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Alcor News Bulletin

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Financial Matters

The Board appropriation of last month allowed us to catch up on almost all current and past due account payables. The arrival after the board meeting of further invoices, in this case for perfusate components that had been ordered previously, totaling about \$54,000, means that the appropriation did not go as far as was hoped.

The PCT has been billed for all expenses through the end of last month, and the most recent payment had part of the

amount owed them subtracted. The remaining amount owed (\$70,000 for two cases) will be subtracted from this billing, bringing us current with the PCT. The CMS fund is still owed \$22,000, and has been billed for one case. Another case that still needs to be billed should cover this amount.

Further upcoming expenses that the appropriation will not cover is the \$7,000 still owed for perfusate, about \$25,000 in upcoming construction costs not covered by the PCT, upcoming attorney fees, and an air conditioning repair that may be as much as \$9,000. We are not asking for further disbursements at this time. [SVS]

M22 Implementation

Alcor has implemented a new whole-body cryopreservation procedure which uses a new cryoprotectant solution, M22, licensed from 21st Century Medicine. The new cryoprotectant is perfused throughout the entire body using the same procedures required for glycerol cryoprotection; but while it cryoprotects the torso, arms, and legs, we are confident that it is also vitrifying the brain. The main difference, beyond the composition of the solution, is that neurovitrification can be done without separating the brain from the rest of the body.

This new whole-body procedure will now be standard for all members currently signed up as whole body, as well as for those whole body members who have executed an open option contract.

The important thing to realize about this process is what it cannot do. This is not whole-body vitrification, in the sense that the entire body is vitrified. Significant portions of the body do not cryoprotect sufficiently to vitrify, mostly because things like fatty tissue and skeletal muscle are not well-vascularized. This new procedure may not be as optimum for brain cryoprotection as a simple neuro procedure would be, because of the somewhat longer cryoprotection and cooling times. Conversely, compromises needed to protect the brain may lead to under-cryoprotecting the body, in less ideal cases. But the good thing to remember is that brain vitrification is now available to those who wish to remain strictly whole-body, and that the entire body is cryoprotected intact.

A significant amount of engineering work was done here at Alcor to ensure the proper use of M22. A new circulating chiller and perfusion circuit were needed, as were controlled-temperature enclosures for both the patient and the perfusion circuit to allow safe perfusion at temperatures well below the freezing point of water. The patient enclosure allows further cooling after cryoprotection, to at least -30 or -40 Celsius, reducing the hazards of temperature fluctuations while moving the patient into the next stage of cooling. The credit for this engineering work belongs to Hugh Hixon and Tanya Jones, who have done a wonderful job implementing the new procedure.

Those interested in neurovitrification and whole body cryoprotection will no longer have to face the sorts of compromises they did in the past, and we believe this is a significant advance in our capabilities. For those who would like to know more about M22, the composition and effects have been published in the scientific literature listed below [reference 1]. Electron micrographs of the ultrastructure of brain tissue vitrified with M22 have also been published [reference 2] and are available on the Alcor website at <http://alcor.org/Library/html/annals.html>. Further information and micrographs explaining the switch to M22 technology for all Alcor cases can be found on our website at <http://www.alcor.org/Library/html/newtechnology.html>.

As explained in reference 1, M22 has been shown to be compatible with high viability of tissue slices and with consistent survival of kidneys after transplantation. This allows the unprecedented vitrification of the human brain within the intact human body using a solution that is in principle capable of preserving tissue viability as measured by present-day methods. However, to be sure that the brain will vitrify in compromised human patients, Alcor currently must perfuse M22 for longer periods of time than those shown to preserve viability in model systems. In addition, M22 has not yet been shown to preserve the viability of the brain in model system studies.

Nevertheless, the use of M22 allows Alcor to come closer than ever to achieving the goal of in situ brain vitrification using perfusion conditions that preserve tissue viability by current standards. It keeps Alcor on the road to the possible, eventual attainment of this goal. [SVS/TJ]

(1) Fahy GM, Wowk B, Wu J, Phan J, Rasch C, Chang A, Zendejas E. Cryopreservation of organs by vitrification: perspectives and recent advances. *Cryobiology*. (2004) Apr;48(2):157-78. http://www.21cm.com/pdfs/cryopreservation_advances.pdf

(2) Lemler J, Harris SB, Platt C, Huffman TM. The arrest of biological time as a bridge to engineered negligible senescence. *Ann N Y Acad Sci*. (2004) Jun;1019:559-63. Review. <http://alcor.org/Library/html/annals.html>

Whole-Body Engineering Improvement

As was previously reported, we had a visibility problem with the vapor cooling environment for whole-body patients. The nitrogen vapor was being circulated around the patient with such vigor that the surgeons' vision was obscured. Our controls have now been modified so that the three fans pushing the vapor through the enclosure can be turned on or off individually. The reduction in vapor circulating should allow environmental cooling to continue without impairing the surgeons' progress. [TJ]

Very Recent Cryopreservation

An Alcor Member in Louisiana deanimated and his cryopreservation was started Oct. 11. This brings the Alcor patient total to 70. Further details will appear in the next Alcor News and in a future issue of Cryonics. [MP]

Training Matters

Our last regional training session for the year was held Sept. 24-25 in southern California. The team learned to operate their newly-delivered Michigan Instruments Thumper (Model 1007). On the completion of the Thumper module, the team dove into a transport simulation, which went smoothly.

I'd like to commend both Bill Voice and all the transport team members who participated in the more vigorous training program implemented this year for regional groups. Everyone has worked hard throughout the course of this year, and the improvements in competence and skill are obvious. We'll continue the training program next year, and we hope to attract more medical professionals, cryonicist volunteers and other qualified individuals to the teams. [TJ]

Construction Update

Progress continues on the construction at Alcor. We have accepted delivery on the second set of operating room lights. More of the extensive electrical and ducting work has been completed, and the large door for moving dewars has been framed. The new door is ready to be installed.

A new lab has also been carved out of the existing space for Dr. Sheleg. He and Bill Voice worked to create an environment for Dr. Sheleg's research that includes improved ventilation and air circulation, a surgical station, and an operating microscope. Dr. Sheleg has begun the projects approved by the Research Committee. [TJ]

Florida and California CryoFeasts

In the past month, two CryoFeasts were held and attended by several Alcor staff members. Both of these events were well attended by the general public and Alcor members. We spent a fair amount of time responding to questions on the deployment of the transport vehicle and whole-body partial vitrification system. Even the prospective members at these events were excited. We hope to capitalize on the interest in the months to come and have already received multiple applications from the Florida event. [TJ]

Alcor to Attend Immortality Institute Conference

You are invited to join Steve Van Sickle, Executive

Director, and Tanya Jones, Director of Technical Operations at the Immortality Institute Conference on November 5, 2005, in Atlanta. Enjoy this rare opportunity to listen to their comments about cryonics in a panel discussion. [JC]

Hurricane Katrina

Anyone affected by Hurricane Katrina is urged to contact Alcor. We need your current contact info and want to ensure you are in a safe area that is accessible by aircraft. [TJ]

Announcing Alcor United

Alcor members have a new forum where they can meet and chat with other members. Please visit Alcor United (www.alcorunited.org), an Internet forum for Alcor members created and moderated by James Conaway, a nine-year member of Alcor. Conaway says, "I have two main goals for the forum. (1) Create an easy-to-reach meeting place for Alcor members to share experiences, thoughts and ideas. (2) Introduce the world and potential new members to Alcor's community and culture. The forum is a community building project. The categories of discussion range from philosophy and technology to general questions about cryonics and Alcor. Users are required to register to post in the majority of the forums, but I have added an anonymous forum for those who wish to remain anonymous."

Conaway felt a need recently to talk with other Alcor members and could not find an easy way to do so. He has attended Alcor events and knows we have a large group of good people. Alcor United creates a new opportunity for members to connect with each other and strengthen our community. [Submitted by James Conaway/JC]

www.alcorunited.org

Membership Statistics

On September 30, 2005, Alcor had 773 members on its Emergency Responsibility List. One membership was approved during this month, one membership was reinstated, and two memberships were cancelled. Overall, there was a net gain of zero members this month. We have an average net gain of 6.7 members per month in 2005, which compares favorably to the average net gain of 4.3 members per month last year.

At the end of this month, Alcor had 68 applicants for membership. With twelve incoming applicants, one membership approval, and two people withdrawing from the application process, there was a net gain of nine applicants.

During the month of September, 183 information packs were distributed. Of those, 176 were mailed, and 6 were handed to facility tour participants. Our average for 2005 has grown to 111 per month, compared to 50 in 2004. There were

775 subscribers to Alcor News as of the September issue.
[DC]

Texas CryoFeast

Natasha Vita-More is hosting the San Antonio, Texas, CryoFeast on November 12. Texas members and applicants, watch for your invitation in the mail soon! [JC]

Website Update

An estimated 25,514 distinct computers visited Alcor's website in September. There was a small access spike on Sept. 5 coincident with the New York Times article on the Ted Williams "death mask" art exhibit. There was a large access spike (triple normal traffic) on Sept. 15, the same day that an Israeli company announced success freezing sheep ovaries. [WWG]

Media Update

- Fuji TV: This crew did a 15-minute spot about Alcor on a news program that is similar to 20/20.

- Red Back Films: This crew is doing a one-hour documentary about therapeutic hypothermia and cryonics as a logical extension of treatments involving reduced body temperature. It will air on Channel 4 in the UK and The Learning Channel in the US in spring of 2006.

- Zig Zag Productions: Alcor signed an Exclusivity Agreement with this UK production company licensing them exclusive rights for up to 12 months of footage of a yet-to-be-filmed cryopreservation case. The film crew will be headed by Deb Johnson of WalshCOMM and the footage will be Alcor's property, with Alcor given full editorial control prior to releasing the footage to Zig Zag.

- Alcor declined to participate in another reality-based TV series program.

- The Arizona Capital Times published Alcor's response to an editorial letter written by Jack Polidoro, a fiction writer from New Hampshire. Polidoro's original letter, "Rep. Stump Deserves Praise For Efforts To Oversee Cryonics Industry":
<http://www.azcapitoltimes.com/main.asp?Search=1&ArticleID=2531&SectionID=5&SubSectionID=&S=1>

Alcor's response, "Letter writer off the mark; Alcor has stringent financial oversight":
<http://www.azcapitoltimes.com/main.asp?SectionID=5&SubSectionID=5&ArticleID=2623>[JC]

Employment Opportunities

Have you ever thought about joining the Alcor team? We have immediate needs for licensed Paramedics, Emergency Medical Technicians, Registered Nurses, Lab Technicians and more to join our nationwide Transport Team. Participation would be on a contractual basis.

You'll be given cryonics training that will enable you to participate in our patient rescue and transport cases. Licensed professionals do not have to be Alcor members to work with us. We welcome your expertise and interest. If you're interested, send your resume to:

Next Board Meeting

The next Board meeting is scheduled for Saturday, November 12, 2005, at 11:00 AM (MST).

Board meetings are typically held on the first Saturday of the month at the Alcor facility (7895 East Acoma Drive in Scottsdale, AZ). Members and the public are encouraged to attend.

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End of Alcor News bulletin #44 dated October 13, 2005.
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