ALCOR LIFE EXTENSION FOUNDATION
7895 E. Acoma Dr. #110, Scottsdale, AZ 85260-6916

CONSENT FOR CRYOPRESERVATION

1) I, **«FNAME» «MNAME» «LNAME»,** now residing at **«ADDR1», «CITY», «STATE» «ZIP»,** (the Donor), concurrent with an agreement to transfer my human remains to the Alcor Life Extension Foundation (Alcor), authorize Alcor, its agents, assistants, associates, employees, volunteers, and physicians to provide and perform the experimental procedure of post-mortem cryogenic preservation (cryopreservation) on my human remains, in the hope that at some future date the science of medicine will have advanced to the point which permits my restoration to life and health. I further affirm my desire to have the procedure of cryopreservation begun as soon as possible after the moment of my legal death, to limit the deterioration of my human remains.

2) I also desire that the transfer of my human remains should contribute to the scientific and medical research needed in order to prove and perfect the process of cryopreservation.

3) I hereby authorize any procedures such as cardiopulmonary resuscitation, anesthesia, pathology, radiology, perfusion, blood transfusion or substitution; organ transplantation (including transplantation of the central nervous system in whole or in part into a host body); cloning; augmented or tissue regeneration; disassembly, repair, refabrication, or replacement of any body components (including cells, tissues and organs); or any other ancillary procedures judged necessary during my cryopreservation, maintenance, or, if it occurs, revival.

4) I specifically authorize Alcor and/or its assigns to attempt revival of my human remains when, in Alcor's best judgment, it is determined that attempting revival is in my best interest.

Should the attempt by Alcor to revive me fail, I authorize and instruct Alcor (if there are sufficient resources available for Alcor to do so) to return me to cryopreservation or use whatever other alternative preservation technologies that may be available to Alcor at that time which in Alcor's best judgment offer me continued hope for revival.

5) I authorize Alcor to do nondestructive testing on and take nonvital samples from my human remains after legal death and/or cryopreservation. It is understood that this testing shall be carried out to improve cryopreservation techniques and our understanding of cryobiology.

6) In the event that my cryopreservation must cease, I authorize Alcor to undertake alternative methods for preservation of my human remains, including, but not limited to, chemical preservation and conventional interment or entombment.

7) I understand and accept that cryopreservation is not consistent with contemporary medical or mortuary practice. I understand that many physicians, cryobiologists, and scientists in other disciplines discount any reasonable possibility that cryopreservation will be successful. I also understand that the legal status and tax status of organizations performing cryopreservations and of those persons whose human remains are cryopreserved are still being tested and clarified in the courts.

8) I understand and accept that:

a) there are no guarantees that this procedure of cryopreservation will be successful in preserving me sufficiently well to permit me to be returned to life and health;

b) due to the possibility of events beyond Alcor's control, there are no guarantees that my human remains will ever be cryonically cryopreserved or will be stored indefinitely if they are cryopreserved;

c) there are no guarantees that any attempt will ever be made to return me to healthy life or that any such attempt will be successful;

d) Alcor is not responsible for knowing the laws or customs in other countries, and is not responsible for social, legal, economic, and other problems that might make cryotransport, cryopreservation, maintenance, or revival of my human remains illegal or impractical;

e) I am transferring my human remains and funds for an experimental procedure for which there is no known probability of success. It is possible that this experimental procedure will benefit the advancement of knowledge generally, without specifically benefiting me.

9) I understand and accept that the dying process and the process of cryopreservation will result in damage to my body on the molecular, cellular, tissue, and organ levels which is currently considered irreversible. I understand and acknowledge that the damage experienced with existing cryopreservation techniques employed by Alcor (as such damage is currently understood) includes but is probably not limited to the following.

9.1) Ischemic Injury. Currently, cryopreservation procedures cannot begin until after the patient has been pronounced legally dead by a qualified person. In practice this means that the patient will frequently (although not always) experience an ante mortem period of deep shock (inadequate blood flow: ischemia) which will be injurious to most body organs, especially the brain.

This ante mortem ischemic period can result in altered capillary permeability (injury to small vessels supplying body tissues), edema (fluid accumulation), and injury to vital organs.

Following cessation of heartbeat and breathing (legal death), there will likely be an interval of minutes to hours (depending upon the individual circumstances) during which blood circulation will be absent or inadequate. Disruptions in cell and tissue functions and structure which are by current medical criteria considered irreversible and which may remain irreversible, may occur during this interval despite Alcor's best efforts to prevent, minimize, or reverse these insults.

Currently, the medically accepted limits for recovery of humans from circulatory arrest (at normal body temperature) without neurological deficits are in the range of 4 to 6 minutes. As it is practiced today, even under the best conditions, it is probable that the Donor will experience an ischemic period of at least 6 to 10 minutes before cryopreservation stabilization procedures which are designed to halt or reverse ischemic injury can begin. Furthermore, the effectiveness of such stabilization procedures for any given patient is unknown. Injuries as a result of ischemia which are currently known to occur include (depending upon duration), but are probably not limited to:

a) clumping of the chromatin (genetic material) in the cell nucleus;

b) altered permeability of the capillaries in the body and in the blood-brain barrier, causing the leakage of blood plasma proteins, and resulting in tissue swelling when circulation is restored, thus interfering with distribution of cryoprotective drugs during perfusion;

c) free radical damage to the cell membrane and other cell components;

d) influx of calcium into the cells resulting in activation of phospholipases which degrade the cell membrane;

e) calcium precipitation in the mitochondria and swelling of the mitochondria;

f) release of toxic levels of neurotransmitters which exacerbate brain cell injury;

g) loss of critical balances such as sodium/potassium ratio, and pH, and concentrations of cell biochemicals such as ATP;

h) accumulation of injurious chemicals (lactic acid, xanthine oxidase, free iron, and others) which directly or indirectly injure the cell during ischemia and which can cause added injury when circulation is restored;

i) spasm of arteries and arterioles resulting in failed circulation when blood flow is restored, which can interfere with adequate distribution of cryoprotective agents;

j) release of damaging lysosomal enzymes which can degrade or destroy cell structures;

k) clotting of blood, which interferes with restoration of circulation and distribution of adequate amounts of cryoprotective agents.

l) accumulation of stomach acids, which may lead to gastric bleeding and compromise circulation, which can interfere with adequate distribution of cryoprotective agents.

9.2) Cryoprotectant Perfusion Damage. Cryoprotectants may be delivered to the brain and other body organs in high concentrations to limit or prevent ice formation during cryopreservation. This process requires considerable time and imposes stresses that may include:

a) osmotic effects, including tissue dehydration and opening of the blood-brain barrier (tearing of junctions between capillary cells);

b) likely washout and loss of some protein from damaged or broken cells;

c) derangements of the levels of critical cell biochemicals and electrolytes;

d) toxic effects of cryoprotectant chemicals, including disturbance of the hydration layer around biomolecules causing altered structure or function;

e) damage to the fine structure of the cell membrane, such as the formation of blebs or blisters (separation of the membrane from the cytoplasm (cell substance)) and alterations in the arrangement of or loss of the proteins which are normally present in the cell membrane;

f) loosening of the chromatin structure (which contains the DNA).

9.3) Biochemical/Biophysical Freezing Damage. Depending on how much water is removed or replaced by cryoprotectants, some or all body tissues may freeze (form ice) during cooling. The resulting combination of elevated concentrations of cryoprotective agents, cellular shrinkage, and low temperature may cause:

a) loss of lipids from the cell membrane (In other words, the cell membrane may be disrupted and lose material);

b) loss of key membrane proteins responsible for regulating cell function and perhaps for encoding memory;

c) damage to hydrophobic (water insoluble) membrane proteins;

d) formation of deleterious chemical bonds (most commonly disulfide bonds) between vital cell proteins or other cell molecules;

e) leakage of important electrolytes and other molecules into and out of body cells;

f) precipitation of some chemicals and proteins critical to cell function (i.e., some enzymes, structural proteins, and buffers);

g) release during freezing of destructive enzymes that can break down cell structure and that could therefore pose serious problems upon rewarming;

h) alteration of the arrangement of the lipids (fats) in the cell membrane during cooling and freezing such that the normal sheet-like structure of the membrane is reorganized into patches of tangled tubules, rendering the membrane nonfunctional and permeable (Hex_{II} reorganization).

9.4) Mechanical Cryopreservation Injury. Several kinds of mechanical injury to tissues as a result of cryopreservation could occur, such as:

a) tissue-level ripping, twisting, and fraying of the ripped ends of nerve tracts by the contraction of brain cells and by the push of extracellular ice (creating debris-strewn gaps of perhaps 5 to 100 microns in width) if ice forms. Similar kinds of damage can be expected in other organ systems that freeze, such as the disruption of muscle fiber bundles, rupture of kidney tubules, etc.;

b) disruption of the junctions between cells;

c) separation of capillaries from surrounding brain tissue;

d) macroscopic fracture and separation of fractured halves of cells, axons, dendrites, capillaries, and other brain elements by gaps in the millimeter range after the temperature drops below the glass transition temperature, (similar gross fractures in the millimeter range will occur in other body organs as well). This fracturing is expected to happen at low temperatures during either freezing or vitrification (cryopreservation without ice);.

e) physical disruption of the capillaries due to intracapillary ice formation (rupture of the capillary wall, tearing of the capillary endothelial cells, and stripping of the capillary endothelial cells from underlying capillary wall material), resulting in incompetent vessels;

f) stripping of myelin from axons, formation of gaps between the axon membrane and the myelin, unraveling of the myelin, and possible tearing of the axolemma, resulting in loss of intraaxonal material.

10) I understand and accept that if it is not possible to carry out cryoprotective perfusion, the damage described above as a result of the freezing process will be far more serious.

11) I understand and accept that if I am recovered from cryopreservation I may experience a wide range of psychological and social problems and traumas as a result of the disease process which necessitated cryopreservation, the dying process, the cryopreservation procedure, and/or the revival procedure, including but not limited to:

a) complete or partial loss of memory of skills and life experiences with consequent compromise of personal identity;

b) neurological deficits which may result in depersonalization, and/or emotional, physical, or social handicap;

c) loss of organ systems or body parts or substitution by prosthetic organ systems or body parts which may result in psychological and/or emotional harm;

d) grief, loneliness, and social maladjustment as a result of separation from and/or permanent loss of loved ones, friends, and work or social position;

e) "culture shock," the inability to adapt to changed social and cultural circumstances as a result of temporal displacement while in cryopreservation;

f) poverty, as a result of inability to adapt or earn a living, or as a consequence of physical or psychological deficits secondary to cryopreservation and revival;

g) loss of personal freedom and/or indebtedness, as a result of legal, social, and political conditions affecting persons recovered from cryopreservation;

h) exposure to legal action, embarrassment, and/or loss of privacy as a result of technology incidental to revival which may allow access to personal memories.

12) I understand and accept that my choice of cryopreservation may limit, interfere with, or exclude completely my participation in programs of experimental medical treatment/research. I understand that exclusion from such research treatment programs may result from my refusal to consent to autopsy (since the requirements of medical research may necessitate a post mortem examination), from the unwillingness of the treating institution to become involved with cryonics procedures, as a result of prejudice against cryopreservation, or as a result of a combination of some or all of these factors.

13) I understand and accept that my choice of cryopreservation currently precludes my participation as an organ donor for purposes of transplantation.

14) I understand and accept that my choice of cryopreservation may affect the type and extent of medical care I receive. Some physicians and medical facilities may refuse to treat or admit me because of my cryopreservation arrangements or may require that I be transferred to another, perhaps less suitable medical facility for treatment and care.

Further, I understand and accept that Alcor, my Health Care Agent, my family, or others empowered to do so may request the application of life-sustaining medical treatment which may cause discomfort or extend the dying process so as to prolong my life long enough to facilitate my cryopreservation under good conditions (i.e., the use of heroic measures to sustain me in order to allow the Alcor cryopreservation team to arrive at my bedside).

I also understand and accept that there may be some risk that some physicians and medical facilities may refuse to respect my requests for termination of life-support technology or to grant me "no heroic measures" or "do not resuscitate" (i.e., "no-code") status as a result of fear, ignorance, or prejudice against cryopreservation.

15) If I have selected the Neurocryopreservation option, I understand and accept the following:

a) Because my body will be discarded and destroyed during the Neurocryopreservation process, I will necessarily have to rely on the development of technology capable of regeneration, regrowth, cloning and implantation, or implantation of my head or brain into a host body. I understand and accept that such technologies may never be developed.

b) I may be revived using a prosthetic body or life support system which I may find undesirable or unacceptable.

c) There may be loss of identity-critical structure/information when my body is discarded.

d) Technological advances required to recover Neurocryopreservation patients may take longer and/or cost more to develop than those required to recover Whole Body Cryopreservation patients, resulting in my remaining in cryopreservation longer or failing to be recovered from cryopreservation at all.

e) Social, political, and ethical objections to Neurocryopreservation or to the technology required to revive Neurocryopreservation patients may result in problems which could delay or prevent my revival.

f) Neurocryopreservation patients may be stored with Whole Body Cryopreservation patients in order to achieve maximum economic benefit, and, as a consequence, have less protection than is currently offered against fire, earthquake, terrorism, and natural disaster.

16) If I have selected the Whole Body Cryopreservation Option, I understand and accept the following:

a) I may receive less secure protection against fire, earthquake, terrorism, and natural disaster than Neurocryopreservation patients due to economic and logistic limitations currently imposed upon Alcor.

b) I may be subjected to more injury from the cryopreservation process as a result of longer perfusion and cooling times, although no quantification of such injury has been established.

c) Due to the increased costs and logistic difficulties associated with Whole Body Cryopreservation, I may not remain in cryopreservation under adverse political, economic, and/or social conditions outside the control of Alcor.

d) Due to the need to repair/rejuvenate the entire body, it may require more resources to effect revival of Whole Body Cryopreservation patients or it may cost more, resulting in delays that could delay or prevent my revival.

17) With full understanding of these conditions, I consent to cryopreservation and attempted revival.

SIGNATURE OF CRYOPRESERVATION MEMBER

YOUR SIGNATURE BELOW CONFIRMS YOUR ACKNOWLEDGMENT THAT:

1. You have read, understood, and consented to all of the foregoing provisions of this CONSENT FOR CRYOPRESERVATION.

2. You are fully aware of and accept the risks and limitations explained in this document.

3. These proposed research procedure(s) have been satisfactorily explained to you by the officers, representatives, and/or other personnel of Alcor.

4. You declare that the arrangement described herein, in conjunction with the **Cryopreservation Membership Agreement** and the **Authorization of Anatomical Donation**, constitutes your last wish as to the disposition of your human remains after legal death.

5. You hereby give your authorization and consent.

_____
Signature of Cryopreservation Member

_____ \ _____ \ 20____
Month Day Year

_____ (a.m./p.m.)
Time

WITNESSES

Two (2) witnesses are required to sign in the presence of each other and the Member. At the time of signing, witnesses must not be relatives of the Member, health care providers of any kind, or officers, directors, or agents of Alcor.

YOUR SIGNATURE AS WITNESS CONFIRMS YOUR ACKNOWLEDGEMENT THAT:

1. The Member has represented to you that he/she understands and agrees to the purposes and terms of this document.

2. The Member has declared to you that cryopreservation is his/her last wish as to the disposition of his/her body and person after legal death.

WITNESSED ON (MM\DD\YY) __________ \ 20____ TIME _____(a.m.\p.m.)

1. Signature _____

Printed _____

Social Security # (optional) _____

Address _____

City, State, Zip _____

2. Signature _____

Printed _____

Social Security # (optional) _____

Address _____

City, State, Zip _____