

ALCOR LIFE EXTENSION FOUNDATION

A Non-Profit Organization

# CRYONICS

JUNE 2014 · VOLUME 35:6

## *THE PROSPECT OF IMMORTALITY AT AGE FIFTY*

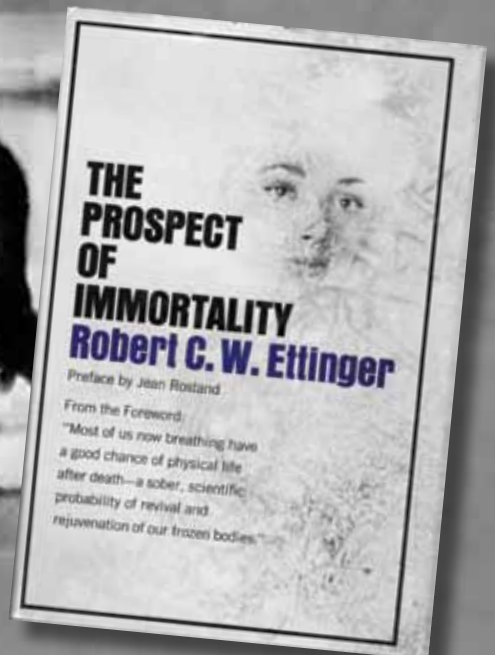
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STATE OF CRYONICS IN CANADA

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# CRYONICS



## COVER STORY: PAGE 6

### *The Prospect of Immortality at Age Fifty*

This month's installment of For The Record is about *The Prospect of Immortality*, the seminal book by Robert Ettinger that largely launched the cryonics movement fifty years ago this month. It is not an exaggeration to say that without *The Prospect of Immortality* much of what constitutes today's cryonics movement, and perhaps Alcor itself, would not exist.

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Robert Ettinger, author of  
*The Prospect of Immortality*

- 14 The North Wind Doth Blow: The Past, Present and Future State of Cryonics in Canada**  
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## The James Bedford Society



Gifts have played a fundamental role in the cryonics movement since its earliest days. Dr. James Bedford, a man whose extraordinary vision led him to become the first person to be cryopreserved, and the first to make a bequest to a cryonics organization, exemplified the determination of the early pioneers of cryonics. We invite you to follow in his footsteps, and join the James Bedford Society.

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# QUOD INCEPIMUS CONFICIEMUS

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Photo: Cryo-Care Equipment Corporation at 2340 E. Washington St., Phoenix, AZ.  
Dr. Bedford's "home" in 1970 or 1971.



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## KILLING YOURSELF TO LIVE By Aschwin de Wolf

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I recently observed a heated exchange on Facebook about cryonics. One person said something to the effect that cryonics lacks evidence and that chemical preservation (“chemopreservation”) is the preservation technology backed by real evidence. Such statements bother me for a number of reasons. The most important reason, and this cannot be reiterated enough, is that while evidence can be presented that strengthens the case for cryonics (i.e. makes it more plausible), cryonics as such cannot be proven because this would require that we have certain knowledge about the limits of future medical technologies. But the whole premise upon which cryonics rests is that future medicine may be able to fix conditions that cannot be treated today (including additional damage done by the cryopreservation process itself). Cryonics is a form of decision making under uncertainty and demanding proof is like asking for absolute proof for the outcome of the NBA playoffs or the level of the S&P 500 in 2050.

The other problem, which I have covered in more detail in my extensive treatment of chemical preservation called “Chemical Brain Preservation and Human Suspended Animation” (*Cryonics Magazine*, January 2013) is that the evidence in favor of chemical preservation is necessarily

incomplete because functional tests are excluded. All preservation technologies that involve a form of chemical fixation produce one consistent outcome. They render the (brain) tissue “dead” by contemporary viability criteria. Now, one could argue that making such an argument is akin to what opponents of cryonics do when they claim that our patients are dead. But this is a misunderstanding of the aim of human cryopreservation

Cryonics is not about “preserving structure” or preventing information-theoretic death. Cryonics as practiced by Alcor is about *keeping the patient alive*. It is only when we fail to meet this objective that we are obliged to argue that lack of viability does not mean irreversibility. We can examine the brain (or the whole body) in its damaged state to *infer* the original state and (eventually) restore the patient to that or an improved condition. So when we use concepts such as “preservation of structure” or “information-theoretic” death it is important to remember that these are conservative fallback options when our efforts to keep the patient alive by conventional criteria have failed. The possibility of inferring the original state from the damaged state should never be used as an excuse to permit more damage than necessary. And this is the problem

with chemical preservation of the brain. To borrow a song title from the metal band *Black Sabbath*, such approaches to life extension are akin to “killing yourself to live.”

Why is all of this important? If we want cryonics to gain greater recognition we should conceptualize it as something that is just an extension of contemporary medicine but *smarter*. One silly premise of contemporary medicine that has got to go is the prevailing practice of abandoning people who can no longer be treated by today’s technologies. What may appear irreversible now may be treatable in the future. But we want to place these patients in cryostasis in the most viable state. Ultimately our aim is widespread recognition for placing critically ill people in suspended animation until a cure for their disease is found. Instead of saying “look how good the structure of this patient’s brain looks” we should aim for a situation in which we can say “this patient is in the same condition as when (s)he was admitted to us but now we have hundreds of years to think about a sensible treatment.” Evidence of good ultrastructural preservation after vitrification constitutes a strong case for cryonics, but cryonicists should not be confused with electron microscopists. ■

## THE PROSPECT OF IMMORTALITY AT AGE FIFTY

By R. Michael Perry

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It was fifty years ago this month, on Jun. 5, 1964, that Doubleday published Robert Ettinger's *The Prospect of Immortality*, perhaps the most important one-day event in the history of cryonics. This book was no flash in the pan; the then 45-year-old author had been thinking about the main idea—freezing the newly deceased to possibly allow eventual resuscitation—for many years already, and had already made a fledgling presentation of the idea in published form. (This was his science-fiction story, “The Penultimate Trump,” which appeared in *Startling Stories*, Mar. 1948.<sup>1</sup>) The book also had appeared in

a privately-circulated, preliminary version late in 1962.<sup>2</sup>

Ettinger, unlike many of those who were active in the early years, did not lose interest and drop out but continued his involvement until, at age 92 in 2011, he himself was cryopreserved at the Cryonics Institute, an organization he cofounded in 1976 and headed as president for nearly four decades. During his long career he published two other cryonics-related books and contributed a steady stream of writings through newsletters and emails.

Returning to the earlier history, a fledgling cryonics movement already existed in 1964, though no one would be cryopreserved for several years. (The term *cryonics* itself was coined in 1965.<sup>3</sup> Earlier descriptive phrases included “the freezer program,” “freeze and wait,” and the more imaginative, “freeze-wait-reanimate.” Ettinger’s book itself, with its 1964 publication, never uses *cryonics* but I’ve used it here as a convenience.) Joining Ettinger in spearheading the movement was another man, Evan Cooper, who had independently thought of the freezing idea and written a book of his own about it. (This slim volume, *Immortality: Physically, Scientifically, Now*, appeared in 1962<sup>4</sup> just a few weeks before Ettinger’s earliest effort, judging by copyright dates. Cooper wanted to revise his book and looked for someone to help but was unable to find such an assistant and his project remained uncompleted.<sup>5</sup>) The early movement centered in Cooper’s Life Extension Society (LES), based in

Washington, D.C. Though quite small—perhaps a few dozen in number—there was at least an audience able to appreciate the greatness of the work now being offered to the world. Cooper and Ettinger in fact had corresponded, and a decision had been made to create LES several months prior to the appearance of Ettinger’s revised and expanded book, after it was realized that publication would be delayed. When the book did appear, there was excitement and jubilation, which Cooper echoed in the third (August 1964) issue of the LES newsletter, referring to the book as “a marvel of lucidity and forceful writing,” and its publication “a great event toward the defeat of death.”<sup>6</sup>

What, then, made this such a great book? In large part, of course, it is just the greatness of the basic idea it offers, of conquering death scientifically. Fifty years later, this idea is still so radical it is hardly mentioned in polite society, and has been publicly disparaged by prominent mainstream thinkers<sup>7</sup>, while the book itself is correspondingly undervalued. This is, of course, not through any defect in authorial skill; the book well deserves praise for its “lucidity and forceful writing,” as Cooper said. This is seen, right from the opening sentence in the Foreword, which cuts to the heart of the matter: “Most of us now breathing have a good chance of physical life after death—a sober, scientific probability of revival and rejuvenation of our frozen bodies.” As explained in chapter 1, this rather startling conclusion



Robert Ettinger from the cover of  
*Cryonics Reports*, May 1967.

rests on a fact, that bodies frozen and stored at cryogenic temperatures do not deteriorate significantly with time, and an assumption, that advancing technology should eventually allow resuscitation—and improvement—of an organism freshly frozen and stored at low temperature.

Much of the book's effectiveness lies in its clear identification of the various issues involved, and its focus around these issues. The "three great questions" considered are (1) whether the basic idea, freezing for eventual resuscitation, is technically sound, (2) whether freezing and indefinite storage of individuals after death would be practical, and (3) whether eventual resuscitation, assuming it possible, would be good for the individual and society.

It should be emphasized that the book proposed to preserve dying individuals at the time of death, to begin right then by the best methods available, and not wait for breakthroughs or "until the process is perfected" before anyone was frozen. (Barring major revisions in our scientific worldview, all the wonders of tomorrow would not rescue those dying today, unless action was taken immediately to preserve them.) Thus it was crucially important to assess—as well as possible—the likelihood of eventual resuscitation of presently frozen organisms. The first several chapters of the book are largely devoted to this question, and to making the case that in fact reanimation is scientifically plausible and worth trying for.

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*"The book emphasizes that no claim is being made of proof that resuscitation in the manner indicated, or any successful revival from a presently-frozen state, will be possible."*

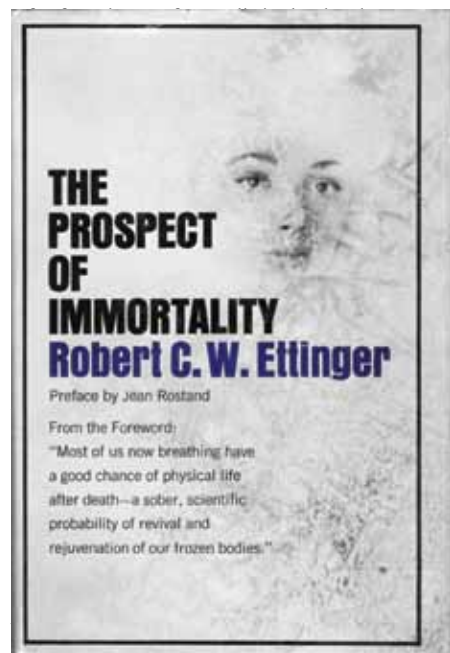
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Some formidable obstacles had to be faced. No large organism had been solidly frozen and successfully revived. It was well-known that freezing extensively

damages tissues. Something was known about this damage; some progress had been made in preventing it, but there was a lethal residue that no existing methods could halt or reverse. On the other hand there were reasons for optimism about the eventual feasibility of resuscitation for those frozen with then-available (and some previous) methods. Freezing certainly preserved structure down to the cellular level and beyond, even if damaged. Partial successes, in the form of revival of partially frozen mammals and organs—and smaller organisms entirely frozen—were numerous. Reasons for optimism surfaced too, when the nature of the freezing damage was studied closely. Even when a sizable tissue mass did not recover function upon rewarming, many cells could be seen to have little or no damage.

This brought up an important point: that techniques ought to become available for repair of damaged cells from the outside. (Otherwise cells must heal themselves, or die and disintegrate; but some limited work of operating directly upon cells, exchanging nuclei and the like, had been done, and is noted in the book.) Many cells too could simply be replaced. In particular the brain, a critical organ, might be satisfactorily repaired due to the redundancy of the information it stores: "... it may well be that only a small percentage of the brain cells need escape with little damage; this may be enough for reasonably faithful reconstruction of the brain with freshly generated tissue."<sup>8</sup> An interesting, worst-case scenario is imagined for brain repair: "... it is not inconceivable that huge surgeon-machines, working twenty-four hours a day for decades or even centuries, will tenderly restore the frozen brains, cell by cell, or even molecule by molecule in critical areas."<sup>9</sup> (This, it should be remembered, was written long before notions of nanotechnology became widespread; more later.)

The book emphasizes that no claim is being made of proof that resuscitation in the manner indicated, or any successful revival from a presently-frozen state, will be possible. With that in mind, though, and the evidence supporting the possible success, the point is made that the choice



The Prospect of Immortality, *original edition*, Doubleday, 1964.

net" to see that the person in question remained properly frozen after death. In practice, as many will know, it has proved very difficult to establish facilities with the dedication and continuity to carry out long-term storage of cryopreserved patients. As a consequence, many early preservations terminated after only a few years. Much better success was had with efforts since the mid-1970s, and some organizations and patients have now endured for 40 years or more, with good prospects for continuing.

Practical matters are also not the only issues that must be addressed. There is a chapter devoted to "freezers and religion" that explores possible theological or ecclesiastical objections to a cryonics program and how these objections might be met. Basically, the major religions are committed to doing good which includes rescue of people from death. Cryonics should fit well with such an attitude, when its intentions, proposed methods, and lack of dogmatic claims are made clear. There is more, including a discussion of just what should be meant by *religion*. There is the Reverend M. R. Holloway, who considers that "Religion ... consists in that act by which Man worships God, subjecting himself to Him." To Ettinger,



LIFE EXTENSION SOCIETY NEWSLETTER  
Washington, D.C.

BIG NEWS OF THE SUMMER:

Bob Ettinger's book The Prospects of Immortality was released by Doubleday June 5th, coinciding with a short serialization in Cosmopolitan, and a thoughtful article by Fred Pohl in Playboy. Quite a number of radio and TV stations carried and are continuing to carry interviews of Ettinger and discussions of the freeze-wait-resuscitate idea. Bob's book has been translated into French, and LES members report seeing it in paperback on the Paris newsstands.

The book itself is a marvel of lucidity and forceful writing. Among the many contributions, the emergency dry ice freezing and storage suggestion is of special interest because the next step is the actual preservation by freezing of a person who has just "died." The dry ice method is an emergency method, for it is preferable that the lower temperatures of evaporating liquid gasses be used, but the latter are not always available. Dry ice is in much more common supply, easier to handle, and the cost of cooling can be made less expensive with sufficient insulation. The temperature of dry ice (-78 C) is lower than any ordinary deep freeze. Depending on the insulation and the number stored, Ettinger estimates that the cost could run from \$4 to 10¢ per frozen person per day. An inexpensive storage unit could be built with sufficient room for the person's body and a compartment for dry ice immediately above. The body would be transferred when a better storage system became available.

Response to the book has been varied from enthusiasm to irritation with anything so revolutionary. It has been reviewed by a number of the major mass media publications indicating they are considering the possibility that Ettinger's is a significant book.

Jean Rostand wrote a preface stating that the idea is solid. Gerald Gruman with his extensive background knowledge of the history of the concept of immortality wrote a second preface noting how great ideas such as this have often taken considerable time in taking hold. Penicillin, for example, is said to have taken 16 years between its discovery and its use.

Congratulations are more than in order. It is a great event toward the defeat of death.

JOHN HUNTER, 1766, CONTEMPLATES FREEZING AS A DEVICE TOWARD LIFE EXTENSION

"Experiment. In the year 1766 two carp were put in a glass vessel with common river water, and the vessel was put into a freezing-mixture. The water surrounding the fish froze very rapidly on the inside of the glass all round. When the freezing-process approached the fish it became, as it were, stationary; and the remaining water not freezing fast enough, in order to make it freeze sooner, I put in as much cold snow as made the whole thick. The snow round the carp melted. I put in more snow, which melted also. This was repeated several times, till I grew tired, and I left them covered up to freeze by the joint

Cover page of the Life Extension Society Newsletter, announcing publication of *The Prospect of Immortality*.

though, "this definition seems much too narrow." Buddhism, he notes, in some of its forms at least has no Deity. Ettinger proposes instead that "the essence of religion lies primarily in extreme *dedication*, and secondarily in *fellowship*" (emphasis original). His own attitude is basically favorable to the broader notion, which he thinks might even be essential. "It is plain enough that man can get along without religion in the narrow sense—or at any

rate some men can. ... But whether many people could get along indefinitely without some kind of dedication and fellowship is another question, and the answer is probably negative."<sup>10</sup>

The closing chapters of the book are devoted to more philosophical issues, based on the important premise that, in addition to mere resuscitation, future technology should allow curing of diseases and even rejuvenation or reversal of aging.

In short, persons of today—even the sick, old and dying—could look forward to the possibility of a virtually endless state of youthful health (with options for further research on any problems remaining in the quest for truly endless, worthwhile existence). It will clearly lead to radical changes in society as we know it (it would become "as we don't know it" in major ways!). A very common reaction to the prospect of sweeping changes, of whatever nature, is a strong mix of fear, loathing, objections, and rejection. No small effort, then, is devoted to meeting objections and reassuring the reader that the proposed changes would definitely be for the better. So everybody should want immortality, and should work diligently to bring it about, starting at the basic level of individual survival, which importantly includes cryonics.

An important question comes up: just what does it mean for us to "survive"—what do we mean by personal identity anyway? The question is particularly vital since, if we are going to resuscitate a cryopreserved person, "we have to envisage the possibility of some very extensive repairs and alterations."<sup>11</sup> An entire chapter is devoted to this issue, where the reader is invited to consider a series of experiments ranging from just growing older to imaginative thought scenarios using yet-to-be-developed technology to make faithfully functioning duplicates of an individual under various assumptions. The upshot of all these is that *identity* is a rather fuzzy concept, and we regularly tolerate some considerable changes while still insisting we remain the "same" persons. So, for instance, even if extensive repair work must be done to resuscitate our cryopreserved remains it might still be reasonably ourselves and not other persons who are finally restored to consciousness. Another thought, if we once accept the idea that a copy or near-copy of our self under suitable circumstances can be considered the same self, is that death cannot be considered absolutely final. Such a copy could be generated at some remote time and circumstance, after the original body is lost. Reality as a whole is vast, perhaps infinite and everlasting, and such a prospect may be inevitable no matter what.



This may offer consolation, as Ettinger notes, to those who are unable to make cryonics arrangements for themselves or some loved one.

It also raises a dilemma: if death is not final, then why bother with cryonics? This issue is not much addressed in the book, which for the most part is focused on the idea that cryonics offers a realistic prospect for eventual resuscitation and recovery from (recent) clinical death, while other prospects are highly speculative and uncertain. Ergo, one should choose cryonics, or “freeze please,” as I remember Ettinger saying. Ettinger was confident the public would agree so that his proposed “freezer program” would flourish and “soon have sledge-hammer impact on every facet of personal and national life.”<sup>12</sup> This optimism rested on the opinion of knowledgeable scientists that demonstrated, reversible suspended animation through cryopreservation would be achieved, with a consensus apparently feeling that it would be “within the lifetimes of a majority of people now living.”<sup>13</sup> A half-century has now passed, and along with it many, maybe most, of those who were alive at the time. Some advances in cryonics preservation techniques have occurred, such as vitrification to largely eliminate ice-crystal damage, but the goal of reversible suspended animation remains elusive. More today are seriously involved and have arrangements for cryopreservation and the prospects for long-term preservation are better, but cryonics has still attracted only a relative handful; about 2,000 people are now signed up for the procedure and about 250 are currently cryopreserved. Very many more people are perishing, and much-needed research must be funded from limited, private reserves. Despite the difficulties, however, cryonics is continuing and, in a modest way, flourishing.

After a great event occurs, eventually people start noting that a round number of years has passed. In the case of *Prospect* this is first noticeable in 1984, the 20th anniversary. (I find nothing about it in the 1974 literature, though by an interesting coincidence, in June of that 10th anniversary year the Avon paperback of Ettinger’s second book *Man Into Superman*

was published.) For the 20th anniversary there is a fine, short piece in *Cryonics* by Mike Darwin, thanking Ettinger for having the courage and genius to create *Prospect*, and noting that “Even powerful ideas take a long, long time to change the inertia of mankind’s whole way of looking at the world.”<sup>14</sup> Mike also notes that “it has been a hard twenty years” but emphasizes, *we are still here*. Such sentiments are echoed, in my 30th-anniversary article on *Prospect* (1994),<sup>15</sup> of which the present article is an update.

The thought of indefinitely postponing death through scientific means is arguably the most profound idea in human history. When this idea is coupled with a procedure—cryopreservation—that can be performed today, radical life extension becomes a possibility for the individual of

today. This prospect then supersedes earlier approaches to addressing the problem of death through mystical means, and also the attitude of resignation prevalent among those who doubt the reality of supernatural assistance. For most people it is a very big mouthful to swallow—and it was all introduced through this book of 50 years ago. As Ettinger himself has noted, we must now convince people that they ought to want and do want the indefinitely extended, post-human existence that science and technology appear to promise.<sup>16</sup> Convincing them may be the hardest part of attaining it. ■

#### MAIN SOURCE:

PI. Robert Ettinger, *The Prospect of Immortality*, New York: Doubleday, 1964, [http://www.cryonics.org/images/uploads/misc/Prospect\\_Book.pdf](http://www.cryonics.org/images/uploads/misc/Prospect_Book.pdf), accessed 26 May 2014.

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2. Copyright date 18 Dec. 1962, *Catalog of Copyright Entries* 3rd Series Vol 17 no 1 (Jan-Jun 1963), 272.
3. The earliest use I have been able to find of the term *Cryonics* is 13 July 1965, from the incorporation papers of the Cryonics Society of New York, now in Alcor archives.
4. Copyright date 3 Nov. 1962, *Catalog of Copyright Entries* 3rd Series Vol 16 no. 2 (Jul-Dec 1962), 1362.
5. A revision of Cooper’s book based on his writings in *Freeze-Wait-Reanimate* and other sources was finally completed (posthumously) in the 1990s by the author, under the title *To Be Immortal* which Cooper himself once approved, and serialized in *The Venturist*, 1999-2003. Further details and text available from the author.
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11. PI 129.
12. PI xxi
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16. This thought is contained in Robert Ettinger, “The Past, the Future, and Everything,” presentation to the sixth annual Venturist Festival, 1994, printed in *Cryonics* 3Q 1994, 31.

# Small Animal Whole Body Cryopreservation: Past and Future Part II



By Chana Phaedra

Up to this point we have discussed the groundbreaking research in the early 1950s performed by Radoslav Andjus in resuscitating rats from body temperatures between 0 and 2°C. Having determined that preferential heating of the heart improved chances of revival, Andjus perfected the technique a number of times, eventually obtaining a 100% resuscitation rate by use of microwave diathermy. Having established a technique that ensured a high percentage of recovery, he began to investigate other problems related to resuscitation from hypothermia, including the effects of repeated coolings to zero and the possibility of resuscitating rats cooled to subzero temperatures.

In his 1955 publication in the *Journal of Physiology*, Andjus briefly states that cooling to 0-2°C was performed as described in earlier papers<sup>1</sup>. Cooling to subzero temperatures required immersion of the animal into a bath of propylene glycol between -5 and -20°C. The method of reanimation was microwave diathermy (as described in the first installment of this series).

To study the effect of length of time at ultraprofound hypothermic temperatures, Andjus cooled six groups of ten rats to colonic temperatures of 0-1°C, with each group kept cold for a different length of time before attempting reanimation. The “period of suspended animation” ranged from 60-70 minutes to 110-120 minutes in 10 minute increments. Andjus defined the period of suspended animation as that “spent below 15°C prior to the application of heat.”

10 out of 10 animals recovered completely from the group that spent 60-70 minutes in hypothermic circulatory arrest, but the longer the period of suspended animation beyond that, the lower the recovery rate, with 6 animals recovering from 70-80 minutes, 4 from 80-90 minutes, 3 from 90-100 minutes, 1 from 100-110 minutes, and none from 110-120 minutes. Several delayed deaths also occurred in animals revived after 70-100 minutes of “suspended animation.”

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*“Andjus noticed that the time to regain weight also decreased with successive coolings, noting that “one rat needed 11 days to regain its initial weight after the first cooling, 6 days after the second, and 1-3 days after the third to eighth cooling.”*

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Another series of rats was cooled to 0-0.5°C for 60-70 minutes and resuscitated repeatedly. The results of this experiment were extremely interesting. Initially, a rat was cooled and resuscitated every other day for a total of 8 coolings over 16 days. The rat lost a lot of weight, was unable to regulate its body temperature, and died 18 days after the last cooling. The next rat was cooled repeatedly but had longer intervals between coolings and was allowed to regain

its initial weight after the first cooling. Interestingly, this rat was able to tolerate a longer periods of suspended animation (80 minutes) after several coolings, and recovered fully from a total of 10 coolings over 43 days.

Other rats were then repeatedly cooled to zero and allowed to regain their initial weight before each cooling. Andjus noticed that the time to regain weight also decreased with successive coolings, noting that “one rat needed 11 days to regain its initial weight after the first cooling, 6 days after the second, and 1-3 days after the third to eighth cooling. The means taken from the results obtained with a group of seventeen animals show the same tendency.”

This trend in improved recoverability after repeated coolings appeared to hold true across the board:

*Further improvements in the recovery after reanimation were noted in repeatedly cooled rats. For a few hours after the first reanimation and artificial rewarming to 37°C the rat is not able to maintain its normal body temperature in a cold environment. When left in a refrigerator at 0 to +3°C the reanimated rat steadily cools down. By contrast, a number of rats reanimated for the sixth to eighth time were perfectly capable of maintaining their normal body temperature in the refrigerator.*

*It was also noted that rats reanimated for the first time, and having just resumed their heart beat and respiration, with a body temperature of 15°C (see Andjus & Smith, 1955) were not capable of spontaneous rewarming to 37°C when left at room temperature (21-23°C), and died after a few hours if the rewarming was not completed artificially. By contrast, a number of rats reanimated for the fifth*

to eighth time spontaneously regained their normal body temperature when left on the bench with colonic temperatures of 15°C.

In addition, one rat cooled for the third time and another for the sixth time tolerated 120 minutes of suspended animation with full subsequent recovery. None of the ten control rats even recovered spontaneous respiration after cooling the first time to 0°C for 120 minutes.

Finally, Andjus investigated the recovery of rats from subzero temperatures. Some rats were “supercooled,” while others were allowed to undergo ice crystallization. In supercooled rats, both subcutaneous and colonic temperatures dropped steadily to temperatures as low as -5.7°C subcutaneous and -3.3°C colonic and for as long as 40 minutes in the subzero range. Andjus reported that “all rats supercooled without crystallization were reanimated, recovered completely, and resumed growth.”

Animals that underwent crystallization did not fare so well. Eight of nine recovered heart beat and spontaneous breathing, but all died during rewarming or within 24 hours post-reanimation.

These experiments mark the beginning of investigation into the effects of hypothermic temperatures on mammalian physiology in a number of laboratories. And while Andjus had determined a method for achieving excellent (75-100%) recovery rates in rats cooled to 0-2°C by local cardiac heating prior to warming the whole body during resuscitation, in simultaneous experiments, Audrey Smith quickly found that hamsters appeared to require whole body warming for resuscitation from ultraprofound hypothermic temperatures. In fact, no hamsters were revived using the local cardiac heating technique, which prompted Smith to question whether it was really necessary for resuscitating rats and other non-hibernating mammals. As usual, the answer to this question was to be determined through experimentation, this time in collaboration with S.A. Goldzweig in 1955 (results were published in the *Journal of Physiology* in January 1956)<sup>2</sup>.

Goldzweig and Smith first replicated previous experiments by cooling 104 rats (150-190 g) to between 0.1 and 1.2°C and

attempting resuscitation using local cardiac heating with microwave diathermy. Of these rats, 78 were long-term survivors.

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*“These experiments proved that local cardiac heating is not necessary for complete recovery of adults rats and mice from ultraprofound hypothermic temperature, and, almost as importantly, that a simple bench lamp was as effective as a microwave magnetron in recovering animals from this state of “suspended animation.”*

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Whole body warming was initially carried out on 12 rats using three 100 W bench lamps. The rat was placed supine on a wire grid and two lamps were placed as close as possible to the ventral surface and a third beneath the dorsal surface of the body. Three rats resumed breathing but died soon afterward. The authors reported that “the appearance of the skin suggested that the animals had been overheated.”

So they tried again. This time they placed the two 100 W ventral bench lamps further away, leaving an air gap 5-8 cm from the body. The third lamp was reduced to 60 W and also placed 5-8 cm from the dorsal surface of the body. All twelve of these animals recovered completely, suggesting that the position of the lamps was paramount to recovery. Thinking that intensity of illumination might also be of importance, they played with reducing illumination further: 4 of 6 rats rewarmed using one 40 W and two 100 W lamps recovered completely, but further reductions in illumination did not produce better results. In general, rats resuscitated by local cardiac heating began breathing spontaneously much earlier (within 11-15 minutes) than rats resuscitated by heating the whole body (14-23 minutes), but no

other differences in rats recovered by the two methods were observed.

Mice (22-38.5 g) of two different strains (one of which was susceptible to bacterial hepatitis) were used for further cooling experiments. They were cooled in the same manner as rats, but due to having much less body mass they cooled much more rapidly. They ceased breathing between 4.5 and 5°C, and the heart stopped beating between 2.5 and 3.8°C. Mice were left in ice for 55-60 minutes after respiration and heartbeat had stopped.

Two methods of resuscitation of ice-cold mice were attempted. Nine of eleven mice were long-time survivors of local cardiac heating by microwave diathermy (intensity of the microwave was reduced to account for smaller body mass). The first attempt at recovering mice by whole-body illumination under a 60 W bench lamp resulted in a 100% recovery rate, but was followed by 10 delayed deaths at 3 weeks, which upon necropsy were found to be due to fulminating hepatitis. The experiment was repeated using another strain of mice, of which all recovered fully and 19 of the 21 were long-term survivors.

These experiments proved that local cardiac heating is not necessary for complete recovery of adults rats and mice from ultraprofound hypothermic temperature, and, almost as importantly, that a simple bench lamp was as effective as a microwave magnetron in recovering animals from this state of “suspended animation.” Goldzweig and Smith admitted that even these results could probably be improved upon by further manipulation of variables, but stressed that “...from a theoretical point of view, these results are of great importance and suggest that the danger of tissue anoxia has been exaggerated.” ■

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# God Is Technology

Review of *God Is Technology: How the Singularity of Monotheism Transcended Biology and Primed the Technological Genesis of God* by Mitchell Heisman, from *Suicide Note*, [http://www.suicidenote.info/ebook/suicide\\_note.pdf](http://www.suicidenote.info/ebook/suicide_note.pdf), pp. 32-358 (2010), accessed Dec. 6, 2010.

## BOOK REVIEW BY R. MICHAEL PERRY

Mitchell Heisman, a self-styled sociobiological scholar with a degree in psychology, labored five years on a treatise running to some 1,900 pages, finally finishing it in September 2010. A few days later the 35-year-old secretive researcher took his own life by gunshot to the head, standing on the steps of a chapel at the Harvard University campus. His magnum opus, appropriately if unsettlingly titled *Suicide Note*, is freely available on the Internet: he wanted people to read it (and not alter it). Included in its ample pages are ruminations on technology, transhumanism, religion, biology, psychology, Western history, and pervasively, existential nihilism—the position that overall life has no meaning. Near the end he announces his intention “to kill myself,” then, after going through some details of his life including his father’s early death which deeply affected him, almost jauntily adds, “I’ll try anything once!” followed by, “There is nothing to take seriously!”

Arguments about the meaning of life, or whether it has any, are unavoidably self-centered and particular; what you find meaningful I may not, and vice versa. A “rational” attempt such as Heisman’s, to argue against life’s having meaning so that existence is not to be valued over nonexistence, invariably runs aground on this fundamental incongruity. Most of us, in fact, are not prepared to embrace Heisman’s comprehensive nihilism or repeat his tragic feat of self-sacrifice. But here I will not dwell at length on his personal problems, nor address the whole of his lengthy treatise. Instead I want to focus on a portion that is a standalone volume in its

own right, and also a remarkable manifesto of a kind of religious transhumanism.

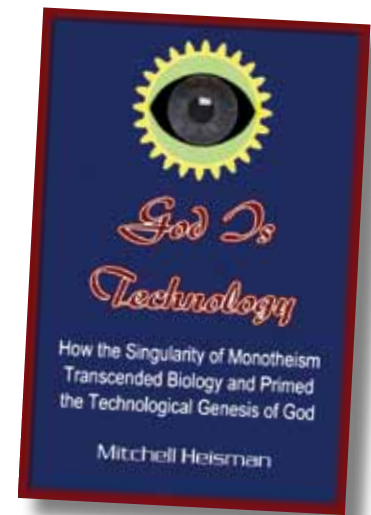
*God is Technology*, the first major part of Heisman’s opus, is surprisingly positive and upbeat, given its context and overlooking a few deathist excursions (mainly in a single paragraph near the beginning). It also differs from many transhumanist works in that it finds strong and convincing links between ancient religious traditions and the modern quest for immortality through technology.

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*“Arguments about the meaning of life, or whether it has any, are unavoidably self-centered and particular; what you find meaningful I may not, and vice versa.”*

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Drawing on his own Jewish roots, the author sees powerful precedents of modern, technological developments in the struggle of the ancient Israelites to escape the slavery of Egypt. The struggle itself is exemplary of the overall struggle of humanity, ultimately a pitched battle between life and death. On one hand there is natural selection which favors the strong (ancient Egyptians) over the weak (Israelites, their slaves). More generally natural selection sacrifices all individuals in the end, even those who are “favored,” the differential rates of death determining what genetic traits are handed down and



become dominant in the ever-changing population of successive descendants. In challenging the authority of their owners and overlords, the Israelites in effect challenge the more “biological” order of society that favors brute strength and coercion, and seek to substitute a rule of perfection, in this case through belief in a supreme Deity who treats all with justice and fairness.

Heisman himself is not a theist but sees the ancient beliefs as foreshadowing a new concept of God as an advanced AI, which will be put in place through modern technology, in an event its enthusiasts call the Singularity. The Singularity, when it happens, will be the ultimate victory of technology over biology—no longer will individuals be sacrificed or treated badly because of bad luck that gave them inferior genes or other weaknesses. Heisman’s own, Jewish people, in their struggles through history, demonstrate the tenacity of

human efforts to overcome the limitations of biology and eventually bring about the Singularity. The Nazis, by contrast, offer a striking example of misguided humanity that sought a “biological” furtherance of progress, through the domination of a “master race” with “survival of the fittest” through extermination of rivals. As Heisman poignantly phrases it, “Auschwitz and the Singularity are two diametrically opposite final solutions to the paradox at the core of Judaism.”

As to the “paradox,” which is not confined to Judaism alone: in favoring the victory of technology over biology, there is danger in going too far. Every advance is actually made against a backdrop of “equality”—the strong become stronger, and some may not at all benefit. If one really favors “all” impartially and fairly, it seems to mean that, for example, animals should have civil rights. Going from there, individual cells (fertilized human egg cells and embryonic stem cells in particular) must also be accorded privileged, maybe even human status, as they are by antiabortionists. Once we start down that path, we get to the absurdity that, with no easy dividing line between what should and should not be considered to have rights, even inanimate matter, some at any rate, might have rights. This would especially follow if the dream of uploading is realized, so that in fact persons with full feeling and consciousness are expressed in nonbiological substrates.

An answer to this conundrum is that the presence and quality of sentience must be considered, however a “person” or other entity may be expressed. It should not matter what stuff a being is made of, so long as feeling and consciousness occur, together with personality traits that call for respect or privilege. I think this point is somewhat lost on the author, and once it is recognized it serves as a powerful counterweight to nihilism. An additional counterweight is the thought that progress affecting individuals should always be possible: there is nothing to stop any being becoming a more advanced being, in all the ways that count, and progressing ultimately to any level. So, instead of being dominated by a single, overarching authority, God-AI,

we should all become gods in our own right, a privilege that could be extended even to nonhuman life forms.

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*“Traits of personality that were naturally selected, even if through brutal means involving death, can nevertheless serve lofty aims.”*

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Another thought is that biology is not simply antagonistic to technology. Traits of personality that were naturally selected, even if through brutal means involving death, can nevertheless serve lofty aims. We see this, for example, in the basic moral sense we have that other people, not necessarily our mates or kinfolk, are important and should be loved and treated fairly and helped in time of need. This sort of altruism actually has advantages—increasing mutual benefit through cooperation and reduction of violence—that translate to enhancements of reproductive fitness, but it also ties in well with the idea of a postmortal world in which material needs are supplied by advanced technology. Heisman, at any rate, concludes this first portion of his larger work on a positive note. “Everything possible that one ever wanted to accomplish, or do, or experience in life, could be accomplished in God-AI. The human world may thus come to an end voluntar[il]ly through the very best possible life in supra-self-realization in God.”

Two additional thoughts are that, despite the emphasis on transhumanism and technology, nowhere is cryonics mentioned, and also, that the author recognizes that to truly bring about justice for all it would be necessary to resurrect the dead. It is clear that many challenges remain before a Singularity can be realized, and there may be further difficult steps before the tougher problems preventing a true “heaven” can be resolved. But the challenge is an exhilarating one, one which is open to people of today, even if so much remains to be done, with all the associated uncertainties. It is unfortunate

that Heisman could not take this positive prospect more seriously, notwithstanding the insights shown forcefully in his writings. ■



# THE NORTH WIND DOETH BLOW: THE PAST, PRESENT AND FUTURE STATE OF CRYONICS IN CANADA

By Christine Gaspar

The Cryonics Society of Canada was created by Douglas Quinn in 1987. Two years prior, he became the first contracted Canadian cryonicist, and went on to be the president of the CSC (Cryonics Society of Canada), and editor of the *Canadian Cryonics News*.<sup>1</sup> One of the early ideas in cryonics circles which he advocated for was the concept of permafrost burial<sup>2</sup> as a low cost alternative to standard cryopreservation by using areas of northern Canada where the ground never thaws at a certain depth. This has become a largely forgotten concept. Doug federally incorporated the CSC and wrote its bylaws. Formal application for incorporation was made in 1989 by Doug Quinn; Scott Maynard, a biochemistry student and the secretary for the CSC; and Benjamin Best. The CSC was finally incorporated in August 1990 after long administrative delays.

In 1990, British Columbia, our westernmost province, passed a law prohibiting the marketing of cryonics, and the early 1990s were spent by the CSC unsuccessfully attempting to overturn it. Similar legislation was considered in Alberta, but it was not passed into law.<sup>3</sup> Even though it is fortunate that no other state or province has passed such a law, it still remains in force to this date. Technically, a resident of British Columbia can have cryonics arrangements made, but as one can imagine, a law written in such a manner makes it difficult to find funeral directors and medical professionals that are comfortable assisting these efforts.

The annual tradition of summer parties and winter dinners started in Toronto during this time, and Ben Best took over the role of president of the CSC and editor of *the*

*CCN* from 1991 to 1999. He was the first cryonicist I met, in 1997 while I was still in college for nursing, and was very influential in my decision to become a cryonics activist and advocate. I consider him to be one of my oldest and dearest friends in this community.

The *CCN* ceased publication in 2000, replaced by the Yahoo email and members forum. Guy Desrosiers of Alberta was elected CSC president in May 2001, in the CSC's first online election and held that position until contact with him was lost in early 2003. I, Christine Gaspar, was appointed interim president in his absence, and it was decided by vote that I would remain in that position. I bring to the group a background in emergency nursing. I have held that position ever since, with the exception of a period in 2007-2008 when I moved out of country. Patrice Levin was elected as president. She did tremendous work updating our financials during her tenure. She, along with Ben Best and Tanya Jones of Alcor led the first Western Canada standby training session during her time with us. When I returned to Canada in 2008, Patrice gave the role of president back to me, and I have served in that capacity ever since.

In the fall of 2002, the Toronto Local group—a subset of the CSC—participated in our first cryopreservation of a lady that was to become a patient of the Cryonics Institute<sup>4</sup>. For most of the life of the CSC, it has been focused on education and advocacy of cryonics, in the Canadian community, often answering press requests and assisting new members with their enrollment in either CI (The Cryonics Institute) or Alcor

Life Extension Foundation. One of the most important aspects of assisting with this case was that it planted the seeds for how the CSC would evolve, and which direction it should be aiming for. Through generous donations, we were able to acquire an ice bath and a Brunswick thumper that would deliver CPR hydraulically. We did also have some rudimentary medications but in hindsight, it would seem that our preparations barely scratched the surface of what would be needed if we were to evolve into an organization that supported its members more than just theoretically.

As can be said for any group whose members are volunteers, with only a single case to base ourselves on, change came slowly. It is really only in the last 2-3 years that significant effort has been taken to truly change our capability to a group that can offer standby support and a cohesive, organized team of volunteers with the capability to truly offer a valued service to a cryonicist in need.

Another element that has served us well is that the political climate and public attitude towards cryonics and transhuman ideas has begun to shift in a positive direction. The fantastic advances in science, and strong transhuman advocacy have helped make cryonics a concept that is gaining mainstream acceptance and legitimacy. This is truly the time to act if we have any hope of improving our chances for a good cryopreservation. Our most basic message is that one can take as many precautions and attempt as many procedures as possible to extend one's life radically, but life is unpredictable, death can be as random as a car accident, and any serious attempt at



transhuman radical life extension must seriously consider a “Plan B.”

One area of focus that I have been diligently trying to develop, with the assistance of our solid group members, is a formalized, clearly defined protocol. Canada is a huge country, with pockets of cryonicists who are thousands of kilometers apart. The same can be said for the rest of the world. My vision here, in collaboration with Alcor and CI is to write a standardized field manual that can be given to any group who wants it, that will outline the equipment, preparation and steps needed to initiate a good cryonics response. It needs to be simple enough that a person without a medical background can work with, and yet comprehensive enough to be worth the group’s effort. We do not have the benefit of contracting with Suspended Animation, as they are still restricted to working within the borders of the continental USA, and clearly, it would take hours, at the earliest, to mobilize a team from Arizona, or coordinate with a funeral director for CI. My goal is to create training videos, and “kits” that can be purchased or obtained by any start-up group, and then operate as a mobile support professional that can come to their aid to initiate the more complex aspects of a stabilization. My ultimate goal would be to have the capability of doing field vitrification, so that a patient can then be shipped to the provider of their choice, in the best possible condition at dry ice temperature.

One of the most significant barriers that we have recently overcome is taking custody of an Alcor meds kit in the greater Toronto area. A long time concern we have had is that if there is a last minute case, any delay at customs would severely impact the quality of a perfusion. Now, Alcor representatives have a kit pre-positioned here, and all they have to be concerned about is moving personnel. On the weekend of August 15-17, 2014, Aaron Drake and Dr. Max More will be coming to Toronto to provide us with orientation and training on their equipment and protocols. It is our goal to not only hold their kit, but to be able to offer immediate assistance, when possible, to their patients, in the hours before their team can arrive. Every minute can make the difference between an optimal and a sub-optimal perfusion.

Over the next few months, we will also acquire vitrification solution, and supplies from CI, in order to offer the same advantage to its Canadian members. Once we have a

plan in place for the Toronto region, it is my goal to duplicate these efforts in other parts of the country that have the most pressing need, such as British Columbia for example.

This takes us to our next challenge, which is the anti-cryonics law in BC. Cryonicists in BC have been trying to have that prejudicial law overturned for many years now. This is a very important issue, not only for the people of BC, but also for cryonicists in other regions. Having an anti-cryonics law on the books creates the potential for others to be influenced by that established precedent. It is in everyone’s best interest to overturn it, lest another zealous lawmaker sees that as an opportunity to create similar rules. In consultation with a civil rights attorney, BC cryonicists have proposed that the best way to challenge the law is to create a business that would be directly affected by it and appeal on the grounds that it is discriminatory. This creates an opportunity to formally start an organization with a similar purpose that Suspended Animation Inc has in the USA, and it falls beautifully in line with the above mentioned goals of the CSC. What this venture lacks at this time is the funding to realize these goals.

If I was to be completely direct about what the CSC needs to further its mission, it would have to boil down to two elements. The first would be active participants. I want to inspire momentum, and help encourage other cryonicists to take a more active role in this service. The future is as yet unwritten. Every effort that we make now, contributes to our future success.

The second inevitable need we have is financial support. The ideal situation, as I see it, is twofold. One aspect is the ability to earn a living in cryonics, so that my efforts and time aren’t divided between what I must do in a career which takes up valuable time, and what I could do if I could devote my fullest efforts on this mission. The second area where financial support would be hugely beneficial is to support the start-up of the BC organization, currently named Biostasis Canada, which would be born as a mobile, professional standby organization that would operate to deliver high quality cryonics field work, train and prepare local groups of cryonicists, and have the teeth to take on the anti-cryonics law in court. I have come to understand that given the great distances that often exist between cryonicists and their service provider, what is most critical to success is timely, effective

preparation, to dry ice temperature. Once that is accomplished, it matters much less how far the patient must travel to reach their intended destination.

I have always believed that being honest and transparent are worthy attributes, and I believe that these ventures would be a wonderful addition to building a cryonics infrastructure that we would all benefit from. It would serve Canadians by improving their chances at a quality cryopreservation, would serve others globally, in assisting them in creating their own networks of support, and in a way would help Americans create a solid cryonics infrastructure outside of their borders, should their own political winds ever change in a manner that becomes hostile to their goals and freedoms. ■

## NOTES

1. <http://www.cryocdn.org/cdnhist.html>
2. <http://www.cryocdn.org/perma.html>
3. <http://cryocdn.org/law57.html>
4. <http://www.benbest.com/cryonics/toronto.html>



### About the Author

Christine Gaspar is a registered nurse with

a background in emergency medicine, trauma and tele-triage. She is the president of the Cryonics Society of Canada, an essayist on transhumanism and cryonics, and has appeared on national and international radio, print and television interviews, advocating for cryopreservation and radical life extension. She is a contracted member of the Cryonics Institute, and an associate member of Alcor Life Extension Foundation. She also serves on the life extension advisory board at the Lifeboat Foundation.

# Elizabeth G. Pugliese

## FUNDRAISER

Your assistance is requested to help cryopreserve the brain of an 88 year old woman who died and wanted to be cryopreserved.

A few months ago the Venturists were contacted by Ron Putirka, who lives in Las Vegas, Nevada. Ron was a long-time member of Alcor and is now an associate member, for financial reasons. He had his aging dog Benje cryopreserved at Alcor in 1991. Ron's 88-year-old mom, Elizabeth Pugliese, also living in the same household on a retirement income, had signed a document expressing a wish for cryopreservation, and was now ailing. Together the two had insufficient funds for even the least expensive cryopreservation options.

Mom's name is Elizabeth G. Pugliese, aka Betty, maiden name Sodski. She was born in Detroit, MI., March 29, 1925 and deanimated December 6, 2013 at her son's home in Las Vegas, NV where he and hospice took care of her. Ron was struggling to keep her alive and hospice was anticipating her death.

Over the years she lived in Detroit, Michigan; Saint Petersburg, Florida; Pittsburgh, Pennsylvania and Las Vegas, Nevada. Two jobs she did primarily for most of her adult life were being a hostess and a waitress, especially the latter. Also she dabbled in professional singing, did some part-time factory work at the 3M Company, and considerably later in her life worked at a daycare center and from there became a personal nanny.

Ron's mother deanimated suddenly in December. There was no time or funding to arrange anything beyond what the local mortuary could do. The body was embalmed with the usual formalin as the main fixative, and with emphasis on the brain, then the brain was removed by a pathologist and stored, again in formalin fixative. From here it is hoped that funding can be raised so that cryogenic storage at a public facility will become possible. This procedure could be preceded by cryoprotectant perfusion by slow diffusion, as has happened for some brain-only cases at Alcor. Overall, it would cost \$15,000 for her brain cryopreservation. Ron has informed the Venturists that he has come up with \$3,000 on his own towards this goal, so the Venturists will need to raise only \$12,000 more. This should be sufficient to cover the indefinite cryogenic storage of the patient. In particular Max More, CEO of Alcor, has assured us that this amount would be adequate for brain-only storage at Alcor.

We ask your help in raising funding for the cryopreservation of this fine woman and good mother.

Please send your donations to:

**Society for Venturism  
11255 S. Highway 69  
Mayer, AZ 86333**

Or else you may donate by PayPal through the Venturists' website: <http://venturist.info/donate.html>

Thank you,

*The Venturists*





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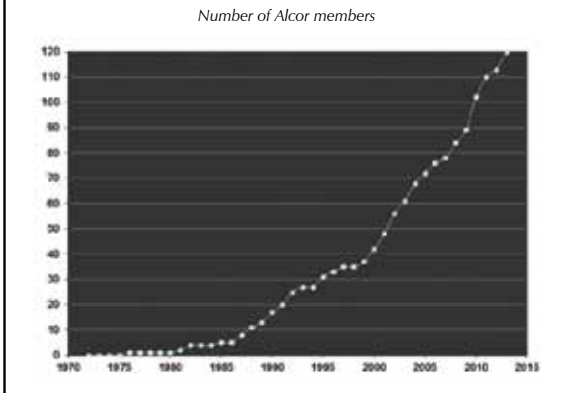
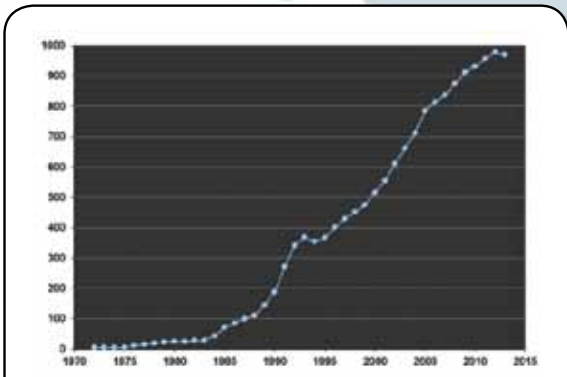
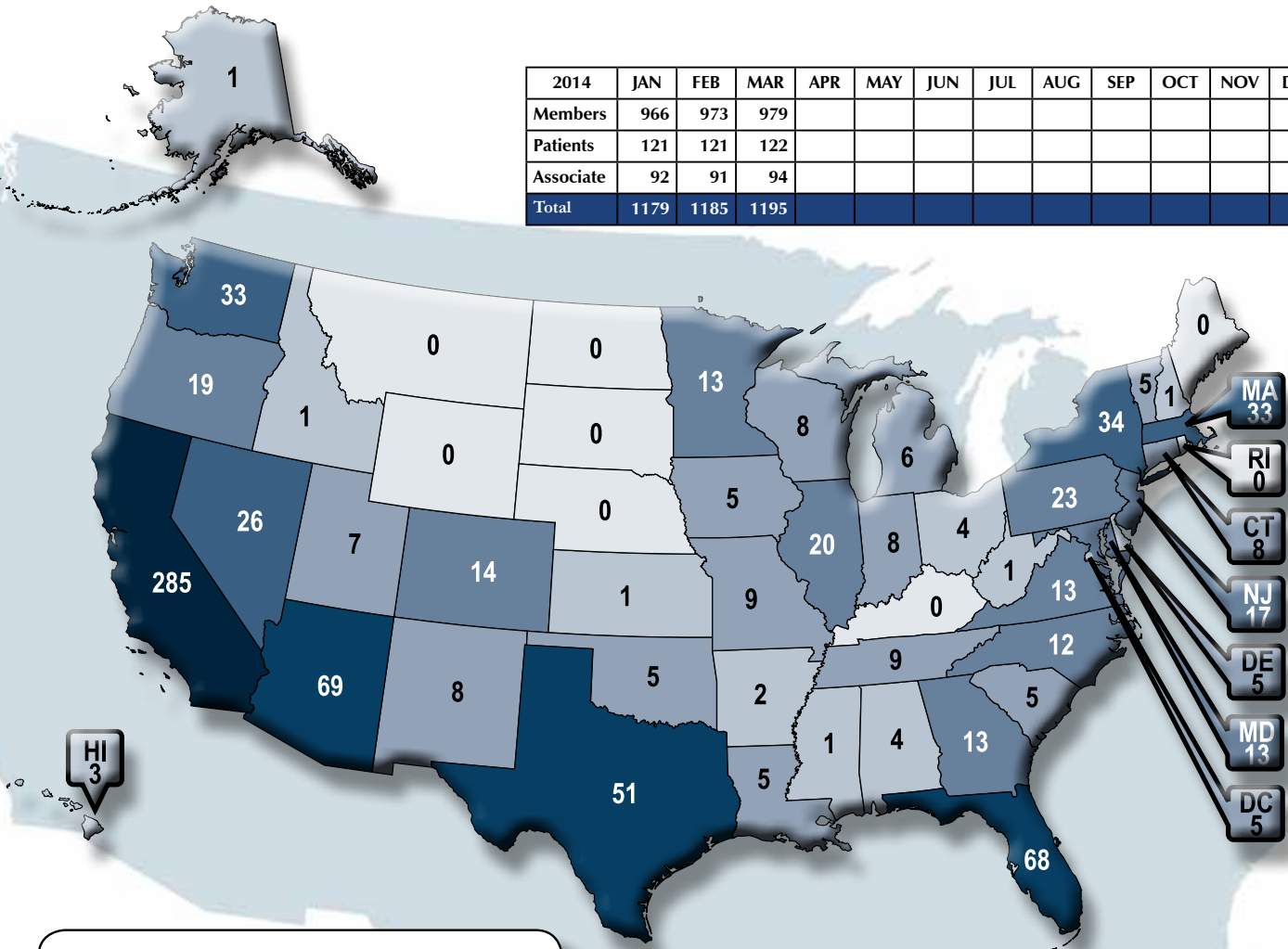
<b>Trans-Resveratrol</b>	<b>250 mg</b>
<b>Grape-Berry Actives</b>	<b>85 mg</b>
<b>Quercetin</b>	<b>60 mg</b>
<b>Trans-Pterostilbene</b>	<b>0.5 mg</b>
<b>Fisetin</b>	<b>10 mg</b>

To order **Optimized Resveratrol with Synergistic Grape-Berry Actives**,  
call 1-800-544-4440 or visit [www.LifeExtension.com](http://www.LifeExtension.com)  
Be sure to mention code **PIM401X**.



# Membership Statistics

2014	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Members	966	973	979									
Patients	121	121	122									
Associate	92	91	94									
<b>Total</b>	<b>1179</b>	<b>1185</b>	<b>1195</b>									

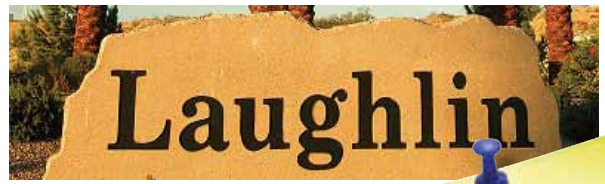


- 0 Members
- 1-4 Members
- 5-9 Members
- 10-24 Members
- 25-49 Members
- 50-74 Members
- 75+ Members

Country	International	
	Members	Patients
Aruba	2	0
Australia	13	3
Canada	42	2
Germany	4	0
Israel	1	1
Italy	2	0
Japan	1	0
Lebanon	1	0
Mexico	4	0
Monaco	1	0
Netherlands	2	0
New Zealand	2	0
Norway	1	0
Portugal	4	0
Singapore	1	0
Spain	3	1
Thailand	3	0
United Arab Emirates	1	0
United Kingdom	19	2
<b>TOTAL</b>	<b>109</b>	<b>9</b>

# Announcing...

## This Year's Cryonics Convention



This year marks the 50th anniversary of the publication in 1964 of *The Prospect of Immortality*, by Robert Ettinger, the book which started the cryonics movement. If you want to find the best information from authoritative sources about the current and foreseeable state of the cryonics movement as of this year, you have an excellent opportunity this coming November. The Society for Venturism is announcing its second Cryonics Convention at Don Laughlin's Riverside Resort in Laughlin, Nevada, to be held November 7, 8 and 9, 2014 at the Resort's Starview Room, a conference facility which offers a panoramic view of the Colorado River and the desert mountains beyond. The Starview Room also has space for the attendees' dining and for exhibition tables.

The convention will feature speakers who will discuss developments of interest to cryonicists, transhumanists, futurists and life extensionists. Some scientists who work in cryobiology and in the science of aging will report on their cutting-edge research. Other speakers representing Alcor and other cryonics organizations will report about developments at their respective organizations. Yet other speakers with long involvement in cryonics will discuss the history and philosophy of the cryonics movement on its 50th anniversary, the movement's current status, and where we would like to see it go in the coming years. And Mr. Laughlin himself will appear to take questions from the audience about anything, which he will answer with his humor and shrewd business sense, just like he did at last year's convention. The Society for Venturism will publish a list of speakers and their presentations in about a month at the Venturists' website: <http://www.venturist.info>.

Mr. Don Laughlin, a longtime cryonicist, has worked with the Society for Venturism to make the convention very convenient and affordable. The registration fee, payable to the Society for Venturism,

is only \$75. You have to reserve your own room accommodations through the Riverside Resort (details to be announced) at special low rates by mentioning that you are coming to the convention. Mr. Laughlin has arranged to provide all the meals for the attendees at special discounted rates inside the Starview Room so that you don't have to go down to the busy casino for your meals. The Starview Room also has a cash bar to provide beverages.

Attendees who have appropriate products or services they would like to offer or sell to cryonicists—books, T-shirts, supplements, CD's, magazines,

etc.—will also be able to reserve free table space at the convention.

So mark your calendars in November for this event, and keep on the lookout for the updated information about the convention at the Venturists' website, <http://www.venturist.info>. If you would like more information, email Mark Plus, Secretary of the Society for Venturism at [mark.plus@rocketmail.com](mailto:mark.plus@rocketmail.com). You can also call him at (928) 273-8451. ■

### Why Should You Join the Venturists?

The Society for Venturism is one of the oldest organizations (established in 1986) which defends the rights of cryonicists to be cryopreserved.

Membership in the Society for Venturism offers the following benefits:

1. Venturist members receive the Venturists' Religious Objection to Autopsy card. This offers possible protection from an autopsy which would compromise the quality of your cryopreservation.
2. The Venturists have a Backup Trust which could offer possible protection of your cryopreservation in case your cryonics organization can no longer keep you cryosuspended.
3. The Venturists offer possible Constitutional protection of your right to cryopreservation because of their church status.
4. The Venturists hold regular, affordable conventions which are open to everyone in the

cryonics community. These offer excellent opportunities to hear talks by scientists about their research into cryonics and life extension; they also provide a way to meet and network with cryonicists, transhumanists and life extensionists from around the world.

Membership in the Society for Venturism is very affordable, with an annual donation starting at \$25 a year. Full membership requires being signed up with a recognized cryonics organization, and affirming the Venturists' Principles: (1) To try to do what is right; and (2) To work for the worldwide conquest of aging and death. You can find the membership application and ways to donate on the Venturists' website, [www.venturist.info](http://www.venturist.info). For more information, contact Mark Plus, Secretary of the Society for Venturism: [mark.plus@rocketmail.com](mailto:mark.plus@rocketmail.com), phone (928) 273-8451. Or write to: Society for Venturism, 11255 S. Highway 69, Mayer, AZ 86333, USA. ■

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Item# 01808

## How Much Curcumin Are You Absorbing?

**Curcumin** is an active compound derived from the Indian spice **turmeric**. It has been widely acclaimed for its diverse health-promoting effects on nearly every organ system in the body,<sup>1-6</sup> including its support for the body's natural inflammatory response system.<sup>7</sup> But most curcumin is neither *absorbed well* nor *retained well* in the blood—posing a challenge to those who wish to maximize its benefits.<sup>8</sup>

Life Extension® took the lead in resolving this issue several years ago by introducing **Super Bio-Curcumin®** containing **BCM-95®**, a patented, *bioenhanced* preparation of curcumin that has been shown to reach up to **7 times higher concentration** in the blood than standard curcumin.<sup>8</sup>

Now, an exciting **next generation** curcumin formula has become available! The **new Advanced Bio-Curcumin® with Ginger & Turmerones** provides additional compounds that **further** boost absorption of curcumin's highly beneficial phytonutrients!<sup>9,10</sup>

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In addition to **BCM-95®**, this **new curcumin** formula contains:

- 1. Turmerones:** After curcumin is extracted from turmeric, what remains is **turmeric oil** rich in compounds called **turmerones**.<sup>11,12</sup> Combining **BCM-95®** with a high content of **turmerones** provides health consumers with **more** beneficial **turmeric** compounds that further multiply absorption.<sup>9</sup> Scientists have shown that these potent **turmerones** not only support curcumin absorption, but significantly increase the amount of curcumin **inside** the cell as well!<sup>9</sup>
- 2. Ginger:** Curcumin and **ginger** are close botanical relatives. Research demonstrates that they have overlapping and complementary health benefits,<sup>13</sup> and scientists are focusing on the therapeutic effects of *combining* these two plants.<sup>14,15</sup> **Advanced Bio-Curcumin® with Ginger & Turmerones** provides a supercritical extract of ginger standardized to the greatest concentration of ginger compounds—including beneficial gingerols and shogaols.
- 3. Phospholipids:** This new curcumin formula also contains **phospholipids**, a type of emulsifying molecule known to greatly enhance absorption of poorly soluble active compounds.<sup>10</sup>

The powerfully enhanced bioavailability and potency of **Advanced Bio-Curcumin® with Ginger & Turmerones** is **superior** to conventional curcumin supplements. This product represents the most powerful and cost-effective way to supplement with—and receive the full benefits of—this very critical nutrient.

The suggested daily dosage of **one** softgel of **Advanced Bio-Curcumin® with Ginger & Turmerones** provides:

<b>Turmeric Phospholipid Blend</b>	<b>630 mg</b>
BCM-95® Bio-Curcumin Turmeric 25:1 extract (rhizome) [total curcuminoids complex with essential oils (380 mg)], Turmeric oil (rhizome) [providing 60 mg total turmerones], Phospholipids	
<b>Ginger CO<sub>2</sub> extract (root)</b>	<b>200 mg</b>
[providing 60 mg gingerols]	

Each softgel of **Advanced Bio-Curcumin® with Ginger & Turmerones** provides **400 mg** of **BCM-95® Super Bio-Curcumin** plus an array of turmerones and phospholipids.

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**Caution:** Do not take if you have gallbladder problems or gallstones. If you are taking anti-coagulant or anti-platelet medications, or have a bleeding disorder, contact your healthcare practitioner before taking this product.

# MEETINGS

## ABOUT THE ALCOR FOUNDATION

The Alcor Life Extension Foundation is a nonprofit tax-exempt scientific and educational organization dedicated to advancing the science of cryopreservation and promoting cryonics as a rational option. Being an Alcor member means knowing that—should the worst happen—Alcor's Emergency Response Team is ready to respond for you, 24 hours a day, 365 days a year.

Alcor's Emergency Response capability includes specially trained technicians and customized equipment in Arizona, northern California, southern California, and south Florida, as well as many additional certified technicians on-call around the United States. Alcor's Arizona facility includes a full-time staff, and the Patient Care Bay is personally monitored 24 hours a day.

## ARIZONA

### FLAGSTAFF:

Arizona without the inferno. Cryonics group in beautiful, high-altitude Flagstaff. Two-hour drive to Alcor. Contact [eric@flagstaffcryo.com](mailto:eric@flagstaffcryo.com) for more information.

## PHOENIX

### VALLEY OF THE SUN:

This group meets monthly, usually in the third week of the month. Dates are determined by the activity or event planned. For more information or to RSVP, visit <http://cryonics.meetup.com/45/> or email Lisa Shock at [lisa@alcor.org](mailto:lisa@alcor.org).

### AT ALCOR:

Alcor Board of Directors Meetings and Facility Tours—Alcor business meetings are generally held on the first Saturday of every month starting at 11:00 AM MST. Guests are welcome to attend the fully-public board meetings on odd-numbered months. Facility tours are held every Tuesday and Friday at 2:00 PM. For more information or to schedule a tour, call Marji Klima at (877) 462-5267 x101 or email [marji@alcor.org](mailto:marji@alcor.org).

## CALIFORNIA

### LOS ANGELES:

Alcor Southern California Meetings—For information, call Peter Voss at (310) 822-4533 or e-mail him at [peter@optimal.org](mailto:peter@optimal.org). Although monthly meetings are not held regularly, you can meet Los Angeles Alcor members by contacting Peter.

### SAN FRANCISCO BAY:

Alcor Northern California Meetings are held quarterly in January, April, July, and October. A CryoFeast is held once a year. For information on Northern California meetings, call Mark Galeck at (650) 969-1671, (650) 534-6409 or email [Mark\\_galeck@pacbell.net](mailto:Mark_galeck@pacbell.net).

## FLORIDA

Central Florida Life Extension group meets once a month in the Tampa Bay area (Tampa and St. Petersburg) for discussion and socializing. The group has been active since 2007. Email [arcturus12453@yahoo.com](mailto:arcturus12453@yahoo.com) for more information.

## NEW ENGLAND

### CAMBRIDGE:

The New England regional group strives to meet monthly in Cambridge, MA—for information or to be added to the Alcor NE mailing list, please contact Bret Kulakovich at 617-824-8982, [alcor@bonfireproductions.com](mailto:alcor@bonfireproductions.com), or on FACEBOOK via the Cryonics Special Interest Group.

## PACIFIC NORTHWEST

A Yahoo mailing list is also maintained for cryonicists in the Pacific Northwest at <http://tech.groups.yahoo.com/group/CryonicsNW/>.

## BRITISH COLUMBIA (CANADA):

The contact person for meetings in the Vancouver area is Keegan Macintosh: [keegan.macintosh@me.com](mailto:keegan.macintosh@me.com).

## OREGON:

The contact person for meetings in the Portland area is Aschwin de Wolf: [aschwin@alcor.org](mailto:aschwin@alcor.org)

See also: <https://www.facebook.com/portland.life.extension>

## ALCOR PORTUGAL

Alcor Portugal is working to have good stabilization and transport capabilities. The group meets every Saturday for two hours. For information about meetings, contact Nuno Martins at [n-martins@n-martins.com](mailto:n-martins@n-martins.com). The Alcor Portugal website is: [www.alcorportugal.com](http://www.alcorportugal.com).

## TEXAS

### DALLAS:

North Texas Cryonauts, please sign up for our announcements list for meetings (<http://groups.yahoo.com/group/cryonauts-announce>) or contact David Wallace Croft at (214) 636-3790 for details of upcoming meetings.

### AUSTIN/CENTRAL TEXAS:

We meet at least quarterly for training, transport kit updates, and discussion. For information: Steve Jackson, 512-447-7866, [sj@sjgames.com](mailto:sj@sjgames.com).

## UNITED KINGDOM

There is an Alcor chapter in England. For information about meetings, contact Alan Sinclair at [cryoservices@yahoo.co.uk](mailto:cryoservices@yahoo.co.uk). See the web site at [www.alcor-uk.org](http://www.alcor-uk.org).

**If you are interested in hosting regular meetings in your area, contact Alcor at 877-462-5267, ext. 113. Meetings are a great way to learn about cryonics, meet others with similar interests, and introduce your friends and family to Alcor members!**

# WHAT IS CRYONICS?

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Cryonics is an attempt to preserve and protect human life, not reverse death. It is the practice of using extreme cold to attempt to preserve the life of a person who can no longer be supported by today's medicine. Will future medicine, including mature nanotechnology, have the ability to heal at the cellular and molecular levels? Can cryonics successfully carry the cryopreserved person forward through time, for however many decades or centuries might be necessary, until the cryopreservation process can be reversed and the person restored to full health? While cryonics may sound like science fiction, there is a basis for it in real science. The complete scientific story of cryonics is seldom told in media reports, leaving cryonics widely misunderstood. We invite you to reach your own conclusions.

## HOW DO I FIND OUT MORE?

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The Alcor Life Extension Foundation is the world leader in cryonics research and technology. Alcor is a non-profit organization located in Scottsdale, Arizona, founded in 1972. Our website is one of the best sources of detailed introductory information about Alcor and cryopreservation ([www.alcor.org](http://www.alcor.org)). We also invite you to request our FREE information package on the "Free Information" section of our website. It includes:

- A fully illustrated color brochure
- A sample of our magazine
- An application for membership and brochure explaining how to join
- And more!

**Your free package should arrive in 1-2 weeks.** (The complete package will be sent free in the U.S., Canada, and the United Kingdom.)

## HOW DO I ENROLL?

---

Signing up for a cryopreservation is easy!

- Step 1:** Fill out an application and submit it with your \$90 application fee.
- Step 2:** You will then be sent a set of contracts to review and sign.
- Step 3:** Fund your cryopreservation. While most people use life insurance to fund their cryopreservation, other forms of prepayment are also accepted. Alcor's Membership Coordinator can provide you with a list of insurance agents familiar with satisfying Alcor's current funding requirements.
- Finally:** After enrolling, you will wear emergency alert tags or carry a special card in your wallet. This is your confirmation that Alcor will respond immediately to an emergency call on your behalf.

Not ready to make full arrangements for cryopreservation? Then **become an Associate Member** for \$10/month (or \$30/quarter or \$120 annually). Associate Members will receive:

- *Cryonics* magazine by mail
- Discounts on Alcor conferences
- Access to post in the Alcor Member Forums
- A dollar-for-dollar credit toward full membership sign-up fees for any dues paid for Associate Membership

To become an Associate Member send a check or money order (\$10/month or \$30/quarter or \$120 annually) to Alcor Life Extension Foundation, 7895 E. Acoma Dr., Suite 110, Scottsdale, Arizona 85260, or call Marji Klima at (480) 905-1906 ext. 101 with your credit card information. You can also pay using PayPal (and get the Declaration of Intent to Be Cryopreserved) here: <http://www.alcor.org/BecomeMember/associate.html>



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