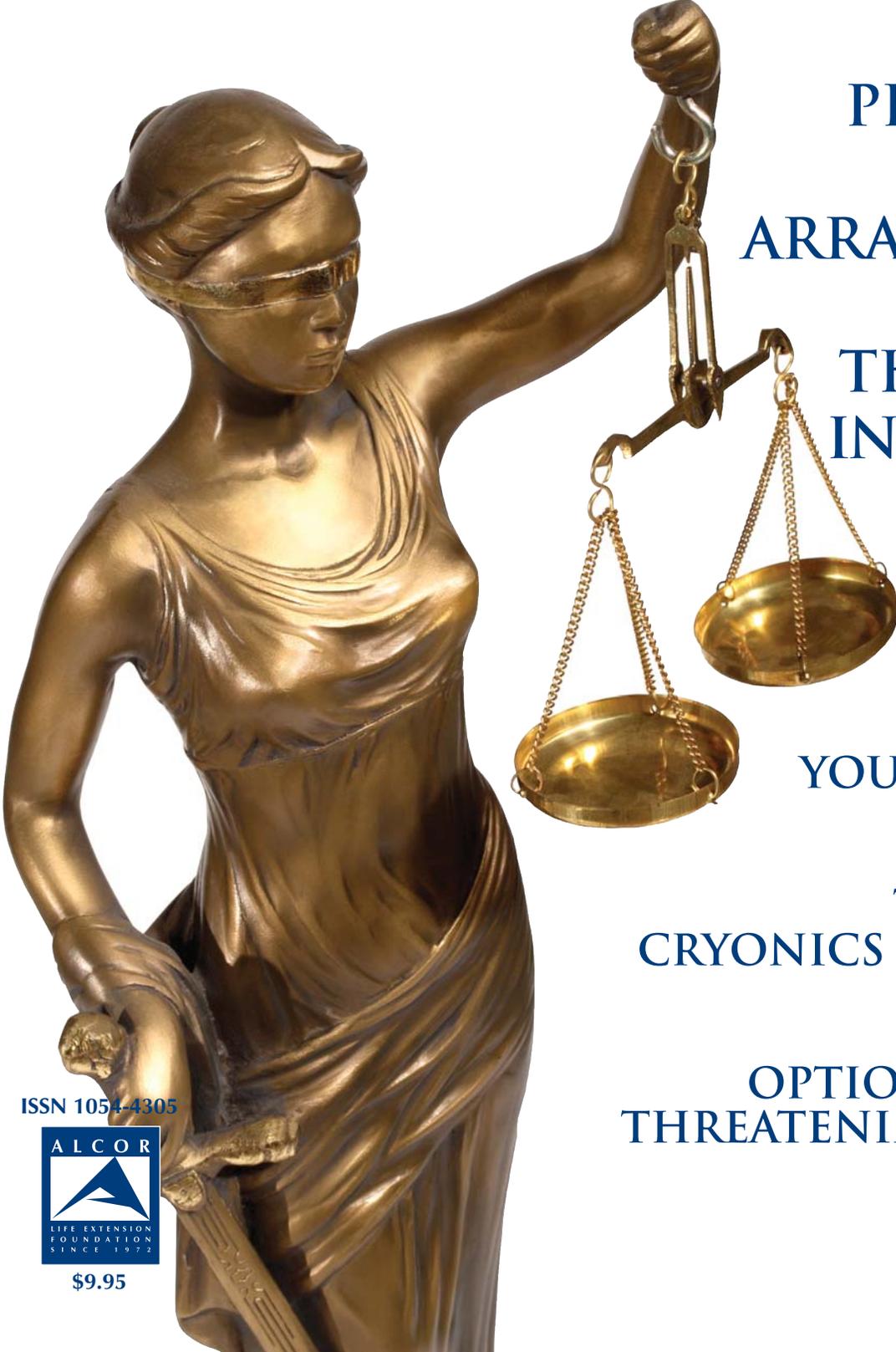


ALCOR LIFE EXTENSION FOUNDATION

CRYONICS

1ST QUARTER 2010 · VOLUME 31:1



PROTECTING
CRYONICS
ARRANGEMENTS
FROM
THIRD PARTY
INTERFERENCE

PAGE 14

READ THIS IF
YOU WANT TO LIVE

PAGE 7

THE ETHICS OF
CRYONICS INTERFERENCE

PAGE 17

OPTIONS FOR BRAIN-
THREATENING DISORDERS

PAGE 20

ISSN 1054-4305



\$9.95

Improve Your Odds of a Good Cryopreservation

You have your cryonics funding and contracts in place but have you considered other steps you can take to prevent problems down the road?

- Do you keep Alcor up-to-date about personal and medical changes?
- Does your Alcor paperwork still reflect your current wishes?
- Have you executed a cryonics-friendly Living Will and Durable Power of Attorney for Health Care?
- Do you wear your bracelet and talk to your friends and family about your desire to be cryopreserved?
- Do you have hostile relatives or supportive relatives that are willing to sign a Relative's Affidavit?
- Do you attend local cryonics meetings or are you interested in starting a local group yourself?
- Are you interested in contributing to Alcor?

**Contact Alcor at 1-877-462-5267 ext. 132
and let us know how we can assist you.**

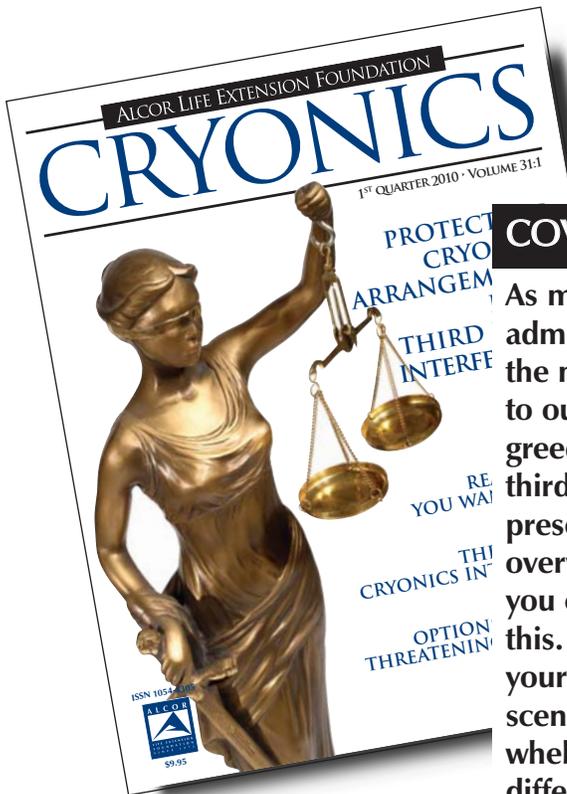


Alcor has 900 Members!!!

Alcor closed the year of 2009 with more than 900 members.
Read Ralph Merkle's "Let's Talk About Cryonics" in the 3rd quarter issue
of *Cryonics* how to help us reach 1000 members.



CRYONICS

1ST QUARTER 2010 • VOLUME 31:1

COVER STORY: PAGE 14

As much as we do not like to admit the possibility, some of the most formidable obstacles to our cryopreservation are greedy relatives or hostile third parties. Rebecca Lively presents a comprehensive overview of the legal strategies you can pursue to prevent this. If you want to protect yourself against these scenarios but are overwhelmed by all the different legal options at your disposal, this article is for you.

7 Read This if You Want to Live

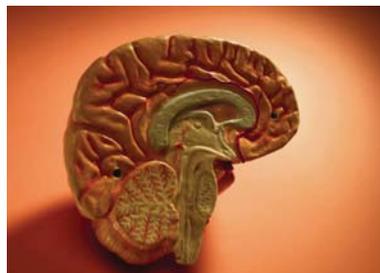
Robert Newport, M.D. and Michael Geisen

You think that you have completed your journey to meaningful life extension by executing cryonics arrangements with Alcor. Not quite! Dr. Robert Newport and Michael Geisen walk you through 14 steps to improve your chance of survival.

20 Options for Brain-Threatening Disorders

Mike Perry

The most important objective of cryonics is to preserve the brain as well as possible after legal death. But what can you do when you are faced with a disease that threatens your brain such as Alzheimer's?



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FROM THE EDITOR

Welcome to the first electronic edition of *Cryonics*! The decision to end the paper version of the magazine was not easy but we are determined to produce an even better and more timely magazine. If you still have any remaining questions about this change please do not hesitate to contact Alcor or the editor.

The major theme of this issue of *Cryonics* is how to protect yourself against hostile interference with your cryonics arrangements by family members or third parties. This problem has always been with us but a number of highly published legal cases have made more Alcor members aware of the importance of executing the proper legal documents to minimize the possibility and negative consequences of such interference.

The one message that all contributors to this issue want to get across is that making cryonics arrangements is not enough. There is more to think about. Have you thought about specifying your cryonics wishes in your Living Will? Have you executed a Power of Attorney for Health Care to make decisions on your behalf when you are no longer able to do so? What about Advance Directives? Most people are not very familiar with these legal topics and we hope that this issue will help you understand them better to strengthen your chances of an uncontested cryopreservation.

The opening article is "*Read This if You Want to Live*" by Robert Newport, M.D. and Michael Geisen. The authors identify no fewer than 14 steps that can improve your chances of a good and timely cryopreservation. Dr. Newport was also kind enough to include two legal documents that he himself has executed as an example for our readers.

My own small contribution concerns the largely unexplored topic of the ethics of cryonics interference. Cryonics patients do not receive the full legal protection of living persons but that does not mean that those who interfere should get off the hook from a moral point of view.

In our cover story Rebecca Lively works out in more detail the legal options to prevent hostile inference with your cryonics wishes. Interference doesn't always reflect outright hostility to cryonics. In some cases it is simply the greed of indifferent family members that is sufficient to delay or prevent your cryopreservation. There is now a growing consensus that greedy family members should be faced with strong incentives *not* to interfere. For example, you can add a no-contest clause to your Living Will so that even if a family member successfully prevents the cryopreservation of a cryonics member (s)he will get *nothing*. Perhaps you can even provide a financial incentive to ensure that your wishes *are* carried out.

One of the most tragic events that can happen to a person with cryonics arrangements is when a brain-threatening disorder progressively destroys your personality and memory as you grow older. Mike Perry reviews the available options for those who are faced with such grim prospects. On a more positive note, Mike Perry also attended the January 2010 cryonics Teens and Twenties meeting and reports back.

One of the attendees was Adele Fournet. Adele signed up with Alcor when she was 16(!) years old as a joint decision with her father. This issue's member profile presents further evidence of how Alcor's demographics are changing. ■

EXECUTIVE DIRECTOR'S REPORT



Jennifer Chapman

The first quarter of 2010 has been a busy time. We navigated a last-minute case, prevailed in an epic legal battle in the state of Colorado on behalf of patient Mary Robbins, and negotiated a favorable resolution with a medical examiner in the state of Florida for a long-time member. Although all three were straight freeze cases, an outcome we intently try to avoid, we fought hard for the best interests of these patients and gained important experience in the process. We continue to monitor several members facing various degrees of risk, while moving ahead with our technical development and patient care initiatives. We also processed our first membership dues increase in nearly a decade. Read on for a more detailed explanation of recent happenings at Alcor.

A-2469: A Last-Minute Case

In the late evening hours of January 24th, an emergency text alerted us to a third-party, non-member case. We were contacted by the patient's son, a long-time member, whose mother had died unexpectedly in an accidental house fire. He was preparing to drive to the location of the accident, several hours from his home, and requested time to talk with the rest of his family about cryopreserving his mother. Although he understood the importance of proceeding quickly, he needed to cautiously approach his family. Additionally, an investigation of the accident was pending, and there was the possibility of an autopsy. Although we were limited in our involvement until the family decided whether to pursue membership, the Deployment Committee decided to deploy Aaron Drake to California the next morning. The medical examiner's office held the patient for a few days but was generally cooperative and ultimately chose to do a non-invasive autopsy using a CT scan. After

the son secured release of the individual from the medical examiner's office and signed the membership agreements, we approved A-2469 as an Alcor patient. We placed the patient on dry ice and drove her back to Alcor for neuroseparation and a straight freeze procedure. A-2469 became Alcor's 90th patient.

A-1926: Fighting For Your Rights

On Friday, February 6th, we were contacted by the family of Mary Robbins (A-1926). Mary had been admitted to the hospital for complications associated with a recent cancer diagnosis. In fact, Mary had contacted Alcor herself only a month prior, after learning of her diagnosis, to ensure her Alcor membership was in order. Unfortunately, her health rapidly declined, and she was admitted to hospice care in Colorado Springs a few days before pronouncement of legal death. As her condition worsened, her family became less communicative. Alcor was not immediately informed of her death, despite having deployed Aaron Drake to Colorado to check her condition, and so began a three-week dispute between the Robbins family and Alcor. Mary was maintained on dry ice at a local mortuary until a court ruled in Alcor's favor. Despite the favorable ruling, a settlement agreement was signed between the parties.

We were well represented by our legal team in Colorado. The media quickly took interest in the legal dispute, prompting us to explain that Alcor's motives were purely to uphold the wishes of our long-standing member. We spearheaded the effort to keep the public informed by distributing the below press releases available on the "News Media" page of our website:

February 22: Alcor Attempts to Fulfill Wishes of Colorado Springs Woman

<http://www.alcor.org/Library/html/pr2010-02-22.html>

March 1: Colorado Springs Court Upholds Desire of Alcor Member to be Cryopreserved

<http://www.alcor.org/Library/html/pr2010-03-01.html>

March 3: Alcor and Robbins Family Reach Amicable Settlement

<http://www.alcor.org/Library/html/pr2010-03-03.html>

Three Alcor representatives testified at a hearing about this matter, and the court found our testimony credible. After weeks of Alcor coordinating remote deployments, maintaining relations with the funeral home, working with the attorneys, and dealing with the media, it was quite a relief to finally have Mary Robbins as Alcor's 91st patient on March 5th.

This case emphasized the importance of being very cautious about the funding arrangements we accept. In the case of Mary Robbins, we approved a special funding arrangement whereby Alcor was not the irrevocable beneficiary of Mary's annuity. Although she agreed not to change the beneficiary, authorization from Alcor was not required from the insurance company's standpoint. Mary kept her end of the bargain, but the beneficiary was changed by Mary's power of attorney, just before her death, without Alcor's knowledge or consent. Our current membership requirements follow the principle that we only accept arrangements requiring Alcor's signature for substantive changes to the funding mechanism. However, some funding arrangements approved in the past do not follow this principle. In the coming days, we will consider what can be done to address this issue, and others, raised by this case.

A-1712: Negotiating with a Medical Examiner

Simultaneous to the Mary Robbins situation, we managed a second case for a long-time member who had died unexpectedly in Florida on February 14th (A-1712). We were initially contacted by a nurse, who called our emergency number. She informed us it would be a medical examiner's case due to the surrounding circumstances. It was a Sunday, and the next day was a national holiday, so it would be difficult to have him released quickly. We explained his status as an anatomical donor and requested he be cooled immediately. The hospital staff packed his head in ice and moved him to a cooler. Suspended Animation dispatched to the scene to help with hospital coordination, and we hired legal counsel to assist with avoiding an invasive autopsy and expediting release from the medical examiner's office. The medical examiner, although generally cooperative, did require a court order before agreeing to limit the analysis of the brain's condition to a non-invasive CT scan. We tried to prevent this from becoming a straight freeze case, but it took several days to obtain the court order. Suspended Animation, Inc. assisted with performing a field neuroseparation and transport of the patient to Alcor. A-1712 became Alcor's 92nd patient.

Orville Richardson Legal Dispute

In April of 2009, we learned that Alcor member Orville Richardson had been buried the prior February by his siblings. Orville's membership arrangements with Alcor stated that he wanted Alcor to proceed with his cryopreservation, regardless of the severity of damage to his remains. However, the state of Iowa required the disinterment permit to be requested by the next of kin. Attempts to negotiate with the family members who buried him failed and, as a consequence, Alcor took legal action to compel them to sign the application form necessary to effectuate Orville's disinterment. This resulted in a protracted legal dispute, which was ultimately concluded in Alcor's favor by the Court of Appeals of Iowa.

It is our understanding that before his death Orville suffered the onset of dementia and was no longer capable of living independently. As a result, his brother and sister were named as his co-conservators prior to his legal death. His sister also became his legal guardian. For whatever reason, Alcor was not contacted by his family, nor any of his caregivers, when his cryopreservation appeared imminent. This case has many lessons, but it particularly exem-

plifies the extreme importance of our members proactively making arrangements to facilitate a successful cryopreservation. This includes ensuring that cooperative individuals are fully informed of the need to contact Alcor well in advance of legal death.

Readiness Activities

As of the end of the first quarter, we are back on high alert for two terminal members. One local member has been admitted to a friendly hospice on an outpatient basis. We are maintaining good communication with the family and hospice providers. Several plans are in place in the event of her unexpected death at home. We prepared the emergency response vehicle, ensuring it has a constant supply of ice. Ice has also been pre-positioned at the member's home with the family's consent. We developed a general plan of action for responding quickly, since the home is only about 10 minutes from Alcor, and put our surgeon and team members on notice. We also discussed certain aspects of our emergency stabilization procedure that differ for a local case, specifically at what temperature to discontinue cardiopulmonary support. Another terminal member in California may likewise need hospice care soon. He is presently in the hospital and the hospital staff has been advised to release all medical information to us. We are monitoring his condition closely with the assistance of a Southern California team member who visits him regularly.

Alcor is a 24/7 operation, and we often receive calls to our emergency line at all hours of the day and night that vary in their urgency. In the first quarter, we received four member-related emergency calls that warranted attention, but were not urgent.

First, we were contacted about an Arizona member who had been taken to the ER and was undergoing emergency surgery. Based on the information available to us, her condition was not deemed life threatening. She is temporarily on our watch list until we are confident she has fully recuperated. We also added an elderly member in Florida to our watch list after we were contacted by his son who was admitting him to the hospital for treatment of a long-time condition. Next came a call about a 73-year-old member residing in Washington who had broken his ankle and was undergoing general anesthesia to have it set. We were contacted again a few weeks later when this member was unexpectedly losing blood. His condition was stabilized, and we continue to monitor his recovery. Finally, upon receiving notification that a 96-year-old member in St.

Louis had entered an extended care facility, we sent an abbreviated medication kit to the head nurse of the facility. We continue to maintain communications regarding this member, with both his family and health care providers.

I was pleased to recently speak with the Texas regional group leader, Steve Jackson, about activities involving our emergency response network. The Texas group is proactively seeking medical professionals for their team and taking other actions to build their capabilities, such as establishing contact with the chief medical officer at a local hospital and locating friendly funeral homes. Our caseload is quite high right now, averaging about one case per month since December. We continue to work with the regional teams to aid their development when possible and replenish their inventory as needed. We hope to restore our training program in the second half of the year. As a supplement to the in-person training, we have started production on a training DVD with supporting documentation. In this video, Aaron Drake will demonstrate how to perform certain emergency response skills on cryonics patients.

Cryonics Experiments

In late January, we were presented with a rare opportunity for training, equipment testing and information-gathering about the effects of cryopreservation on the brain. A woman in Florida had donated her body to Alcor, not for the purpose of being cryopreserved, with the hope of revival, but for the purpose of research. The matter was discussed extensively with Alcor's technical staff and several advisors, as well as Suspended Animation, Inc. The pros and cons of proceeding were conscientiously weighed. In the end, several factors resulted in a declination of the anatomical gift. Factors that were considered included cost, the risk of communicable disease, the lack of forewarning of her death, legal concerns, and the need to restore readiness after the A-2469 case. Although we believe that donations of this nature could be an important resource for Alcor, proper preparations must be made in advance of such opportunities in the future.

Along the lines of information-gathering regarding cryonics procedures, we entered into an agreement with Advanced Neural Biosciences, Inc. (ANB) that will help Alcor address long-standing issues relevant to the field of cryonics. Part of the agreement involves ANB conducting experiments requested by Alcor. The details of these experiments are still being worked out, but it will likely involve validating existing and potential

Do you have an upcoming surgery or a medical condition Alcor should know about?

Whether your surgery is high risk or low risk, life-threatening or a routine procedure, there are a few things you should do in advance:

- (1) Contact Alcor to provide the details of your surgery.** We need to know several details, such as where it will take place, the name and number of your doctor, and information about your durable power of attorney for health care. Alcor will provide a standard form you can fill out to aid our timely response in the event of an emergency.
- (2) Talk to your doctor about your cryopreservation arrangements.** It is preferable for your doctor (and your family, for that matter) to hear directly from you about your cryopreservation arrangements. Your doctor may or may not interact cooperatively with Alcor, and it is better to find out his or her attitude in advance of your surgery.
- (3) Complete a durable power of attorney for health care.** This document names the person who will make key decisions regarding your medical care in the event you are incapacitated and cannot speak for yourself. It is critical that you select a durable power of attorney for health care who is fully supportive of your cryonics arrangements. It is also helpful to put that person in contact with Alcor in advance of your procedure so we can introduce ourselves and explain what they are asked to do in an emergency situation.

Please contact Alcor's Medical Response Director regarding your upcoming surgery or medical condition:

Aaron Drake
877-462-5267 x 104
aaron@alcor.org

whole body organ preservation solutions and stepwise validation of Alcor's medication protocol for field operations.

Technical Development

We continue to hire consultants possessing various areas of expertise to aid with technical development. Steve Graber majored in Architecture with a minor in Fine Art, which includes some graphic design. In December, we retained him to document several important processes, including all aspects of perfusate preparation. This covers preparing pre-weighed perfusate packages, preparing sterilization packs, operating the anprolene sterilizer, and mixing and storing perfusates. Due to our incoming case, it was also a valuable opportunity to have him document the whole body patient transfer process from setup to cleanup. The documentation process includes both written procedures and video footage of actual operational activities. He continued these projects into January, while additionally working with Joel Andersen (our LabVIEW programmer) to learn how to operate the whole body perfusion system.

Aschwin de Wolf was invited to visit the facility to observe and document the whole body straight freeze process. During his visit, we discussed projects he could undertake remotely, and he is currently contracted to offer input on a variety of readiness matters. This including suggesting contents for an abbreviated medication kit, suggesting modification to Alcor's protocol for pediatric cases, discussing the pros and cons of certain water recirculation devices, and drafting a training reader. He is also reviewing the whole body perfusion system manual and will recommend improvements.

Eric Vogt, a 14-year paramedic and Alcor contractor, visited the facility for about a week to round off his efforts to organize our readiness inventory. During his previous visit, Eric had centralized the readiness items in suite 105 and created an inventory list. Since then, Richard Cremeens has taken an actual count of each individual item. During his present visit, Eric is labeling the shelves to specify each item and the minimum level at which reordering should take place. To aid with ease of reordering, he is updating the inventory list to include documentation of vendor details, such as contact information and part numbers. Those items with an expiration date are being arranged in "first use" order and, to ensure the inventory is maintained properly over time, he will be submitting a written inventory control procedure.

Progress continues on our R&D projects, including development of a system that will simultaneously control patient cooldowns while listening for and recording fracturing events. Joel Andersen has just about finished the data acquisition phase of the project and will soon be moving on to post-processing. Randal Fry also addressed items needing attention on the whole body perfusion table, rebuilding the center cold stage fan motor to one of a dual-winding model with silicone insulation; rebuilding the lids to improve the seams; installing lighting; and addressing an issue with the nitrogen plumbing causing uneven cooling of the cold stage. Randal has temporarily taken a break from this project to begin building several field ATPs (Air Transportable Perfusion Kits), a project funded by a grant from the LEF, Miller, Thorp donation. Randal will build the back plates and shelving, and Hugh Hixon will assemble the rest of the contents. These ATPs will be distributed around the country for our regional groups.

Patient Care

In 2005, Alcor had three dewars manufactured that all had higher boiloff rates than desired: Bigfoot #10, #11, and #12. The manufacturing company agreed to repair Bigfoot #10 free of charge to see if the boiloff rate could be improved. After cutting open the dewar, they pulled out the inner shell. It was hard to remove, which may mean the super insulation was packed too tightly. The shell was rewrapped using 0.5 mil insulation (instead of 1.0 mil insulation). However, in order to put the shell back in, they needed to weld a ring at the top of the dewar to raise up the shell an inch or two so that the insulation at the bottom of the dewar would not be compressed.

They hoped to begin testing in January, but their plans were slightly delayed due to a leak, which had to be repaired. They then pumped down the dewar and commenced testing, which revealed a boiloff rate of 12.6 liters per day at about one-third full. Further testing is required to determine the actual boiloff rate. While Bigfoot #10 is being repaired out-of-state, the other two dewars are kept empty at Alcor. Reaching a resolution is particularly important because we will need to use one of the empty dewars with a higher boiloff rate with our next whole body case. Both of the terminal members mentioned above will be whole body patients, so it is highly likely we will need to temporarily use one of the dewars presently at Alcor awaiting repair.

Regarding patient care, a down payment has been made on patient care bay security

upgrades approved by the Alcor Board and Patient Care Trust Board. The vendor is putting us on their schedule, and Hugh Hixon is in charge of managing the project. Randal Fry will hang curtains or blinds in the conference room to obstruct vision into the area during construction and thereafter.

Member Funding Checks

When emergency calls are received, it is our standard practice to review the membership file to assess the member's funding status. In doing so recently, we learned that the funding for the above mentioned 73-year-old member (see "Readiness Activities") was unsatisfactory due to a misunderstanding regarding the term "assignment." His policy defined assignment to mean that Alcor was the owner, not the collateral assignee, as we had erroneously interpreted it to mean. Without being named the collateral assignee or beneficiary, the insurance company would not recognize Alcor as the valid recipient of the insurance proceeds. This particular issue has been corrected, but the broader issue remains that some unknown percentage of our membership has inadequate funding. D'Bora Tarrant conducted a first pass review of the funding status for each member a few years ago. Now Diane Cremeens will undertake a more detailed analysis, and some of you may be hearing from her about your funding. We appreciate your willingness to cooperate with these efforts, which are important to protect our financial security and your cryopreservation arrangements.

When it comes to life insurance, a reliable agent can be essential. In an emergency, logistical planning is benefited by knowing the amount of funding available. During the A-1712 case, we tried to check the patient's funding, but the insurance company was closed. So, we sought assistance from the agent, Mary Naples. Unfortunately, Mary had retired some time ago and could not be reached. About 115 members have Mary named as their agent of record, so Diane Cremeens sent a mailing referring them to a new agent, one that has a good relationship with Alcor and has agreed to offer assistance after hours. Twenty percent of the members contacted have responded thus far by filling out the appropriate form. Multiple mailings may be necessary to get everyone assigned to a new agent.

Membership Dues Increase

One of the primary ways members support the organization is through the

payment of membership dues. Alcor charges membership dues to support the advancement of its programs and to help defray the costs of equipment and supplies, administrative expenses, professional services, and other similar expenses. Alcor's last dues increase was eight years ago, in 2002. Since then, the CPI-U (a frequently cited measure of inflation) has increased by nearly 20 percent. Alcor's expense budget has accommodated this significant increase in general cost levels without any corresponding increase in revenue from member dues. In light of this, and considering the need to address Alcor's current operating budget deficit, a 20 percent dues increase was enacted effective January 2010. Comprehensive Member Standby charges and Life Member dues were unchanged. The membership application fee and extended application fees paid by applicants also increased by approximately 33 percent.

Thank you to all the staff who busily worked behind the scenes to ensure a smooth transition to the new dues rate, including Diane Cremeens and D'Bora Tarrant who helped update the legal contracts, website, blog and promotional materials. D'Bora also processed the mailing to our members and applicants, while Bonnie Magee single-handedly updated each and every membership record in QuickBooks, checking for accuracy during the process. She even made corrections along the way, including adjusting student or family discounts that had not been updated for many years. She also took the time to organize the memorized transaction list into groups, which makes it easier to spot inaccuracies and find information.

Financial Matters

The first quarter is one of the busiest times for the accounting department. In addition to processing the fee increases, Bonnie processed the January billing (the biggest of the year), mailed each member an overview of their 2009 dues payments and donations for tax purposes, and completed the 1099s. We no longer have to pay our accountants to process the 1099s, so we are pleased to now have this in-house capability. Bonnie works closely with our accountants on any issues that arise. For instance, we had informed our members for many years that dues were 90% tax deductible. In consultation with our accountants, Bonnie determined that the only tangible benefit our members receive is *Cryonics Magazine*. The

tax letters were customized to address this more accurate interpretation.

In the first quarter, Bonnie also completed the 2007 financial review and 2008 990, which are posted on the website. We spoke with our accountants, who we have a good relationship with, to explain our concerns about the quote we had received for the 2006 compilation, pointing out that we had already paid for an opening balance sheet review of 2006. As a result of our conversation, they agreed to reduce their quote by about 53 percent. They have provided us with a list of documents and information needed for the compilation. D'Bora and Bonnie also coordinated to restore the functionality of the PayPal account with input from the website working group, after we were informed about a member who tried unsuccessfully to make a donation. (The donation has since been received). All things considered, it may be another few months before we are ready to move on to other high priority accounting projects, such as cleaning up the general ledger and working with our accountants on our backlog of financial reviews.

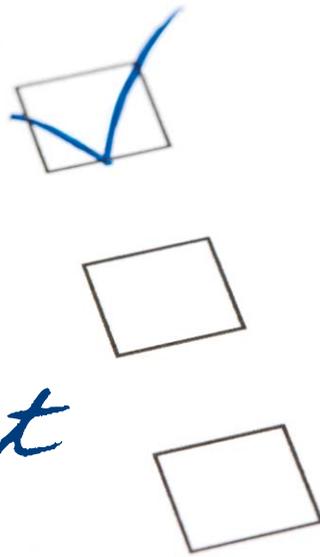
We continue to monitor our budgetary situation and made some important adjustments in the last few months, with more to come. In addition to implementing the fee increases and negotiating a lower charge for the 2006 compilation, we eliminated our phone lease, electing to purchase the equipment outright for under \$3,000. This represents a savings of about \$4,000 in the first year and \$7,000 per year thereafter. We recognized that our paper towel expense was too high, so new dispensers were installed that are estimated to save around \$1,000 per year. We also reduced or eliminated some professional retainers, for a savings of \$14,000 per year. Our general account was further benefited by a reimbursement from the R&D account of \$32,000, which is a partial reimbursement for 2009 expenses.

Respectfully,



Jennifer Chapman
Executive Director
ALCOR FOUNDATION

Read This If You Want to Live



By Robert Newport, M.D. & Michael R. Geisen

Good, we were hoping that title would get your attention. Based on our combined experience with approximately 15 cryopreservations over a span of 10 years as members of Alcor's Southern California Transport Team, the information we have to share with you can literally mean the difference between a high quality, early resuscitation or a resuscitation that may need to wait for better technology or, possibly, no resuscitation, ever.

Aschwin de Wolf provided a good description of the substantial improvements Alcor has made in equipment and procedures in the areas of standby, stabilization, transport and cryopreservation.⁽¹⁾ While these advances are substantial, again, based on our experience in the field, they are all for naught when, for example, one of our members passes away under circumstances which delay the cryopreservation process. This happens all too often.

In a year-long (2010) series of monthly television interviews, acclaimed interviewer and broadcast journalist Charlie Rose interviewed many of the world's leading scientists in the field of brain research. In episode four, Dr. Cornelia Bargmann, of Rockefeller University, talked about the immense complexity of the structure of the brain. She

explained that the human brain consists of approximately 100 billion nerve cells. Each nerve cell can connect with approximately 1,000 other nerve cells, which implies that the typical human brain can have 1 trillion neuronal connections. That is a lot of information to preserve when transitioning from 37 degrees C (98.6 degrees F) to -196 degrees C (-321 degrees F).

Our cryopreservation process is attempting to preserve, at the very least, as much of the brain structure as possible, so if an Alcor member dies and the cryopreservation process is not initiated immediately, ischemic damage begins to occur in the brain within 3 – 4 minutes, under ordinary circumstances, and it can occur even earlier in a warm environment, like a hot tub.

By taking some basic steps, each of us can greatly increase the odds of a good cryopreservation. Following is a checklist which can help you substantially improve your odds of a good cryopreservation. We strongly encourage you to make completion of this checklist a priority – you've gone so far as to sign up for cryonics, it would be a shame to have that effort nullified because of preventable circumstances. Actually, it would be more than a shame, it could mean the end of your life.

- 1) Make sure you always wear your Alcor necklace and bracelet. This is your first line of defense in the case of an unexpected death. First responders are trained to look for medical information like this and when they read this information they will be prompted to call Alcor. From that point on, Alcor's experts will provide guidance for beginning the cryopreservation process. If you don't have one or both of these items, contact D'Bora Tarrant at dbora@alcor.org to request a replacement(s).
- 2) For the same reasons, ensure that your Alcor wallet card is in your wallet or purse. If you don't have one or if yours is old and unreadable, ensure that you get one and keep it in your wallet or purse at all times. Again, D'Bora is the point of contact.
- 3) Share your cryopreservation plans with those who are close to you and ask them to support your wishes if you should be found incapacitated in any way. This includes family, friends, co-workers and neighbors; discuss your wishes and commitment in detail;

⁽¹⁾ Aschwin de Wolf, *Advances in Readiness* (Cryonics magazine, second quarter, 2009).

emphasize the seriousness and long-term nature of your decision; make sure they understand that you have made definite legal and financial arrangements to ensure your cryopreservation.² This may be uncomfortable (or worse) when you first break the news, but after these people have known your wishes for years it is much more likely that they will be supportive, should that time come. And this advance notice is much better than the alternative of learning about your wishes when you are ill or legally dead. So, what exactly should those people do if you are found incapacitated? First, dial 911, not Alcor. Let's always remember that the first priority is to keep you alive. Only after emergency medical personnel are notified, and when time allows, then Alcor should be notified so they can coordinate or direct any activity for cryopreservation.

- 4) To solidify the support that you may receive from your relatives, it is a good idea to ask them to sign a "Relatives Affidavit," a four page PDF that is available on the Alcor website at <http://www.alcor.org/Library/pdfs/signup-RelativesAffidavits.pdf>.
- 5) Many cryopreservations have been delayed and even cancelled by relatives or business associates for financial, religious or other reasons. Even if you believe this could not happen to you it is highly recommended that you structure your will or other related documents so as to eliminate any incentive for people to obstruct your cryopreservation. Even further, you may want to include incentives to support your wishes, such as instructions that funds will be disbursed only if you are cryopreserved – that will eliminate most objections to cryopreservation!
- 6) Prepare your cryopreservation instructions while you are of sound mind and body. If these instructions are not already in place when we get older or are depressed or in pain due to illness, it

is easy to imagine that someone might attempt to convince us to cancel our decision to be cryopreserved.

- 7) To give items five and six even more weight, you may want to make a video that documents your wishes. This can be a simple statement that you record on your own and then forward a copy to Alcor in case it may be needed in the future.
- 8) Ensure that your cryopreservation funding is rock solid. Most people use a life insurance policy with Alcor as the owner, or joint owner, and beneficiary. Rudi Hoffman wrote recently that he was "not aware of a single suspension that was delayed for funding considerations when there was adequate life insurance in place in a verifiable manner."
- 9) The healthier Alcor is the better it is for all of us, so if your funding vehicle has more funds than are needed for your cryopreservation, consider assigning some or all of the additional funds to Alcor. Alcor can provide the forms to assist with this.
- 10) If there is any indication that your health may be at risk, alert Alcor immediately. Members do this on a frequent basis and the Alcor staff appreciates knowing of any significant risk to your health because it helps them be prepared for a quick response. Depending on the circumstances, an Alcor staff member may talk with your medical representative or begin preparations to mobilize people and equipment to standby for your safety.
- 11) If there is any concern that your life may be at risk, seriously consider relocating to Scottsdale, near the Alcor facility. By relocating to Scottsdale you will substantially improve the odds of your getting a high quality cryopreservation. Contact Alcor to discuss options for this decision.
- 12) Set up an Advance Medical Directive (AMD). An AMD is a written list of

instructions for what you want done if you are incapacitated and not able to communicate your wishes. At the end of this article is an example AMD kindly contributed by Dr. Newport. Feel free to send an email to mgeisen@gmail.com if you would like an electronic version of this AMD. You're welcome to use this as a template for creating your own AMD, however, you may want to consult with your doctor and/or lawyer.

- 13) Set up a Durable Power of Attorney so that if you are incapacitated, people you trust will have the ability to act on your behalf. Again, Dr. Newport has contributed an example at the end of this article. Feel free to use this as a template for your own version and, once again, you may want to consult with your doctor and/or lawyer.
- 14) Set up Next of Kin Status Assignment (may also be called "permission to release medical information") to give Alcor access to your medical information. You may also choose to include people that you trust. Again, you may want to consult with your doctor and/or lawyer.

It would be a good idea to provide copies of items 12 – 14 to Alcor.

Taking action on any one of these 14 steps can significantly improve the odds that you will have a high quality cryopreservation, which, in turn, may lead to an earlier and higher quality resuscitation. ■

References

Alcor Foundation, *Protecting Yourself in Medical Emergencies*, in the Membership Info section of the Alcor website www.alcor.org/BecomeMember/toprotectyourself.html

Bill Voice, *Who Have You Told?*, (*Cryonics*, Nov/Dec 2005, page 23), www.alcor.org/cryonics/cryonics0506.pdf

² Steve Bridge, *Practical Planning for a Cryopreservation in Your Own Area* (*Cryonics* magazine, February, 1989).

ADVANCE MEDICAL DIRECTIVE

for

Robert R. Newport M.D.
6215 Del Valle Drive
Los Angeles, CA, 90048
Tel: 323-857-0128
Cell: 323-449-9434
holodoc1@sbcglobal.net

1. This document is an advance medical directive.
2. It has all of the authority of any such document produced by the California Medical Association (goldenrod) or that of any other these United States Medical Associations, or those of any countries of the world, and therefore should be considered valid in every jurisdiction on the planet.
3. It does represent my true wishes for my health and well-being for now and into the future and until which time I should change this document.
4. By this document I charge any and all of those persons responsible for my medical care and treatment, whether it be acute, chronic, rehabilitative or custodial to read and follow these instructions should I become moribund, incapacitated, or unable to maintain essential life supporting functions on my own.
5. AT A MINIMUM PROVIDE THE FOLLOWING:
 - a. Establish an airway
 - b. Support respiration and supply oxygen (if necessary by measurement) EXCEPT if I should have suffered an oxygen deficit from any cause for over 11 minutes, in which case oxygen is not to be administered without the express order of either my personal physician or a physician employed by the Alcor Life Extension Foundation.
 - c. Support cardiac function chemically and or mechanically whether or not oxygen is administered concurrently (see above No. 5.b).
 - d. Establish and maintain an I.V. (intravenous) drip with normal saline solution (this is not to replace or displace any other treatment which my physicians deem necessary)
 - e. Maintain and continue the above regimen until such time as I may be evaluated by my personal physicians AND those employed or contracted by the Alcor Life Extension Foundation who may be reached at 1-800-367-2228, (24/7) Fax 480-922-9027, or by cable to 7895 E. Acoma Dr. #110 Scottsdale, Arizona, 85260-6916, USA, to whom I have pledged my entire body under the Uniform Anatomical Gift Act.
6. The purpose of this regimen and protocol is to provide for my successful biostasis.
7. When after consultation between my family members, my personal physician and Alcor Representatives, it has been concluded that I have no reasonable chance for a return to conscious life given the current state of medical technology, then I am, with all of the CPR systems in place, to be transferred to hospice care in Scottsdale Arizona.
8. Or, alternatively, at my hospital/hospice bedside, where as soon as Alcor's "Transport Team" is ready and in place, all life support systems are to be turned off.
9. And as soon as practical I am to be declared legally dead so biostasis protocols can be applied.
10. Nancy Lee Weiss is the executor of my estate and is aware of my wishes in this matter. She holds my durable power of attorney for medical matters.
11. Gary Haraldsen Esq. is my alternative executor and is also aware of my wishes.

The above statements reflect my true wishes.

Robert R. Newport M.D.
Los Angeles County
Los Angeles California, USA
January 29, 2009

Nancy L. Weiss
Witness

DURABLE POWER OF ATTORNEY FOR MEDICAL TREATMENT

1. This document is a durable power of attorney for medical treatment executed by me, Robert R. Newport, M.D.
2. In this document I assign to Nancy Lee Weiss my power of attorney for medical matters.
3. This power is to persist should I become incapacitated for any reason by any cause and be unable to understand, execute or order my own medical affairs.
4. Ms. Weiss is aware of my wishes and is holding a copy of my Advance Medical Directive, q.v.
5. Gary Haraldsen Esq. is my alternate in these matters and is aware of my wishes.

This document is to be considered valid in any jurisdiction and represents my true wishes in this matter.

Robert R. Newport M.D.
Los Angeles County
Los Angeles California, USA
January 29, 2009

Nancy L. Weiss
Witness



About the Authors



Robert Newport, M.D.

Dr. Robert Newport, has been an Alcor Member for twelve years and on the

Southern California Rescue Team for the past ten years. A practicing psychiatrist when he joined, he became a member of Alcor's Medical Advisory Board and for a number of years served, at the pleasure of the Board of Directors, as Ombudsman. Currently he is engaged in a second career as a fine artist, a painter of landscape art.



Michael Geisen

Michael Geisen has been interested in living a long, fit, active life since 1982, when he read Doris

Lessing's "Canopus in Argos: Archive" series and was captivated by the life of Johor. In 2000, reading James Halperin's "The First Immortal" resulted in his rapidly becoming an Alcor member. Currently, Michael is the team leader of Alcor's Southern California Transport Team, an Advisor to the Alcor Board of Directors, CEO of Ntelligent Systems, a national web services company and an Executive Trainer for 5LINX, a telecommunications company.



Adele playing a show.

MEMBER PROFILE:

ADELE FOURNET

By Chana de Wolf

Everyone knows that the typical cryonicist has long been (and still is) the older, single male “computer nerd,” but Adele Fournet is one of a growing number of Alcor members who do not fit into this category. Adele’s story starts familiarly enough: she learned about death at a young age and became fixated on the topic. She was scared. She asked questions, but was frustrated by the lack of any real clarity that anyone could provide on the issue. She knew she wanted to avoid death, but she didn’t know how.

Terrified by the prospect of nonexistence but knowing of no way to avoid it, Adele first attempted to gain control of the situation by announcing to her friends and family that she was, in fact, immortal. And until investigating life extension in her teenage years, she continued to live her young life with a deeply rooted conviction that she would live forever. This was probably the first indication that Adele intended to approach the topic of death a little differently than the vast majority of humankind.

As she grew up and further examined the prospect of death, Adele’s motivations for achieving immortality changed from being inspired by fear to being inspired by a love of existence. Accordingly, death became less scary and more of an annoyance – something that got in the way of living, the foundation for everything she enjoyed.



Adele and her dad putting her recording studio together.

All the while, Adele had been pressing the issue with anyone who would listen; but it was her father who listened the most. David Fournet, who had become very interested in philosophy, psychology, and cognitive science since converting from Christianity to atheism in his late 20s, handled his daughter’s all-consuming interest by talking with her about it extensively over the years.



Adele in her recording studio.



Adele's band in college.

“He felt that death was an inevitability, but stressed that he wanted to live as long and healthy a life as possible,” Adele remembers. “But he wasn’t aware of any movements such as life extension or cryonics, so those were never brought up.”

However, David’s involvement in Adele’s self-journey led them both to an unexpected conclusion when Adele was presented with the opportunity to write her first in-depth research paper, in 11th grade. Adele chose to examine life extension strategies and, with his usual interest in whatever Adele was doing in school, David began helping her look into the various approaches to life extension being explored at that time. Together they researched and explored such topics as caloric restriction, reversal of telomere shortening, various forms of nanotechnology robotics, and, finally, cryonics.

“I learned that many folks interested in significantly extending their lives, or eliminating death altogether, took measures to maximize health and physical and cognitive functioning right now by engaging in various forms of caloric restriction and technological body enhancement,” Adele says. “But at the same time, as a last chance preventative measure, many had also signed up for cryonics.” And although Adele’s initial research left her wanting more scientific data to back up the efficacy of cryonics, she was convinced by Pascal’s Wager -type arguments in favor of cryopreservation. At the age of 16, Adele knew she wanted to sign up. And,

convinced by the same arguments as Adele, so did her 46 year old dad.

“For a number of reasons, including the friendliness and competence of the people working at Alcor as well as the logical location of the facility in Arizona’s benign climate, we elected Alcor over the other [cryonics organizations],” Adele comments regarding their decision to sign up with Alcor.

another, which she took over when the original leader graduated.

Playing shows in Florida and back home in Arkansas, Adele quickly realized that there were not really a lot of other women – especially in rock music. Already focusing on the social sciences at the New College of Florida, she became very interested in the topic of women in rock music and wound up writing her thesis about it.

“While in high school I maintained a very strong interest in natural science, in college my interests swung radically in the other direction and I found myself reveling in the humanities and social sciences.”

If Adele’s story isn’t atypical enough already, consider this: she is also no computer nerd. Aside from being a young female to sign up of her own accord (and bring her dad along for the ride), Adele is also a musician and social scientist. Having attended the Suzuki School of Music, Adele went on to become interested in pop rock piano and music theory in high school. Adele’s love of music then followed her into college in Florida where she took more music theory classes. Soon she started composing orchestral and chamber music for ensembles and joined her first rock band as pianist and singer. When that band fell apart Adele joined

“In general, my thesis conceptualized music production as different forms of knowledge,” Adele explains. “Having the knowledge about how to play in a rock band is different from the kind of knowledge one needs to play in an orchestra – it’s totally different operational knowledge. But why is that the case? What are the social processes that are in place? How do women come into that knowledge? How did I?”

As with her investigations into cryonics, Adele probed the subject matter deeply and with very personal reasons for doing so. “Of course I see a lot of discrimination when it comes to women as rock musicians, and there are intense image issues ranging from

sexualization and objectification of women to the role that women are expected to play in rock bands.” But she feels that her interest and background in social science has allowed her to view the situation from a more objective perspective, as well.

Having just finished her Bachelor of Arts degree, Adele is now set to travel to Peru on a Fulbright research grant to do anthropological and musicological research on female rock instrumentalists in Lima. Upon her return next year she intends to start graduate school in either New York City or San Francisco, maintaining her interest in anthropology of music, but focusing more on pure social theory and the history of ideas surrounding gender and social roles in music.

“While in high school I maintained a very strong interest in natural science, in college my interests swung radically in the other direction and I found myself reveling in the humanities and social sciences,” Adele explains of her current involvement in cryonics. “Nevertheless, being a member of cryonics and having a general interest in life extension is always in the back of my mind. I make decisions to live an extremely healthy life, being careful to eat well and little, and have integrated activities like yoga, biking, and dance into my daily life.” Accordingly, she also feels that scientific research into cryopreservation and resuscitation are the most important steps that cryonics organizations can take to expand the movement and gain more social and monetary support.

Adele would eventually like to contribute in her own way to cryonics by looking into “social phenomena like the widespread paradigms of death in place in our society, such as the paradigm that death and aging are inevitable, and social institutions, like schools, philosophical traditions, and religions, that deliver a set number of answers to our natural human questions about death.”

In the meantime, before she heads off to study female rock instrumentalists in Peru, she has been busy in the recording studio where she just finished recording her first professional album of original music. “Since I studied music composition in college, in addition to studying philosophy and social science, and since I also play piano and sing, I figured I would take the time before leaving to Peru to record some of the songs I have been writing over the last few years. The album will soon be



Adele with copies of her thesis, “Chicks with Picks: An Ethnography of Female Rock Instrumentalists in Tampa, FL”

available to download on iTunes under my name, Adele Fournet. And although I didn’t include a cryonics song on this album, I look forward to writing one for the next album. Stay tuned!” ■

More information about AdeleFournet’s music and research will be available soon at her forthcoming website, www.adelefournet.com. In the meantime, you may contact Adele by email at adelefournet@gmail.com.

Although Adele has been an Alcor member for seven years, she had not met many other cryonicists until recently. “With the exception of my father and the awesome folks who work at Alcor, I had not met any other members until my recent journey to the Teens and Twenties Cryonics Conference in Fort Lauderdale,” she tells us. “There I had the opportunity to meet dozens of other Alcor members, who are my age no less, and to finally feel a real sense of community with them. As I told one of my college friends: ‘I have finally found my clan of bracelet wearers!’”

It should come as no surprise that meeting those dozens of young, motivated cryonicists (many of whom also did not fit the cryonics stereotype, as evidenced by the large number of young women in attendance) inspired Adele to write the following poem, which she says may be the lyrics to a future song about cryonics.

“Death!” we say, nay we proclaim,
 “the number one scam of the past,
 to say my life will resemble the last”
 Ask Hume in his chair
 with his pen and his beer:
 “The future wont bow to the past anymore!”

But they’re nailing our tombs
 and fanning the fumes
 and conjuring babies from outdated wombs
 And handing out poetry, philosophical texts
 to convince us that dying is all for the best:
 “The cycle of life! The natural way!
 The will to death and authentic decay!”

But leave us in peace in our icy repose
 proving our point as the centuries close
 Watching them swarm and die with conviction
 hoping Cryonics is just science fiction



How to Protect your Cryonics Arrangements from Interference by Third Parties

By Rebecca Lively

On December 15, 2004, Orville Richardson signed up with Alcor Life Extension Foundation, Inc., to have his body cryopreserved in the event of his legal death. This was not a simple matter for Orville. When Orville signed up with Alcor, he paid an upfront lump sum payment of \$70,000. He also had to read and fill out at least three lengthy legal agreements expressing his intentions. Ultimately, before Orville's arrangements with Alcor could become final he had to gather two witnesses and a notary and attest to his wishes publicly.

On February 21, 2009, Orville Richardson was embalmed and buried. Orville had not changed his mind about his

arrangements prior to his legal death. Orville did not want to be buried, and we have reason to believe the people who made the arrangements to bury Orville knew it. Yet, despite the contracts he had signed, the money he had paid, and the people he had told, no one stepped in to protect Orville's wishes or inform Alcor of his legal death.

How did Orville go from a signed up cryonicist to embalmed and buried six feet underground? Unfortunately, Orville did not do enough to ensure that his cryopreservation would begin as soon as possible after his legal death. The unfortunate truth is that the family members of cryonicists often pose the greatest risk to a prompt cryopreservation. Orville's expressed wishes

for cryopreservation were not upheld by his own brother and sister after he became unable to take care of himself.

Accordingly, it is critical for cryonicists to manage the risk that family members pose to a successful and prompt cryopreservation. The purpose of this article is to suggest legal and practical strategies to minimize the risk of unsupportive family members and to limit the amount of time which passes between legal death and the start of cryopreservation procedures for as many cryonicists as possible.

While a precise description of the laws and policies in every state and country is far beyond the scope of this article, the below categories are intended to point cryonicists in

the right direction to avoid devastating conflicts with their arrangements. However, nothing can replace hiring a knowledgeable and cryonics-friendly attorney in your jurisdiction.

I. Sign Up With a Cryonics Provider

The September 1989 issue of *Cryonics* magazine contained a survey of 109 people who identified as “cryonicists.” Of the respondents, 34% indicated that they were not signed up with any cryonics organization. While this percentage has likely improved in the twenty-plus years since the survey was taken, it is safe to assume that at least some of the intended readers of this article have not yet signed up with a cryonics organization despite identifying as cryonicists.

Obviously, the first and most important step toward cryopreservation is signing up and arranging funding. The excuses for not signing up are varied and range from not having family support to not having the money to being “young and healthy” and waiting until you “need” cryonics to sign up.

Regardless of the reason, if you are not signed up for cryonics your best case scenario at legal death involves suffering ischemic damage while a friend or loved one makes last-minute arrangements for your cryopreservation. Of course, the more likely scenario is that such last-minute arrangements will not be possible.

Being “young and healthy” is no excuse either. First, young and healthy people die every day. Second, the best time to arrange for life insurance to fund your cryopreservation is when you are young and healthy. Locking in the relatively low life insurance premiums generally available to the under-forty set is reason enough to arrange funding and sign up as soon as possible.

While signing up with Alcor seems like the simple and obvious solution, it is the most important step you can possibly take toward ensuring you are cryopreserved at the time of your legal death.

II. Designate a Guardian

Orville knew his family was not supportive of his decision to be cryopreserved. Indeed, the brother and sister who cared for Orville after he was unable to care for himself admitted in court documents that they “tried to talk [Orville] out of” his plan

to be cryopreserved and “emphatically told him they would have nothing to do with his plan.”

Since Orville knew that his family did not support his cryonics arrangements, he should have taken steps to prevent them from making decisions if he ever became incapacitated. Instead, when Orville began showing signs of dementia in 2007, his sister easily obtained an appointment as his guardian. Once she was appointed as his guardian, she had complete decision making authority regarding Orville’s medical care and treatment.

This could have been prevented. Most states allow you to execute a medical power of attorney to designate who should oversee your medical affairs in the event you become incapacitated. These states also generally allow you to specifically disallow a potential guardian. In addition, you can specify what decisions your guardian is and is not permitted to make and provide specific restrictions. Using a medical power of attorney, a cryonicist could do three important things: (1) select a fellow cryonicist as their medical guardian; (2) prohibit hostile friends and relatives from serving as medical guardians; and (3) restrict an appointed medical guardian to make choices in consideration of your cryonics arrangements and to notify your cryonics provider if you are near death.

Authorized medical power of attorney forms (also known as health care proxy or designation of guardian in the event the need arises) differ by state and country. You may be able to find the appropriate form for your jurisdiction by searching your state government’s website or the website of a hospital doing business in your state. At a minimum, most forms contain a space for the designation of a guardian and an alternate. Most forms also require two witnesses and a notary. Your witnesses cannot also be designated as guardians. In the United States, an appropriate form should specifically address the HIPAA privacy laws as they apply to your guardian.

III. Execute a Living Will

A Living Will is a legal document which provides specific direction to health care providers in the event that you are terminally ill. Coupled with the designation of an appropriate guardian, a Living Will can ensure that your cryonics provider will be contacted and any necessary protocols will

be followed prior to your legal death. Your Living Will can also dictate your wishes regarding the removal of life support measures under various circumstances. If it is your desire to be removed from life support, it is recommended that you specify that your health care providers should wait to remove life sustaining treatment until your cryonics provider’s support staff is on hand to begin any necessary protocols as soon as possible after your legal death.

Like all other legal documents, a Living Will is a state specific document. However, in most states the witness and notary requirements are similar to the designation of a guardian. For that reason, it will probably be convenient for you to execute a Living Will at the same time as your medical power of attorney.

IV. Add a “No Contest” Clause to Your Will

Looking back to the unfortunate situation with Orville Richardson, the question remains: If his family was so intent on having him buried, how did Alcor ever discover that Orville’s wishes were ignored? The answer is simple, Money. Remember the \$70,000 that Orville prepaid to Alcor—his family called requesting a refund.

The unfortunate and sad truth is that many challenges to cryonics arrangements are motivated at least in part by the money at stake. Because cryopreservation is funded in some manner which is usually payable at death, family members often have a desire to access the funds earmarked for cryopreservation. If the cryopreservation does not occur, they reason, the money will go to them. Had Orville ensured that the money could never be available to his brother and sister, perhaps they would have chosen to honor his wishes.

A critical step toward controlling the purse strings of your estate after your death is executing a Last Will and Testament. A Will dictates the disposition of your assets and property and can also reiterate your cryonics related wishes. Your cryonics paperwork most likely included a document stating that it is your desire to be cryopreserved. For this reason, it is *critical* that your attorney be aware of all of your cryonics paperwork so that you do not unintentionally supersede your cryonics documents with your new Will.

Most states recognize a special Will provision called a “no contest” or “in

terrorem” clause. This clause states that if anyone interferes with your Will they forfeit everything which is granted to them by your Will. While the issue has never been litigated, this provision could easily be drafted to extend to interference with your cryonics arrangements. A creative lawyer may even attempt to draft a provision which provides for an inheritance on a sliding scale based on the amount of time which passes between your legal death and your cryopreservation.

The primary caveat to using a “no contest” clause to financially incentivize your family to follow your cryonics arrangements is that you have to leave them something substantial in your Will in order to make it worthwhile for them to abide by its terms. Leaving a family member very little in your Will makes a “no contest” clause a worthless protection because they will not mind risking their small inheritance for the chance at the big “payday” that might result if they prevented your cryopreservation. However, assuming you have something to give, a “no contest” clause can be a substantial motivator for an otherwise reluctant family member.

A “no contest” clause is subject to a probable cause exception in many states. The probable cause exception allows a person to collect under your will despite challenging it if they had probable cause to do so. Probable cause is determined by the court and cannot be determined until after a challenge has been made. For this reason, a person challenging a Will despite a “no contest” clause takes a substantial risk of disinheritance. At this time, “no contest” provisions are not enforced in either Florida or Indiana.

V. Change Your Contingent Beneficiary

Most cryonicists fund their cryonics arrangements using a life insurance policy listing their cryonics provider as the beneficiary. However, problems may arise when you list a family member as contingent beneficiary or when you do not list a contingent beneficiary. Contingent beneficiaries collect from the life insurance policy if your primary beneficiary cannot collect. If no contingent beneficiary is listed and the contingency is triggered, the funds from the policy will pass to your estate and be distributed under your Will or by the laws of intestacy.

Life insurance policy contingencies create an incentive for family members to challenge your cryopreservation if they have hope of collecting the insurance proceeds. Cryonics life insurance policies can be several hundred thousand dollars. That amount of money is enough to sway almost anyone, especially a family member who is skeptical of your arrangements.

It is critical to remove any financial incentive to challenging your cryonics arrangements. For this reason, you should name a contingent beneficiary who is entirely unrelated to you. Your contingent beneficiary will not ever know that they are your contingent beneficiary unless the contingency is triggered. This contingent beneficiary should be an established charity organization because it is likely that they will still exist if the contingency is ever triggered. Moreover, they will have no reason to believe that they are in a position to benefit from your estate or that your estate even exists and thus no motivation to challenge your cryonics arrangements.

VI. Tell People About Your Arrangements

All of the legal forms in the world cannot guarantee that you will be cryopreserved if you put them in a drawer and do not tell anyone they are there. Make several copies of every cryonics related document that you sign and give them to trusted individuals. Tell those individuals where the originals are located. At a minimum, keep a copy of your paperwork in at least four places: (1) with your cryonics provider; (2) in a clearly marked folder where you keep other important documents; (3) with the person who you have designated as your guardian; (4) at your attorney’s office. Keep the forms up to date and ensure that any old forms are destroyed.

In addition to making sure your legal forms are not buried in a desk drawer, let other people know about your plans in general. If the unthinkable happens and your right to cryonics is litigated in the probate court you should ensure that witnesses are available to testify and say, “he told me that he wanted to be cryopreserved on many occasions.” Additionally, telling friends and family about your arrangements ensures that your cryonics provider will be promptly notified in the event of an accident or illness. An additional option is to go the extra mile and make a video of yourself

explaining your wishes and desires. This video can provide further evidence of your strong desire to be cryopreserved.

VII. Conclusion

In the end, the Illinois Appellate Court has ordered that Orville Richardson will get his wish to be cryopreserved. However, well over one year has passed since his burial in February 2009. The damage that has occurred in that time is an unthinkable disaster that no cryonicist should endure. This disaster may have been prevented if Orville had taken the proper steps to prevent his siblings from having medical decision making authority, made his last wishes known, and removed all financial incentives to hindering his cryopreservation.

The ultimate outcome of the Orville Richardson legal case is hopeful and the precedent it has set will help future cryonicists. However, the presence of supportive legal precedent will not save you from the ischemic damage which will occur while you wait for a court to rule. Do not become the next cryonics legal battle. If you have already put the time and money into signing up with a cryonics organization, put in a little bit more effort and safeguard your arrangements in as many legal and practical ways as you can. ■



About the Author

Rebecca Lively

Rebecca is an attorney living in San Antonio,

Texas. While she primarily practices intellectual property law, she is also interested in the legal aspects of estate planning for members of cryonics organizations.



The Ethics of Cryonics Interference

By Aschwin de Wolf

Advocates of human cryopreservation argue that death is not an event but a process. Cryonics patients are stabilized at low temperatures in anticipation of a second medical opinion in the future. This raises an important ethical issue. What is the moral status of cryonics patients? It is not possible to argue that cryonics patients *will* be resuscitated in the future. But it is not possible to rule this out either. As a matter of fact, evidence from cryobiology, neuroscience, and synthetic biology support the technical feasibility of cryonics. As a consequence, cryonics patients are somewhere on a continuum between alive and irreversible biological death.

What does this mean when someone interferes with a person's wish to be cryopreserved? In essence, those who successfully prevent the cryopreservation of a person have altered the probability of future revival from "possible" to "impossible." For example, let us assume that cryonics patients can be resuscitated in the future. What does this mean for those who were not cryopreserved because of hostile interference? Have they been killed? Most people would agree that such a verdict is too strong. But do we believe that a person who *knowingly* changes the prospect of future revival from possible to impossible (or decreases those probabilities by causing delays) should be free from moral blame

and legal consequences?

A related problem is the termination of cryonics procedures. Advocates of cryonics agree that a person who has not chosen cryonics should never be forced to be cryopreserved. But what is the right course of action when such a person is already cryopreserved? Can we just thaw him out? Let us consider the case of a person with a Do Not Resuscitate (DNR) order who is accidentally resuscitated because paramedics were not aware of his wishes on the matter. Few people would argue that this person should be killed before he gains awareness to honor his wishes. Now let us consider a

"The ethical and legal issues surrounding cryonics are not unique to cryonics."

situation where it is discovered that a person was cryopreserved against his will but at a point in the future when the prospect of resuscitation becomes increasingly likely. In such a case, the issue would be similar to a resuscitated DNR patient in deep anesthesia.

This example illustrates a number of issues. There is a meaningful distinction between ignoring someone's wishes not to be cryopreserved and terminating the cryopreservation of an existing patient. Honoring a person's wishes not to be cryopreserved requires *non-interference*. Thawing out an existing cryonics patient is an *act* to

change someone's existing chance at revival from possible to impossible. The example also illustrates the role that probability of resuscitation plays in such considerations. Few people would argue that it does not matter at all how credible resuscitation of cryonics patients is for making decisions about the moral status of cryonics patients, interference with cryonics procedures, and the decision to terminate somebody already in cryostasis.

We want certainty in a universe that only offers us probabilities. The ethical and legal issues surrounding cryonics are not unique to cryonics. It is not just in cryonics where issues of moral obligation are discussed in the context of uncertainty, probability and risk. It will be rewarding to review these philosophical and legal debates and see how debates about interference with cryonics can be framed from these perspectives.

In the meantime, people who have made cryonics arrangements are not completely powerless against hostile interference. They can alter their cryonics paperwork and living will to ensure that there is little incentive for greedy relatives to interfere. As a matter of fact, one could change one's "last" wishes to ensure that interference would trigger the worst financial outcome for greedy family members and others who would stand to benefit from a person not getting cryopreserved. ■



From left: Shannon Blevins, Amanda Blevins, Cairn Idun.

TEENS AND TWENTIES Meetup Strengthens Links between Cryonics Generations

By Mike Perry

One big problem in cryonics is that all of us are growing older. Barring medical miracles the day is coming, fairly soon, when we must take our places in the dewars and trust our lives and fates to the hands of others. Meanwhile the world at large is showing scant interest in our attempt to defeat death. So much, then, is resting in the hands of a relative handful of younger cryonicists who must take up where we are forced to leave off. Recognizing this, Cairn Idun, a longtime cryonics signup, activist, and organizer, came up with the idea of a “Teens and Twenties: Getting to Know You” meetup, which she created and coordinated. The gathering was funded by Bill Faloon and the Life Extension Foundation (LEF), and was held at the Hilton Hotel, Deerfield Beach, Florida, January 8-10. To encourage younger cryonicists to attend, scholarships were offered covering travel, accommodations and meals, to those with cryonics arrangements who were between ages 12 and 30. (Meals alone were covered for other

attendees as well.) In all, 48 persons attended at least part-time, including 33 scholarship recipients. Also included were members of Cairn’s Asset Preservation Group, and yours truly as a “special guest.” Cryonicists from the three major American organizations (Alcor, American Cryonics Society, Cryonics Institute) as well as the Russian company KrioRus were there. By common consensus the meeting was a rousing success, with younger attendees meeting some of us older veterans as well as getting better acquainted among themselves. Below are some highlights; Ben Best, who attended and who is the president of the Cryonics Institute, has also written an account of the event which I’ve used as a reference.

First, the problem for me and two others who came from the Phoenix area that Friday morning (Bonnie Magee, Jaime Cohen) was getting there. The 9:52 a.m. departure time for the nonstop to Ft. Lauderdale would put us down at 4:06 p.m., with plenty of time for the short shuttle ride to our destination, for the opening ceremonies which started at 7. Unfortunately, an engine problem forced us to switch to a new aircraft—when it became available—so our flight was delayed about 4 hours and we didn’t get to the meeting until about 8:45.

Bill Faloon had given his introduction, recalling how, as a 19-year-old in the 1970s, wealthy cryonicists had sponsored his attendance at a cryonics training and life-extension gathering, and expressed hope that this LEF-sponsored gathering, too, would bear worthy fruit as had the earlier one. (Bill and his business partner Saul Kent

currently fund cryonics-related causes to the extent of millions of dollars per year; a major portion goes to scientific research.)



John Lobell makes a point during his lecture. Philip Irions listens.

Next there were short introductions; each attendee related, in a minute or two, who they were and their interest in cryonics. An oft-repeated sentiment was that, while they were willing to go “against the grain” of conventional thinking in their quest for longer, more meaningful life, there was also a need for all of us “pulling together.” The introductions were in progress when the three of us straggled in, so we were able to tack ours on the end (and also have supper, which had been served to the others earlier).

The next and final “getting to know you” exercise that evening involved the participants classifying themselves by personality type represented by four colors:

Green—Conceptual, Curious, Wise, Versatile (intellectual, head rules heart).

Blue—Warm, Communicative, Compassionate, Feeling (seeks harmonious relationships).



Main meeting place: Hibiscus Room, Deerfield Beach Hilton Hotel, Florida

Gold—Responsible, Dependable, Help-ful, Sensible (dutiful, family-oriented, organization-oriented).

Red—Adventuresome, Skillful, Competitive, Spontaneous (seeks variety and physical involvement).

Colored sheets were handed out that described each personality color in detail so we could judge how much of our personality corresponded to each color. We then put dots of the corresponding colors on our name badges, in the amount we considered appropriate. Overall, green was somewhat dominant but there were many exceptions, mainly “reds.” (For me, green seemed slightly dominant, followed by gold, followed a little more distantly by blue. I avoided red because in the handout it described this kind of person as “live for the moment.” Cairn, however, just said “you’re gold.” For what it’s worth, I do think the “gold” type is important for sustaining a movement and “sticking it out” as long as may be necessary. Keeping the movement going, especially at the “wet end” of actual patient storage and maintenance, requires unusual dedication.)



Catherine Baldwin addresses the group.

The next day (Saturday) was devoted to more-formal presentations by invited speakers, interspersed with more “getting to know you” activities. Futurist John Lobell opened with an optimistic talk about the progress of nanotechnology and the nearness of the Singularity, one consequence of which (out of many) should be resuscitation of cryonics patients. After this were longer introductions, followed by a talk about Suspended Animation, Inc. by

General Manager Catherine Baldwin. (SA is nearby and can handle cryopreservation and preliminaries in the Florida area. Both Alcor and Cryonics Institute have used their services.) In third place Bill Faloon addressed some problems in cryonics, including setting up an insurance company for cryonicists. (It will require substantial capitalization but he appears to be quite serious about seeing it through, when the time is right.)



From left: Chase Faloon, Bill Faloon, Stephen Valentine

A break in the presentations at this point was filled by the inauguration of five special-interest groups, with attendees free to join as many or as few as they wished. These groups were formed to address, respectively, (1) scientific research, (2) legal issues, (3) outreach and social networking, (4) defending cryonics on the Internet, and (5) promoting cryonics through entertainment media.



Mark Voelker (left) and Rudi Hoffman discuss issues during a dinner break.



Danila Medvedev of KrioRus; glasses constantly record what is seen and heard.

Finally, after dinner and some technical problems (temporary power outage) Stephen Valentine told us about the Timeship project, his dream that needs “only” \$200 million to be realized. It will be a very large cryonics storage facility, in a currently undisclosed location, an architectural masterpiece and cryopolis. I tried to find out if there were plans to start up a new cryonics organization or just to lease space to existing organizations. Apparently this is still being decided.

After this in theory everybody got a good, long, night’s sleep in view of the very full day of activities just passed, with more to follow on the morrow. I understand, though, that there was celebrating and partying by some that went on for a good while. Anyway, as the closing performance on Sunday we toured Suspended Animation, Catherine Baldwin serving as host. The group was split into about 4 or 5 subsets and each took the tour in turn, two in the pipeline at once. Old videos were also shown that Curtis Henderson had made available, The Icemen Cometh (freezing of Herman Greenberg, May 1970) and another one on the Cryonics Society of New York that appears to have been made earlier, in the late 1960s. Then Cairn had the whole group play a kind of game where people had 2 minutes to talk to different others before going to the next person. A way to get acquainted, yes, but I tended to get into involved conversations that too suddenly had to terminate. This went on until it got time to leave for the airport. In all though, it was a wonderful gathering; I understand Bill Faloon wants to make it an annual event. ■

Options for Brain-Threatening Disorders



By Mike Perry

Introduction

As cryonicists we want to be cryopreserved with mental faculties intact. Prospects for this are threatened if one has a brain disorder such as malignancy or Alzheimer's disease. To best counter such a physical threat, if it should occur, one wishes to have cryopreservation performed as soon as possible. But there are problems.

We in cryonics see cryopreservation as a medical procedure, but this is not recognized legally. With a normal medical operation, one might be anesthetized and the operation performed without much fanfare. With cryonics, the procedure can be started only after the patient is legally dead (possibly barring a few jurisdictions, which have not yet been used, and not counting pets). A cryonicist with a brain-threatening disorder might want to hasten his/her legal death so the procedure can be started in a timely fashion, but there is the additional complication that cases of "suicide" are normally subject to mandatory autopsy which is highly damaging to the preservation process.

So what are we to do? There are many options, but perhaps the most attractive is to follow the advice of the New England Journal of Medicine: "Because physician-assisted death is not available to most terminally ill patients, some medical experts have suggested voluntary refusal of food and fluids as an alternative. Unlike physician-assisted suicide, the choice to stop eating and drinking is legal throughout the United States, available to competent patients, and does not necessarily require the participation of a physician."¹ Death occurring from such a choice is treated as "natural," and there is no danger or stigma to attending caregivers whose presence could obviate the require-

ment of autopsy. In what follows I first consider preliminaries—what can be done in advance of any problem—then interventions, including but not limited to voluntary stopping of eating and drinking, to be used when physical symptoms of varying severity occur.

Preliminaries

Cryonics arrangements themselves are the basic preliminary for addressing the problem of one's clinical death, whatever might be involved. At the time arrangements are made some thought should be put into the possibility that intervention may be needed to escape damage to the brain, or that mental impairment may occur despite any efforts to avoid it. Stating one's wishes and preferences in writing is a good starting strategy which can be worked out with one's cryonics service provider.

Among the desirable choices is for a durable power of attorney to make decisions in case one is incapacitated. Saving personal information in such forms as notes, diaries, photos, and audio or video clips is also highly advisable as a way to allow reconstructions of memory in case the brain is inadequately preserved. If possible, one should choose one's associates to be sympathetic and understanding of the intentions and procedures of cryonics. A friendly, supportive community of fellow cryonicists will help ensure the best results.

Some discussion is in order about philosophical issues. Resuscitation from cryopreservation is a subject that has many divergent points of view even among those who accept the basic idea of cryonics. Most agree that with good preservation resuscitation is a worthwhile goal that might be

achievable someday, if technological advances continue. The question then becomes whether the preservation will, in fact, be good enough to be worthwhile to the individual concerned, and what measures are reasonable to take in anticipation of problems that may arise.

Not everyone will agree that a certain measure is worthwhile, for example, separately storing a cell sample in case something should happen to one's cryopreserved remains. (In this way a clone of oneself might be produced, which could then be "programmed" with memories and other personality elements captured in data files. A version of oneself could then emerge that would be very similar in thoughts and behavior to the original, and from some but not all points of view would qualify as a bona fide resurrection of that individual.)

With this in mind I mention that a number of options exist for indefinitely storing both digitized or other recorded data and genomic samples. Some organizations that are strongly sympathetic to cryonics are the Society for Venturism (<http://www.venturist.org>), the Society for Universal Immortalism (<http://www.universalimmortalism.org>), and Terasem. As of this writing, the Society for Universal Immortalism would be amenable to storing both digital or other recorded information and genomic samples at room temperature (resin-embedded for example). The Society for Venturism is a "maybe" on both counts, though perhaps stronger on "digital" than "genomic." Terasem at present is strictly "digital": their CyBeRev and LifeNaut projects (<http://www.cyberev.org>, <http://www.lifenaut.com>) store "mindfiles" and other personal data from which they

hope to recreate individuals, if no other data about them survives.

Other possibilities for information storage exist but all are presently underdeveloped and underutilized for the purpose of backing up cryopreservations. Feedback from interested parties is badly needed.

Brain Disorders: Dealing with Symptoms

Dementias and malignant brain tumors are things we hope we never have to confront. Unfortunately they happen all too often so we must be prepared as far as possible. Very often the cryonics member has advance warning. A diagnosis is made that provides a time window before serious impairment can be expected. A reasonable course would be to deanimate before such has occurred. Due to laws in most jurisdictions, however, cryopreservation procedures cannot simply be started as in the case of a pet but special approaches must be used. A simple, straightforward approach in the case of a brain malignancy might be voluntary stopping of eating and drinking (VSED) until clinical death occurs. This can be accomplished with hospitalization or hospice care, as has occurred with some Alcor cases I've witnessed.

One public case of this sort was Arlene Fried who was cryopreserved (as a neuro or head-only) at Alcor's facility in Riverside, California in June 1990.² Ms. Fried, who is Linda Chamberlain's mother, had the loving, attentive support of her daughter and her son-in-law Fred Chamberlain, two cryonics pioneers who well understood and sympathized with her views and what she was attempting. Ms. Fried was cared for during approximately 10 days while her VSED was in progress, receiving only some moistening of her lips and mouth from time, and very limited amounts of fluid internally. She bravely toughed it out and accomplished her mission of cryopreservation, escaping both the ravages of the tumor in her head and the autopsy that would have followed had she chosen an easier "exit."

In her case the burden was lightened, to some degree at least, by the fact that her illness (actually lung cancer metastasized to the brain), was legally "terminal." Thanks to this, hospital personnel were more sympathetic and beneficial to the course that was followed. A slower-acting but still lethal brain malady such as Alzheimer's is not similarly classed as "terminal" and victims may find it harder to obtain assistance from

the medical establishment. Starvation/dehydration is still arguably the best means of hastening one's death to escape brain impairment or otherwise speed one's cryopreservation.

States in which assisted suicide is legal (currently Oregon, Washington, and Montana) allow that a physician can prescribe lethal medication which then must be self-administered by the patient (rather than administered by another party). To date no cryonics member has attempted to use the assisted suicide law of any of these jurisdictions to hasten deanimation. It would arguably be very risky to do so, in view of the unconventional nature of cryonics, which might invite bureaucratic interference.

VSED: The Best Option for Now

In balance it appears that voluntary stopping of eating and drinking is the best of currently available means to hasten one's deanimation without inviting autopsy or legal recriminations. The following summary of VSED is adapted, with kind permission, from a review by David Brandt-Erichsen of the book, *A Hastened Death by Self-Denial of Food and Drink*, by Boudewijn Chabot, MD, PhD (Amsterdam, 2008, 64 pages; available from the Hemlock Society, email to fayegirsh@msn.com).³ The author, who in the book refers to the method as STopping Eating and Drinking (STED), studied 110 cases of VSED in the Netherlands. His book is a practical guide to VSED for both patients and health care givers.

If water intake is stopped completely rather than tapered off, VSED takes about two weeks to cause death by dehydration; death is almost certain within 16 days. The discomfort involved is generally mild but will vary with individuals. Hunger usually disappears after a couple of days, and after a week of fasting, metabolic by-products generally cause a sense of well-being, even elation. Electrolyte imbalance (especially potassium loss) eventually causes cardiac arrest during sleep.

The bowels should be cleansed at the start of VSED to avoid gastric distress later on. The most important comfort measure is adequate mouth care. The mouth can be kept moist with small amounts of ice chips, sugar-free popsicles or gum, or saliva substitutes. VSED itself generally does not require pain medication but the patient's other health problems may require it for palliative care. Benzodiazepines (such as Valium) may be prescribed for anxiety if needed.

Summary and Afterthoughts

In confronting the possibility of brain-threatening illness and mental impairment, cryonics members have two sorts of options, (1) preparation in advance, (2) intervention when symptoms appear. Preparing in advance includes choosing someone to act as representative and decision maker if one is incapacitated, and also, storing information to be used in restoring damaged memory or other brain functions. Interventive strategies when symptoms of intractable brain illness appear, include ways to hasten one's deanimation so cryopreservation can halt the destructive process. At present the safest such strategy appears to be voluntary stopping of eating and drinking. Deanimation is hastened in a way that is considered "natural" and does not require autopsy, so that cryoprotective procedures can begin without interference.

The situation of course is far from ideal. Ideally, cryopreservation would be treated as a medical procedure which could be freely chosen and started at any reasonable time. This appears to be a long way off. Meanwhile we must work together to increase whatever options are feasible. This is a matter that affects us all, since we all have a terminal disorder (aging) which can drastically impair our mental functioning. ■

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My thanks to David Brandt-Erichsen, Hugh Hixon, Cairn Idun, and Ralph Merkle in preparing this article.

LONG LIFE?

Author: Robert Begam [Dallas, TX: Durban House Press, 2008]

BOOK REVIEW BY MIKE PERRY

A veteran trial lawyer with a penchant for courtroom fiction, Robert Begam achieved critical acclaim with his first novel, *Fireball* (1987). He now offers a cliffhanger sequel which in fact is a tale about cryonics.

Kent Eastman, a young adventurer with a Ph.D. in physics, is injured in a skiing accident and gets AIDS from a bad blood transfusion. He has meanwhile made acquaintance with Rebecca Adler, the young CEO of the Scottsdale, Arizona-based Omega Terrace which does high-priced human cryopreservations. As the end approaches he makes a decision based on his hopes of seeing the future despite his illness. "My head is still working," he tells Rebecca, "but my body is rotting away, and before this disease starts eating at my brain, I want out. I want you to freeze me, suspend me." Rebecca is horrified at the risk he is asking her to take—to give him a premortem preservation, inviting charges of homicide—but out of sympathy and compassion agrees to help. Kent, now wheelchair-bound but still alert, visits the facility with his parents who understand and accept his intentions, though his mother is conflicted with religious misgivings. Taking personal charge when backs are turned Rebecca starts the procedure. Despite efforts at concealment the secret leaks out and she is charged with capital murder. Joe Purcell, fresh from his victory in the *Fireball* case, is asked to defend. At first the case looks hopeless but he hits on the strategy of raising the issue, is the victim really dead?

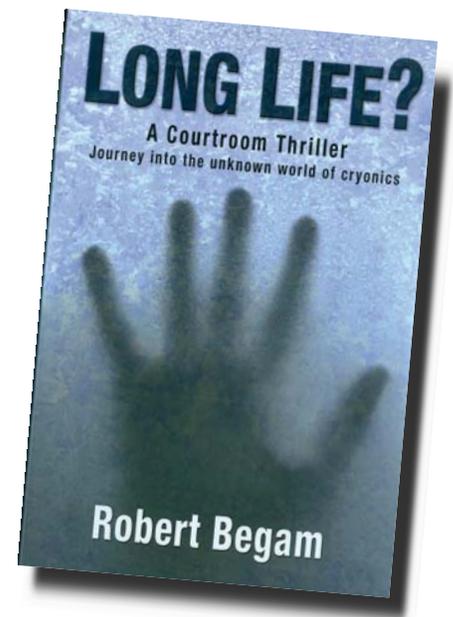
At this point I'm thinking, *great story so far, but the case does look hopeless. What do you do?* Two decades ago Thomas Donaldson, a real-life brain cancer patient, sought permission in the California courts for a premortem cryopreservation and was turned down. The arguments against him were based straightforwardly on legal definitions. Cryopreserved people meet the criteria for legal death just the same as if they were buried or cremated. Anyone assisting in a premortem cryopreservation would be complicit in a homicide. Homicide victims are autopsied, in addition to the complications for the perpetrators.

In the fictional scene Rebecca, technically at least, is guilty of premeditated murder, which can indeed bring the death penalty in Arizona. The motive, the prosecuting attorney says, is clear enough: money. Omega Terrace has a million-dollar minimum signup fee (real cryonics organizations charge much less) but there are advantages such as providing for high-quality standby services anywhere in the world and supporting expensive research and legal services. (Mr. Eastman, it turns out, was not initially wealthy but his AIDS case leaves him with a multimillion-dollar malpractice judgment.)

The issue of "is the victim really dead?" is argued at length in the trial and presents the case for the likely viability of cryonics patients based on the prospects of future cell-repair technologies and the like. In addition there is the fact that Mr. Eastman signed consent forms and in other ways made his wishes and mental competence abundantly clear. So, should the person who assisted him in doing what he wanted be punished, killed, in fact, or commended for her compassionate action and maybe even rewarded for her trouble?

Most readers of the book, though not cryonicists, would, I think, sympathize with the defendant, and the book is really not about whether she is in the right but whether right will prevail. Will she, along with her organization and their voluntary clients including Mr. Eastman, escape serious harm? (Again, homicide victims are autopsied under the law.) The forces arrayed against her are formidable. By the letter of the law she is guilty as charged and admits it. The prosecutor, Scott "Scroogie" Novak, has skills to match his opponent, Purcell, and is equally determined to win the case. Eastman's father dies and his mother, convinced her son's choice was against the will of God, decides to side with the prosecution and testify against the defendant.

In short it's a cliffhanger story, laced with wit, humor, and copious knowledge of the practices and personalities of those whose livelihood centers around the courts. Read it. Whether you are a cryonicist or not I think you'll find it worth your while, as I did.



As for cryonics, the author is right on target for most of it, though his version is by now a little dated, centering around glycerol-based perfusion and "freezing" rather than newer procedures that achieve vitrification and minimize ice-crystal damage. In one place it also reports that Walt Disney was frozen. (Records say he was cremated, despite some apparent interest, when he died in December 1966.) These are minor blemishes, however. As a sort of humorous disclaimer at the beginning the author pays tribute to "my beautiful Helen" who agreed to review the manuscript "only after I promised that if she predeceased me I would not have her frozen." For those of us in cryonics this sort of thing is unfortunate, but something we must live with. The book in any case can be commended for its thoughtful treatment of both cryonics and the delicate subject of euthanasia. ■



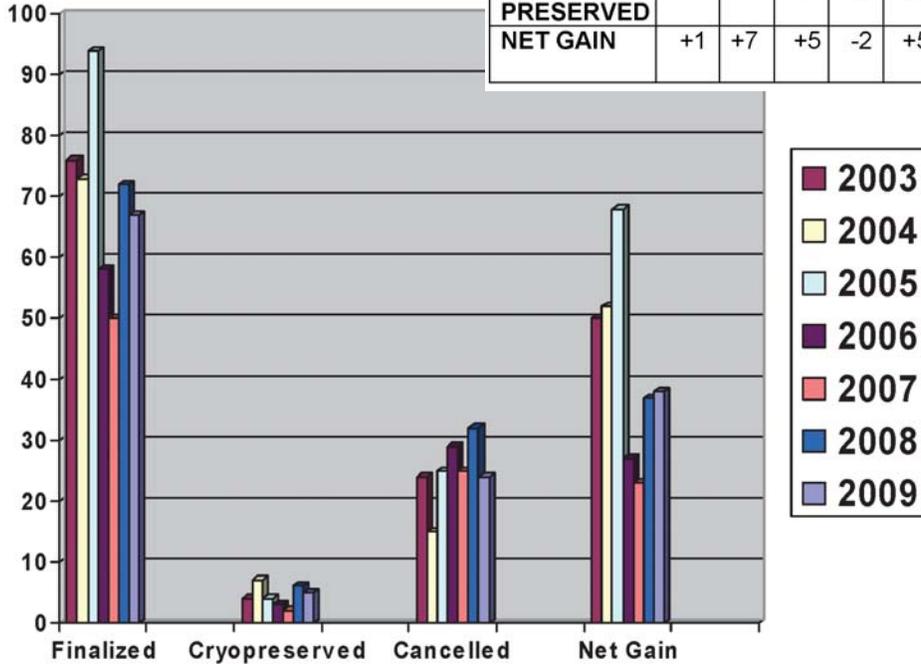
About the Author Robert Begam

A graduate of the college and law school of Yale University,

Robert Begam is the founding partner of Begam, Lewis & Marks, a nationally prominent law firm of litigation specialists. Long recognized as one of the most skillful trial lawyers in the United States, he is past president of the Association of Trial Lawyers of America, comprising 60,000 trial lawyers in all 50 states.

Membership Statistics

2009	01	02	03	04	05	06	07	08	09	10	11	12	
TOTAL	876	883	888	886	891	893	895	903	905	906	908	913	913
FINALIZED	3	11	8	0	4	3	3	11	5	4	4	7	63
REINSTATED	1	0	0	0	2	0	0	1	0	0	0	0	4
CANCELLED	3	3	3	2	1	0	0	3	3	3	2	1	24
CRYO-PRESERVED	0	1	0	0	0	1	1	1	0	0	0	1	5
NET GAIN	+1	+7	+5	-2	+5	+2	+2	+8	+2	+1	+2	+5	+38



On December 31, 2009, Alcor had 913 members on its Emergency Responsibility List. During the year of 2009 63 memberships were approved, 4 memberships were reinstated, 24 memberships were cancelled and 5 members were cryopreserved. Overall, there was a net gain of 38 members for the year of 2009 to date.

The chart on the left displays the year-end monthly average net gain since 2002.

Take a look at the **ALCOR BLOG** www.alcornews.org/weblog

Your source for news about:

Cryonics technology

Cryopreservation cases

Television programs about cryonics

Speaking events and meetings

Employment opportunities



Solar Cells Made through Oil-and-Water “Self-Assembly”

Researchers have demonstrated a simple, cheap way to create self-assembling electronic devices using a property crucial to salad dressings. It uses the fact that oil- and water-based liquids do not mix, forming devices from components that align along the boundary between the two. The idea joins a raft of approaches toward self-assembly, but lends itself particularly well to small components. The work is reported in Proceedings of the National Academy of Sciences. Crucially, it could allow the large-scale assembly of high-quality electronic components on materials of just about any type, in contrast to “inkjet printed” electronics or some previous self-assembly techniques. Such efforts have until now exploited the effect of gravity, assembling devices through so-called “sedimentation”. In this approach, “blank” devices are etched with depressions to match precisely-shaped components. Simply dumped into a liquid, the components should settle down into the blank device like sand onto a riverbed, in just the right places. “That’s what we tried for at least two years and we were never able to assemble these components with high yield - gravity wasn’t working,” said Heiko Jacobs of the University of Minnesota, who led the research.

BBC News
1/12/10
<http://news.bbc.co.uk/2/hi/science/nature/8452912.stm>

UN Climate Body Admits “Mistake” on Himalayan Glaciers

The vice-chairman of the UN’s climate science panel has admitted it made a mistake in asserting that Himalayan glaciers could disappear by 2035. The Intergovernmental Panel on Climate Change (IPCC) included the date in its 2007 assessment of climate impacts. A number of scientists have

recently disputed the 2035 figure, and Jean-Pascal van Ypersele told BBC News that it was an error and would be reviewed. But he said it did not change the broad picture of man-made climate change. The issue, which BBC News first reported on 05 December, has reverberated around climate websites in recent days. Some commentators maintain that taken together with the contents of e-mails stolen last year from the University of East Anglia’s Climatic Research Unit, it undermines the credibility of climate science. Dr van Ypersele said this was not the case. “I don’t see how one mistake in a 3,000-page report can damage the credibility of the overall report,” he said. “Some people will attempt to use it to damage the credibility of the IPCC; but if we can uncover it, and explain it and change it, it should strengthen the IPCC’s credibility, showing that we are ready to learn from our mistakes.”



Neither satellites nor ground observations give a complete picture.

BBC News
1/19/10
<http://news.bbc.co.uk/2/hi/science/nature/8468358.stm>

Laser Fusion Test Results Raise Energy Hopes

A major hurdle to producing fusion energy using lasers has been swept aside, results in a new report show. The controlled fusion of atoms—creating conditions like those in our Sun—has long been touted as a possible revolutionary energy source. However, there have been doubts about the use of powerful lasers for fusion energy because the “plasma” they create could interrupt the fusion. An article in Science showed the

plasma is far less of a problem than expected. The report is based on the first experiments from the National Ignition Facility (Nif) in the US that used all 192 of its laser beams. Along the way, the experiments smashed the record for the highest energy from a laser—by a factor of 20. Construction of the National Ignition Facility began at Lawrence Livermore National Laboratory, Calif. in 1997, and was formally completed in May 2009. The goal, as its name implies, is to harness the power of the largest laser ever built to start “ignition”—effectively a carefully controlled thermonuclear explosion. According to Nif plasma scientist Dr. Siegfried Glenzer, “It’s going to happen this year.”



The experiment focuses 192 laser beams to a tiny target.

BBC News
1/28/10
<http://news.bbc.co.uk/2/hi/science/nature/8485669.stm>

Genes Reveal “Biological Aging”

Gene variants that might show how fast people’s bodies are actually aging have been pinpointed by scientists. Researchers from the University of Leicester and Kings College London say the finding could help spot people at higher risk of age-related illnesses. People carrying the variant had differences in the “biological clock” within all their cells. The British Heart Foundation said the findings could offer a clue to ways of preventing heart disease. While doctors know that as people age they are more at risk from diseases such as Alzheimer’s, Parkinson’s and heart disease, some people fall prey to these at

an earlier age than expected. One theory suggests that biological timers called “telomeres,” part of the chromosomes in every cell that carry genetic code, may be a factor in this. Professor Tim Spector, from King’s College London, said: “What our study suggests is that some people are genetically programmed to age at a faster rate. Alternatively, genetically susceptible people may age even faster when exposed to proven ‘bad’ environments for telomeres such as smoking, obesity or lack of exercise—and end up several years biologically older or succumbing to more age-related diseases.”



Telomeres at the end of chromosomes shorten with age.

BBC News
2/8/09
<http://news.bbc.co.uk/2/hi/health/8500761.stm>

Mediterranean Diet May Lower Risk of Brain Damage That Causes Thinking Problems

A Mediterranean diet may help people avoid the small areas of brain damage that can lead to problems with thinking and memory, according to a study that will be presented at the American Academy of Neurology’s 62nd Annual Meeting in Toronto April 10 to April 17, 2010. The study found that people who ate a Mediterranean-like diet were less likely to have brain infarcts, or small areas of dead tissue linked to thinking problems. The Mediterranean diet includes high intake of vegetables, legumes, fruits, cereals, fish and monounsaturated fatty acids such as olive oil; low intake of saturated fatty acids, dairy products, meat and poultry; and mild to moderate amounts of alcohol. For the study, researchers assessed the diets of 712 people in New York and divided them into three groups based on how closely they were following the Mediterranean diet. Then they conducted MRI brain scans of the people an average of six years later. A total of 238 people had at least one area of brain damage.

Those who were most closely following a Mediterranean-like diet were 36 percent less likely to have areas of brain damage than those who were least following the diet. Those moderately following the diet were 21 percent less likely to have brain damage than the lowest group.

ScienceDaily
2/9/10
<http://www.sciencedaily.com/releases/2010/02/100208185158.htm>

Drug Created to Keep Tumor Growth Switched Off

A novel—and rapid—anti-cancer drug development strategy has resulted in a new drug that stops kidney and pancreatic tumors from growing in mice. Researchers at the Moores Cancer Center at the University of California, San Diego, have found a drug that binds to a molecular “switch” found in cancer cells and cancer-associated blood vessels to keep it in the “off” position. “We locked the kinase switch in the off position in cancer and in tumor-associated blood vessels,” which differs from the way current inhibitors attempt to block active kinases, said David Cheresch, PhD, who led the work. The new approach employs scaffold-based chemistry combined with supercomputer technology, allowing for rapid screening and development of drugs that are more selective for the tumor. The development and screening processes were used to identify potential drug candidates able to halt a growth signaling enzyme, or kinase, which can foster tumor blood vessel and tumor growth. According to the researchers, the novel approach may become a useful strategy in cancer drug development. The study appears online the week of February 8, 2010, in the Proceedings of the National Academy of Sciences.

ScienceDaily
2/14/10
<http://www.sciencedaily.com/releases/2010/02/100211175217.htm>

US Military to Make Jet Fuel from Algae

If military researchers in the US are right, jet fuel produced from algae may soon be

available for about the same price as ordinary jet fuels. The military is the largest single consumer of energy in the US, and a cheap alternative to oil would reduce the 60-75 million barrels of oil currently consumed by military operations. Scientists at the Defense Advanced Research Projects Agency (DARPA) have already successfully extracted oil from algal ponds; large-scale refining of the oil is now about to begin. Special assistant for energy with DARPA, Barbara McQuiston, said unrefined oil produced from algae currently costs \$2 per gallon, but the cost is projected to reduce to around \$1. The refined and processed jet fuel is expected to cost under \$3 per gallon. The refining operation would produce 50 million gallons of oil derived from algae each year and is expected to begin full-scale operations in 2011. Each acre of algal farm pond can produce 1,000 gallons of oil. The projects are run by private companies General Atomics and SAIC. One advantage of algae over other biofuels such as ethanol derived from corn or sugar is that they do not compete with land use for food, and algae can be grown in brackish water or waste water. The fuel theoretically produces zero carbon emissions.

PhysOrg.com
2/16/10
<http://www.physorg.com/news185521814.html>

A Machine that Prints Organs Is Coming to Market

The great hope of transplant surgeons is that they will, one day, be able to order replacement body parts on demand. At the moment, a patient may wait months, sometimes years, for an organ from a suitable donor. During that time his condition may worsen. He may even die. The ability to make organs as they are needed would not only relieve suffering but also save lives. And that possibility may be closer with the arrival of the first commercial 3D bio-printer for manufacturing human tissue and organs. The new machine, which costs around \$200,000, has been developed by Organovo, a company in San Diego that specializes in regenerative medicine, and Invetech, an engineering and automation firm in Melbourne, Australia. One of Organovo’s founders, Gabor Forgacs of the University of Missouri,

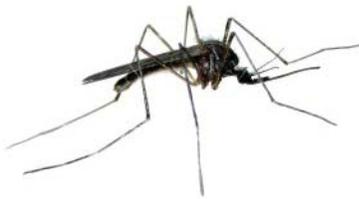
developed the prototype on which the new 3D bio-printer is based. The first production models will soon be delivered to research groups which, like Dr Forgacs's, are studying ways to produce tissue and organs for repair and replacement. At present much of this work is done by hand or by adapting existing instruments and devices.

The Economist
2/18/10

http://www.economist.com/science-technology/displaystory.cfm?story_id=15543683

"Lame" Mosquitoes to Stop Dengue

Scientists are breeding a genetically altered strain of mosquito in an effort to curb the spread of dengue fever. The dengue virus is spread by the bite of infected female mosquitoes and there is no vaccine or treatment. Experts say the illness affects up to 100 million people a year and threatens over a third of the world's population. Scientists hope their genetically altered males will mate with females to create female offspring that will inherit a gene limiting wing growth, making them unable to fly. The study is published in Proceedings of the National Academy of Sciences. The scientists say their approach offers a safe, efficient alternative to harmful insecticides and could be used to stop other diseases spread by mosquitoes, like malaria. Researcher Professor Anthony James, of the University of California, Irvine, said: "Current dengue control methods are not sufficiently effective, and new ones are urgently needed."



BBC News
2/23/10

<http://news.bbc.co.uk/2/hi/health/8528417.stm>

Predicting the Fate of Stem Cells

Researchers at Rensselaer Polytechnic Institute have discovered a new method for

predicting—with up to 99 percent accuracy—the fate of stem cells. Using advanced computer vision technology to detect subtle cell movements that are impossible to discern with the human eye, Professor Badri Roysam and his former student Andrew Cohen can successfully forecast how a stem cell will split and what key characteristics the daughter cells will exhibit. By allowing the isolation of cells with specific capabilities, this discovery could one day lead to effective methods for growing stem cells on a large scale for therapeutic use. "If you have many cells in a culture, they all look the same. But our new method senses all sorts of tiny differences in the shapes and movements of the cells, and uses these cues to predict what kind of cells it will divide into," said Roysam. "We believe this method will be beneficial for one day taking cells from a patient, and then growing large amounts of the kind of cells that patient is in need of. This could enable many new and exciting types of medical treatments using stem cells." Results of the study, titled "Computational prediction of neural progenitor cell fates," were published recently in the journal Nature Methods.

Clone Age
3/3/10

http://www.spacedaily.com/reports/Predicting_The_Fate_Of_Stem_Cells_999.html

Computational Feat Speeds Finding of Genes to Milliseconds Instead of Years

Like a magician who says, "Pick a card, any card," Stanford University computer scientist Debashis Sahoo, PhD, seemed to be offering some kind of trick when he asked researchers at the Stanford Institute for Stem Cell Biology and Regenerative Medicine to pick any two genes already known to be involved in stem cell development. Finding such genes can take years and hundreds of thousands of dollars, but Sahoo was promising the skeptical stem cell scientists that, in a fraction of a second and for practically zero cost, he could find new genes involved in the same developmental pathway as the two genes provided. Sahoo went on to show that this amazing feat could actually be performed. The proof-of-principle for his idea, to be published online March 15 in the Proceedings of the National

Academy of Sciences, opens a powerful, mathematical route for conducting stem cell research and shows the power of interdisciplinary collaborations in science. It also demonstrates that using computers to mine existing databases can radically accelerate research in the laboratory. Ultimately, it may lead to advances in diverse areas of medicine such as disease diagnosis or cancer therapy.

ScienceDaily
3/16/10

<http://www.sciencedaily.com/releases/2010/03/100315161915.htm>

Reversal of the Developmental Aging of Normal Human Cells

BioTime, Inc. (NYSE Amex:BTIM), a biotechnology company that develops and markets products in the field of stem cells and regenerative medicine, on Mar. 16 announced publication of a scientific paper titled "Spontaneous Reversal of Developmental Aging in Normal Human Cells Following Transcriptional Reprogramming." The article was released online in the peer-reviewed journal Regenerative Medicine in advance of the print publication. Using precise genetic modifications, normal human cells were induced to reverse both the "clock" of differentiation (the process by which an embryonic stem cell becomes the many specialized differentiated cell types of the body), and the "clock" of cellular aging (telomere length). The on-line version of the article can be found at <http://www.futuremedicine.com/doi/abs/10.2217/rme.10.21>. "This is just the beginning of some really fascinating new possibilities for intervening in age-related disease," said Michael D. West, Ph.D., president and chief executive officer of BioTime. "We believe that these technologies will have a significant impact on the future of medicine. However, it is important to underscore that much work needs to be done to translate these findings into safe and efficacious therapies."

Earthtimes
3/16/10

<http://www.earthtimes.org/articles/show/biotime-inc-reports-peer-reviewed-scientific,1206294.shtml>

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 it 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.

chana.de.wolf@gmail.com or (503) 756-0864. <http://www.cryonicsoregon.com/>

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

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. The Alcor Portugal website is: 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.

UNITED KINGDOM

There is an Alcor chapter in England. Its members are working diligently to build solid emergency response, transport, and cryopreservation capability. For information about meetings, contact Alan Sinclair at cryoservices@yahoo.co.uk. See the web site at 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!

ARIZONA

Scottsdale:

This group meets the third Friday of each month and gatherings are hosted at a home near Alcor. To RSVP, visit <http://cryonics.meetup.com/45/>.

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. Facility tours are held every Tuesday and Friday at 2:00 PM. For more information or to schedule a tour, call D'Bora Tarrant at (877) 462-5267 x 101 or email dbora@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. 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 Galecki at (408) 245-4928 or email Mark_galeck@pacbell.net.

DISTRICT OF COLUMBIA

Life Extension Society, Inc. is a cryonics and life extension group with members from Washington, D.C., Virginia, and Maryland. Meetings are held monthly. Contact Secretary Keith Lynch at kfl@keithlynch.net. For information on LES, see our web site at www.keithlynch.net/les.

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 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 AlcorNE mailing list, please contact Bret Kulakovich at 617-824-8982, alcor@bonfireproductions.com, or on FACEBOOK via the Cryonics Special Interest Group.

OREGON

Portland:

Cryonics Oregon holds regular meetings every 2-3 months for members of cryonics organizations living in Portland and the surrounding areas. For information, please contact Chana de Wolf at

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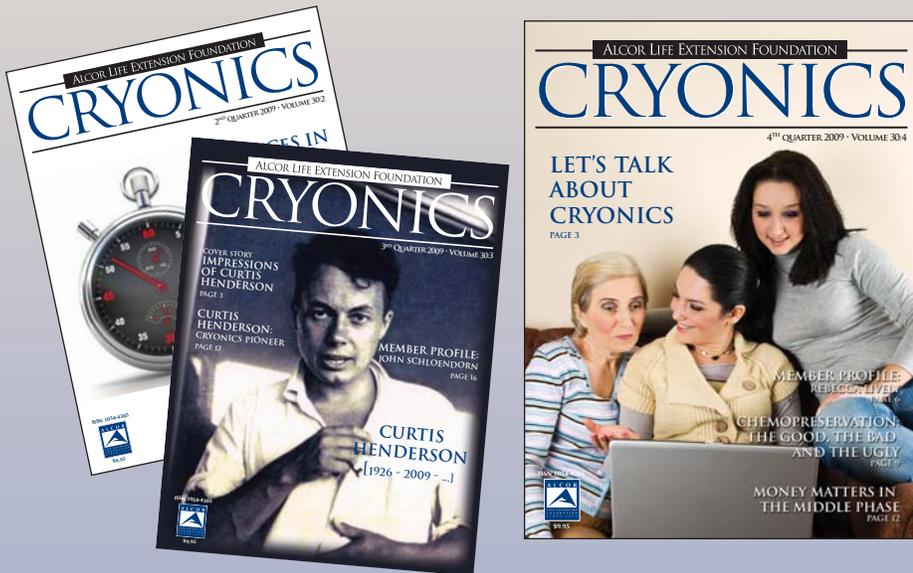


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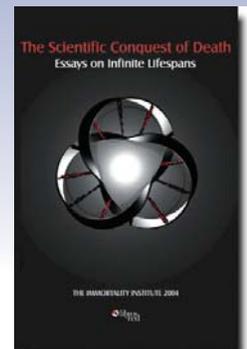
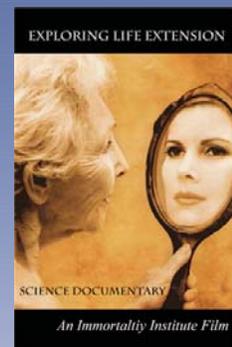
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WHAT IS CRYONICS?

Cryonics is an attempt to preserve and protect the gift of human life, not reverse death. It is the speculative practice of using extreme cold 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?

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). 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 \$150 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.

Call toll-free today to start your application:

877-462-5267 ext. 132
info@alcor.org
www.alcor.org





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