parts of the leaf, causing

movement, or modified secretion, or aggregation, does not depend on the presence of a diffused element, allied to nerve-tissue' (p. 273) (21).

Darwin confirmed an important homeopathic observation that living systems are hypersensitive to only certain substances. Sadly and strangely, conventional scientists have attacked homeopaths for using extremely small doses of substances without any appreciation for the homeopaths' credo that living systems—whether human, animal, or plant—will be hypersensitive to a limited number of substances (and the homeopathic method of individualizing treatment is a refined method to find this substance or substances).

The doses in which Darwin tested above are not as dilute as most other homeopathic medicines, some of which are so dilute that, in all probability, they may not have any remaining molecules of the original medicine in the solution. However, a large number of homeopaths and a larger number of the general public use what are called 'low potencies', which includes doses of medicines in the range in which Darwin was testing ammonia salts. Furthermore, Darwin noted the remarkable effects that his extremely small doses had on a plant that did not have a nervous system, thereby suggesting that human beings (and other animals) may be sensitive to even smaller doses of certain substances. However, there is no known record of Darwin testing even smaller doses on plants, let alone on humans.

Darwin was so enraptured by his experiments on *Drosera* that on November 24, 1860, just 1 year after the publication of his seminal book, he wrote 'at this present moment I care more about *Drosera* than the origin of all the species in the world' (22).

### Darwin's Admiration of Another Homeopath

The archive of letters from Darwin includes one other interesting reference to homeopathy in which its significance is obvious but its meaning not perfectly clear. This was in an August 20, 1862, letter to Asa Gray, a professor of botany (of which the first part, shown below in brackets, was probably written by Francis Darwin, his son and assistant, who collated his father's letters):

[The greater number of the letters of 1862 deals with the Orchid work, but the wave of conversion to Evolution was still spreading, and reviews and letters bearing on the subject still came in numbers. As an example of the odd letters he received may be mentioned one which arrived in January of this year] from a German

homoeopathic doctor, an ardent admirer of the 'Origin.' Had himself published nearly the same sort of book, but goes much deeper. Explains the origin of plants and animals on the principles of homoeopathy or by the law of spirality. Book fell dead in Germany. Therefore would I translate it and publish it in England (p. 175) (11).

What is intriguing about Darwin's statement is that he asserted that this writing by a homeopathic doctor is similar to his own but 'goes much deeper'.

Robert Jütte, PhD, chief historian at the Robert Bosch Institute in Stuttgart, Germany, where Hahnemann's casebooks reside and which may have the largest homeopathic library in the world, has determined that this German homeopath was probably Augustus Wilhelm Koch (1805–1886) (Jütte, R. Personal Communication, March 29–30, 2006). Koch was a conventionally trained physician, graduated from the University of Tübingen, Germany in 1831. He began to study and practice homeopathy within a couple of years, and at the invitation of some influential families in Stuttgart, he moved there and developed a successful homeopathic practice. In 1846, he wrote a 613-page book called *Die Homöopathie, physiologisch, pathologisch und therapeutisch begründet: oder das Gesetz des Lebens im gesunden und kranken* (The homeopathic, physiologically, pathologically and therapeutically foundations: or the law of the life in the healthy and ill).

Dr Jütte notes that in the introduction to this book (p. xv) Koch explains homeopathy scientifically by including it in a more general 'Grundgesetz des organischen Lebens', which could be translated as 'law of spirality'. A whole chapter is devoted to the evolution of crystals, plants, and animals.

A year after Dr Koch published this book he moved to Philadelphia, though before leaving Europe, he was made an honorary member of the Homeopathic Institute of Paris. When in the USA, Koch was an active member of the American Institute of Homeopathy and Pennsylvania state and Philadelphia county homeopathic medical societies. He even served on the board of trustees of Hahnemann Medical College in Philadelphia (23). A close friend and colleague of America's preeminent teacher of homeopathy, Dr Constantine Hering (1800–1880), Dr Koch was one of his pallbearers.

Although Koch lived in the USA and could speak and write in English, he probably still sought Darwin (or someone else) whose mother tongue was English in order to have the most accurate translation. Sadly, his master work was never published in English.

Despite Darwin's personal experiences and significant successes as a homeopathic patient, he never publicly acknowledged the benefits he received. And despite his own experiments on plants using homeopathic doses, he never used the word 'homeopathic' in his public writings. Although these actions may seem surprising, Darwin's decision to avoid reference to homeopathy was an important part of his own survival strategy.

Ultimately, even though Charles Darwin had a long-time skepticism of homeopathic medicine, his life and health seems to have been impacted by it, and he engaged in experimentation that verified the power of extremely small doses on plants. Furthermore, he was found to express appreciation for the contributions to science that select homeopathic physicians were known to provide.

2009 is the year in which we honor Charles Darwin's 200th birth anniversary and the 150th anniversary of the publication of his seminal book, originally published on November 24, 1859. When commemorating the many vital contributions that Charles Darwin made to science, we should not ignore the therapeutic contributions that may have allowed Darwin to live beyond his own life expectations and that seemingly played an important role in improving his physical and mental health.

When physicians and scientists today consider how much resistance Darwin experienced to his new ideas and how much resistance still exists for them, perhaps the same physicians and scientists should also reflect on and learn from the far greater resistance that they themselves have given to homeopathic medicine, hydrotherapy, and other unconventional medical treatments. It is indeed ironic that so many physicians and scientists over the past 150 years have vehemently obstructed the acceptance, the growth and the development of the unconventional medical treatments that seem to have lengthened Darwin's life. Until and unless physicians and scientists learn from history, they (we) will continue to make the same mistakes and simply delay the evolution of a truly healthy medical care system.

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