To the Honorable Barack H. Obama, President of the United States, Members of the United States Congress, Kathleen Sebelius, Secretary of the Department of Health and Human Services, Linda Douglass, Director of Communications in the Office of Health Reform and Dr. Francis Collins, Director, National Institutes of Health:

We, the undersigned, vehemently urge Congress and the President of the United States of America, Barack Obama, to repeal the Dickey Amendment rider language annexed to bill H.R.3293 and incorporated into Division D of the Consolidated Appropriations Act of 2010 (*see below* Sec. 509 TITLE V GENERAL PROVISIONS). The Dickey Amendment first passed by the United States Congress in 1995 and attached to each federal appropriations bill since continues to be an antiquated obstacle that impedes valuable scientific research. The rider is annually created as a tactic to pass a controversial provision which would not pass as its own bill.

The Department of Education Appropriations Act, 2010 also known as H.R. 3293, makes appropriations for the Departments of Labor, Health and Human Services, and Education, and related agencies for fiscal year 2010. H.R. 3293 was introduced to the House of Representatives and reported by Committee on July 22, 2009. This bill passed in the House by roll call vote on July 24, 2009 with 264 Ayes, 153 Nays and 16 Present/Not Voting. On August 4, 2009 H.R. 3293 was placed on Senate Legislative Calendar under General Orders. The Senate passed the Consolidated Appropriations Act of 2010 on December 13, 2009.

TITLE V

GENERAL PROVISIONS:

Sec.509. (a) None of the funds made available in this Act may be used for--

(1) the creation of a human embryo or embryos for research purposes; or

(2) research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses in utero under 45 CFR 46.204(b) and section 498(b) of the Public Health Service Act (42 U.S.C. 289g(b)).

(b) For purposes of this section, the term 'human embryo or embryos' includes any organism, not protected as a human subject under 45 CFR 46 as of the date of the enactment of this Act, that is derived by fertilization, parthenogenesis, cloning, or any other means from one or more human gametes or human diploid cells.

Dickey Amendment Restrictions

While the July NIH guidelines permit funding of research on discarded IVF embryos, they ban funding for study of human embryonic stem cells derived from other methods, such as embryos created specifically for research. This ban is in line with Dickey-Wicker, which has been attached as a rider to every federal appropriations bill since 1995.

Castle said this amendment is limiting because it also prohibits work on embryos created through somatic cell nuclear transfer (SCNT), a method of creating cell lines by inserting the DNA from a somatic cell, such as a skin cell, into an embryo that has had its nucleus removed. The NIH guidelines also prohibit parthenogenesis, or development of embryonic cells from an unfertilized egg.

"Obviously I'm opposed to Dickey-Wicker. It does affect SCNT research and parthenogenesis, and it is very limiting," Castle said. "Perhaps this is the year we can prevent it from continuing because we think it's a restriction as far as research is concerned." (The Bureau of National Affairs, Inc. "Castle, DeGette Plan to Reintroduce Bill on Embryonic Stem Cell Research Funding", by Jeannie Baumann. *Life Sciences Law & Industry Report*, http://healthcenter.bna.com/pic2/hc.nsf/id/BNAP-7WEPFX?OpenDocument Volume 3: Number 18 September 25, 2009)

The undersigned are cognizant of the Dickey Amendment funding restriction language in the Consolidated Appropriations Act of 2010, voted on then passed by Congress and incorporated in the National Institutes of Health 2009 Guidelines on Human Stem Cell Research enumerated *below*:

National Institutes of Health Guidelines on Human Stem Cell Research:

SUMMARY: The Executive Order states that the Secretary of Health and Human Services, through the Director of NIH, may support and conduct responsible, scientifically worthy human stem cell research, including human embryonic stem cell (hESC) research, **to the extent permitted by law.**

V. **Other Research Not Eligible for NIH Funding**

A. NIH funding of the derivation of stem cells from human embryos is prohibited by the annual appropriations ban on funding of human embryo research **(Section 509, Omnibus Appropriations Act, 2009, Pub. L. 111-8, 3/11/09), otherwise known as the Dickey Amendment.**

B. Research using hESCs derived from other sources, **including somatic cell nuclear transfer, parthenogenesis,** and/or IVF embryos created for research purposes, is not eligible for NIH funding. (Stem Cell Information The National Institutes of Health resource for stem cell research *National Institutes of Health Guidelines on Human Stem Cell Research* http://stemcells.nih.gov/policy/2009guidelines.htm effective date July 7, 2009)

Although these guidelines may appear limiting, they leave room for revision or expansion if Congress takes steps to repeal the Dickey Amendment. The scope of the Guidelines as directed by Executive Order 13505 enable the NIH to review and update the Guidelines periodically, as appropriate. The undersigned urge Congress to lift this prohibition so such important work can benefit from an infusion of federal dollars.

Parthenogenesis

Parthenogenesis is a process of producing pluripotent stem cells without requiring a fertilized egg or creating a viable embryo. Using this technology the human stem cell lines are created from unfertilized human eggs without the transfer of foreign DNA. Funding for this research is not available through the federal government because of the Dickey Amendment:

"Restricting U.S. funding to limited types of stem cells will limit opportunities for U.S. researchers and potentially lead to lost jobs and higher costs for American health care. Parthenogenetic stem cells are unique models for the study of immune rejection and DNA expression patterns. Another technology called "SCNT," excluded under the NIH draft guidelines and not pursued by ISCO, may also create stem cell lines useful in the study genetic diseases such as Parkinson's disease. U.S. companies developing parthenogenesis and SCNT technologies are receiving funding offers from the governments of Korea, India, and China. Without access to federal funding here in the U.S., technologies could migrate to other countries. When disease cures are ultimately developed and sought by the U.S. population, those cost-savings technologies and jobs will be located outside the U.S." (International Stem Cell Corporation "International Stem Cell Corporation provides Comments on National Institutes of Health's Proposed Stem Cell Research Guidelines" Press Release, http://www.internationalstemcell.com/breakingnews/ISCO-NIH5-19-09.pdf May 19, 2009)

Francis S. Collins, M.D., Ph.D. was nominated to lead the NIH, the nation's premiere biomedical research agency, by President Barack Obama on July 8, 2009. The effective date of the *above* mentioned NIH guidelines relating to human embryonic stem cell research was July 7, 2009.

We, the undersigned, align ourselves with Dr. Francis Collins creating a clear scientific consensus in favor of somatic cell nuclear transfer (SCNT) for stem cell research. This common ground of shared beliefs are substantiated and illustrated from the following direct assertions attributable to Dr. Collins, Professor Elizabeth Blackburn, Ph.D., D.Sc. and Dr. Michael West. Federal funds remain prohibited for somatic cell nuclear transfer technology under the currently constructed NIH guidelines and the Dickey Amendment.

Interview with Ben Wattenberg PBS: Francis Collins, Reconciling God and Science Pt.2

BEN WATTENBERG:
Where does-- do stem cells fit into that?
DR. FRANCIS COLLINS:
Stem cells are really not part of genome research, but they're part of medical research and they're controversial so they tend to, sort of, fall in my lap, too.
BEN WATTENBERG:
And-- what-- what is your view of it? That we ought to-- proceed on the research?

DR. FRANCIS COLLINS: But as a scientist-- I would say we are currently not making as much progress as we could if we had access to more of these stem cell lines. The ones that are currently available for federal funding is a very limited set and they clearly have flaws that make them hard to use. But you know what? I think that kind of stem cell research is actually not the part that's going to be most interesting.

The part that's really showing the most promise is to take a skin cell from you or me and convince that cell, which has the complete genome, to go back in time and become capable of making a liver cell or a brain cell or a blood-- cell if you need it to. That reprogramming. That's called somatic cell nuclear transfer in the current mode. And yet people still refer to those products as an embryo. Well, there's no sperm and egg involved here.

And that's where I think we've really gotten muddled. That's the distinction between these various types of biology has been all merkified. And people are beginning to argue in very irrational ways based on a lack of understanding what the science says. If we could back off from all of the, sort of, hard edged rhetoric and really say, okay, what is science teaching us, I suspect that the moral dilemmas are not nearly as rough as people think they are. (Wattenberg, Ben "Francis Collins, Reconciling God and Science Pt.2" *Think Tank with Ben Wattenberg,* http://www.pbs.org/thinktank/transcript1282.html)

Religion & Ethics News Weekly by Bob Abernethy

ABERNETHY: Not far behind, says Collins, is the development of drugs for Alzheimer's and Lou Gehrig's disease, asthma and diabetes. Collins is also a strong supporter of stem cell research, and he thinks there's a way to do this that, for him, removes the moral objections to destroying a human embryo. Collins favors what's called somatic cell nuclear transfer, in which the nucleus of an egg is replaced by the nucleus of, for instance, a cell of skin.

Dr. COLLINS: Now that is very different in my mind, morally, than the union of sperm and egg. We do not in nature see somatic cell nuclear transfer occurring. This is a purely manmade event. And yet somehow we have attached to the product of that kind of activity the same moral status as the union of sperm and egg. I don't know quite how we got there. (Abernethy, Bob "Bob Abernethy's interview with Dr. Francis Collins, Director of the Human Genome Project at the National Institutes of Health" *Religion & Ethics News Weekly*, http://www.pbs.org/wnet/religionandethics/week947/profile.html Episode no. 947 July 21, 2006)

DISCOVER Science, Technology and The Future: Health & Medicine/Genetics
Discover Interview: Francis Collins by David Ewing Duncan

You're a born-again Christian who suggests that therapeutic cloning could be acceptable. Some other devout people consider it fundamentally immoral. What do you see differently?

Dr. COLLINS: There is a difference between doing research on an embryo that was generated by sperm and egg coming together, which is the way human beings are created, versus the very bizarre laboratory phenomenon of taking a nucleus from a skin cell or the udder cell of a sheep and putting it into an environment that takes it back in time to its stem cell state. In public discourse, they're both called embryos. Even though the somatic cell nuclear transfer approach is a very different biological phenomenon, in many people's minds it has been all blurred together. As a result, we've really missed out on a chance for a much more thoughtful, nuanced discussion, and we're still trying to recover from that. (Duncan, David Ewing "Discover Interview: Francis Collins" *DISCOVER Science, Technology, and the Future,* http://discovermagazine.com/2007/feb/interview-francis-collins February 20, 2007)

salon.com Interview Dr. Francis Collins by Steve Paulson

Geneticists are sometimes accused of "playing God," especially when it comes to genetic engineering. And there are various thorny bioethical issues. What's your position on stem cell research?

Stem cells have been discussed for 10 years, and yet I fear that much of that discussion has been more heat than light. First of all, I believe that the product of a sperm and an egg, which is the first cell that goes on to develop a human being, deserves considerable moral consequences. This is an entity that ultimately becomes a human. So I would be opposed to the idea of creating embryos by mixing sperm and eggs together and then experimenting on the outcome of that, purely to understand research questions. On the other hand, there are hundreds of thousands of such embryos in freezers at in vitro fertilization clinics. In the process of in vitro fertilization, you almost invariably end up with more embryos than you can reimplant safely. The plausibility of those ever being reimplanted in the future -- more than a few of them -- is extremely low. Is it more ethical to leave them in those freezers forever or throw them away? Or is it more ethical to come up with some sort of use for those embryos that could help people? I think that's not been widely discussed.

So your position is that they should be used for research if they already exist and they're never going to be used to create a human life?

I think that's the more ethical stance. And I say this as a private citizen and not as a representative of the U.S. government, even though I'm employed by the federal government at the National Institutes of Health. Now let me say, there's another aspect of this topic that I think is even more confusing -- a different approach which is more promising medically. It's this thing called somatic cell nuclear transfer, which is where

you take a cell from a living person -- a skin cell, for instance. You take out its nucleus, which is where the DNA is, and you insert that nucleus into the environment of an egg cell, which has lost its nucleus. Now think about this. We have a skin cell, and we have an egg cell with no nucleus. Neither of those would be things that anybody would argue has moral status. Then you give a zap of electricity and you wait a couple of days. And that environment convinces that skin cell that it can go back in time and it can become anything it wants to be. That is an enormously powerful opportunity because the cell would then be received by that same person who happened to need, say, neurons for their Parkinson's disease or pancreas cells for their diabetes without a transplant rejection.

Isn't this the process that is otherwise known as cloning?

Yeah, it's called cloning, which is a very unfortunate term because it conjures up the idea that you're trying to create a copy of that human being. And at this point, you're doing nothing of the sort. You're trying to create a cell line that could be used to substitute for something that a person desperately needs. It would only become a cloned person if you then intentionally decided to take those cells and reimplant them in the uterus of a recipient woman. And that, obviously, is something that we should not and must not and probably should legislate against. But until you get to that point, it's not clear to me that you're dealing with something that deserves to be called an embryo or deserves to be given moral status. (Paulson, Steve "The believer" *salon.com*, http://www.salon.com/books/int/2006/08/07/collins/print.html Interview Aug. 07, 2006)

From: Francis S. Collins, *The Language of God*

Dr. COLLINS: "Like virtually everyone else, I am strongly opposed to the idea of human reproductive cloning. Implanting the product of human somatic cell nuclear transfer into a uterus is profoundly immoral and ought to be opposed on the strongest possible grounds. On the other hand, protocols are already being developed to convince a single cell that has been derived from somatic cell nuclear transfer to be converted into a cell that senses glucose levels and secretes insulin, without going through any of the other steps of embryonic and fetal development. If such steps can result in tissue-matched cells that cure juvenile diabetes, why would that not be a morally acceptable procedure?" (Francis S. Collins, *The Language of God* (Free Press), NY, 2006; p. 256)

STATEMENT OF DR. ELIZABETH BLACKBURN (2009 NOBEL LAUREATE)

SCNT-derived stem cells could provide other crucial information, in a way impossible for excess in-vitro-fertilized-embryo-derived stem cells. Researchers could address, in a clear and experimentally controlled way, a key unknown issue about the therapeutic value of stem cell use for regenerative medicine: the immune rejection issue. There are excellent in vitro investigations that could cast a lot of much needed light on this area, and could be done only with cells derived from the same genetic background – i.e., using stem cells from SCNT. Again, this cannot be done with animal models alone, which have been the only source of information on this topic to date, because we know that animal models are not complete models for many particular biological questions in humans.

In sum, reliance on excess IVF embryos would severely hobble efforts to gain the information that is needed to be able to judge the promise of cloning-for-biomedical-research. Further, the use of IVF embryos in no way facilitates the most immediately promising areas of SCNT research, which involve not tissue transplantation but rather the development of laboratory tissue that has been grown from somatic cells with known genetic mutations that are needed for study and for testing of new pharmaceutical interventions. (Blackburn, Elizabeth "Why a Moratorium on Cloning-For-Biomedical-Research Is Not the Way to Proceed" *bioethics.gov*, http://bioethics.gov/reports/cloningreport/appendix.html#blackburn July, 2002)

Michael D. West, Ph.D. Congressional Testimony

In conclusion, nuclear transfer and human embryonic stem cell technology offer novel pathways to develop lifesaving therapies that will impact the lives of millions suffering from such diseases as Parkinson's disease, diabetes, arthritis, heart disease, kidney failure, spinal cord injury, liver failure, skin burns, blood cell cancers, to name only a few. The gravity of this issue calls for a compassionate, reasoned, and dispassionate debate. History will judge us harshly if we as a society fail to recognize and deliberate carefully upon a medical technology that could so powerfully alleviate the suffering of our fellow human being. (West, Michael D "Testimony of Michael D. West, Ph.D. before the Subcommittee on Labor, Health and Human Services, Education and Related Agencies of the Senate Committee on Appropriations, December 4, 2001" http://michaelwest.org/testimony/Testimony%2012-4-01.pdf)

The country's leading scientists including Dr. Collins, 2009 Nobel Laureate for Physiology or Medicine, Dr. Elizabeth Blackburn and Dr. Michael West had their convictions affirmed concerning the potential for somatic cell nuclear transfer technology by Memorial Sloan Kettering Cancer Center investigators on March 23, 2008.

Memorial Sloan-Kettering Cancer Center Press Release

> Research led by investigators at Memorial Sloan-Kettering Cancer Center (MSKCC) has shown that therapeutic cloning, also known as somatic-cell nuclear transfer (SCNT), can be used to treat Parkinson's disease in mice. For the first time, researchers showed that therapeutic cloning or SCNT has been successfully used to treat disease in the same subjects from whom the initial cells were derived. While this current work is in animals, it could have future implications as this method may be an effective way to reduce transplant rejection and enhance recovery in other diseases and in other organ systems. (Memorial Sloan-Kettering Cancer Center "Therapeutic Cloning Treats Parkinson's Disease in Mice" Press Release, http://www.mskcc.org/mskcc/html/84575.cfm March 23, 2008)

Furthermore, on May 5, 2006 Bill S.2754, the Alternative Pluripotent Stem Cell Therapies Act was introduced. Senator Rick Santorum sponsored S.2754 and Senator Arlen Specter co-sponsored. The overall intent of the bill was to **derive human pluripotent stem cell lines using techniques that do not knowingly harm embryos.**

Co-Sponsor Senator Arlen Specter stated on Congressional Record:

> Dr. Robert Lanza of Advanced Cell Technologies claims to have derived stem cells from a single cell extracted from 2-day-old, eight-celled mouse embryos. This single cell is called a blastomere and its removal from human embryos does not destroy the original embryo. Scientists know a single cell can be taken from a 2-day-old embryo without destroying it, because it is routinely done in pre-implantation genetic diagnosis. (U.S. Congress. Senate. Senator Arlen Specter speaking for the Alternative Stem Cell Therapies Act. S. Bill 2754, 108th Congress, Section 17. 5 May 2006. Congressional Record, http://www.govtrack.us/congress/record.xpd?id=109-s20060508-17)

Bill S.2754 passed the Senate on July 18, 2006 and failed passage in the House July 18, 2006. The Dickey Amendment federal funding restriction on potentially lifesaving research continues to act as a legislative blockade. The prohibitive nature of the Dickey Amendment congressional ban as it relates to federal funding for the most necessary research is summarized by the scientists *below:*

"Progress in our understanding of human diseases and the development of effective treatments for them has come largely from federally funded research, primarily supported through the National Institutes of Health (NIH). The present congressional ban (instituted in 1994 after an NIH panel established guidelines and oversight that would have allowed such research) has meant that work on the development of embryonic stem cell lines and on the use of embryonic cells has been limited to private and for-profit ventures. Not only are these efforts relatively small in comparison with those funded by NIH, the results are largely hidden from the general scientific community. Moreover, the benefits are likely to be available to the public in a very restricted manner, usually based on the ability to pay whatever price is asked."(Rowley, Janet D.; Blackburn Elizabeth, Gazziniga, Michael S. and Foster, Daniel W. "Harmful Moratorium on Stem Cell Research" http://www.sciencemag.org/cgi/content/summary/297/5589/1957 *Science* 20 September 2002, Vol. 297 .no. 5589, p. 1957, DOI: 10.1126/science.297.5589.1957)

A strong case can be made that the Dickey Amendment ban on expansion of human embryonic stem cell research violates the Establishment Clause of the United States Constitution. Churches and other organizations must adhere to the separation of church and state as provided for in the First Amendment. Such organizations should not expect the rest of society will submit to controlling influence by religious groups. Religious organizations such as *Nightlight Christian Adoptions in re JAMES L. SHERLEY, et al v. KATHLENE SEBELIUS Case No. 1:09-cv-01575-RCL* should not believe that the government or the courts will assist them in efforts to force their religious doctrines on others. In *Lemon v. Kurtzman,* the court applied the three-part test for determining whether a law impermissibly intrudes on the Establishment Clause: (1) there must be a secular legislative purpose: (2) its principal or primary effect must be one that neither advances nor inhibits religion: (3) the law must not foster an excessive government entanglement with religion. *Lemon v. Kurtzman, 403 U.S. 602 (1971)*

The undersigned concludes repeal of the pernicious Dickey Amendment will enable researchers' access to unique properties of stem cells that may lead to major medical breakthroughs that would offer hope to people suffering from cancer, diabetes, Parkinson's disease, multiple sclerosis (MS), cardiovascular disease, spinal-cord injuries, Alzheimer's disease, organ failure and a host of other debilitating diseases. We are fighting for cures to chronic illness and almost everyone knows somebody with an incurable disease. That is why the undersigned urges Congress and the President of the United States of America to repeal the Dickey Amendment because every family has a loved one at risk and we want the best treatment for them.

Congress and the President of the United States of America must share the same determination and courage as the nation's leading scientific minds by removing the long standing impediment referred to as the Dickey Amendment. The undersigned seek to expand the scope of discovery by reversing the Dickey Amendment policy thus increasing the potential for scientific truth. Good health and good sense are two of life's greatest blessings. We emphatically ask that our voices be heard:

"Our ignorance in this vitally important area is profound, and the potential for meaningful medical advances is very high indeed. To realize that potential, we must remove the current impediments to this critical research. Scientists should become more active in urging Congress to lift the ban and to establish the proposed, broadly constituted regulatory board NOW.**"**

(Rowley, Janet D.; Blackburn Elizabeth; Gazzaniga, Michael S. and Foster, Daniel W. "Harmful Moratorium on Stem Cell Research" http://www.sciencemag.org/cgi/content/summary/297/5589/1957 *Science* 20 September 2002, Vol. 297. no. 5589, p. 1957, DOI: 10.1126/science.297.5589.1957)

The views expressed in this letter represent those of the signers acting as individual citizens. They do not necessarily represent the views of the institutions with which they are affiliated. All electronic signatures have been verified, confirmed and documented.

Letter Composed by: Mark J. Neuhauser, Attorney-at-Law, Type 1 "insulin dependent" diabetic

Contributor: Bonna W. Neuhauser, RN

****This effort is a heartfelt tribute to all the scientists who have worked tireless hours in the lab and been put at a competitive disadvantage because of the Dickey Amendment over the last fourteen years.**

Inspirational Contributors: Alliance for Aging Research, Alpha-1 Foundation, ALS Association, American Academy of Neurology, American Association for Cancer Research, American Association of Neurological Surgeons/Congress of Neurological Surgeons, American Autoimmune Related Diseases Association, American College of Neuropsychopharmacology, American Diabetes Association, American Parkinson Disease Association - Arizona Chapter, American Society for Cell Biology, American

Society for Microbiology, American Society for Neural Therapy and Repair, American Society for Reproductive Medicine, Americans for Cures Foundation, Association of American Medical Colleges, Biotechnology Industry Organization, California Institute for Regenerative Medicine, Californians for Cures, Christopher and Dana Reeve Foundation, Columbia University Medical Center, Cornell University, CuresNow, Duke University School of Medicine, FasterCures, Friends of Cancer Research, Genetics Policy Institute, Hadassah, Harvard University, Hereditary Disease Foundation, International Cancer Advocacy Network (ICAN), International Society for Stem Cell Research, Johns Hopkins Institutions, Juvenile Diabetes Research Foundation International, The Leukemia & Lymphoma Society, Michigan Citizens for Stem Cell Research and Cures, Mount Sinai School of Medicine, National Alliance for Eye and Vision Research, National Association for Biomedical Research, National Health Council, National Multiple Sclerosis Society, New York Stem Cell Foundation, Packard Center for ALS Research at Johns Hopkins, Parkinson's Action Network, Parkinson's Disease Foundation, Prevent Cancer Foundation, Quest for the Cure, Research!America, Rutgers, The State University of New Jersey, Sloan-Kettering Institute for Cancer Research, Society for Women's Health Research, Stand Among Friends, Stanford University, Stem Cell Partnering Series, Student Society for Stem Cell Research, Texans for Advancement of Medical Research, Travis Roy Foundation, Unite 2 Fight Paralysis, United Spinal Association, University of Minnesota, University of Pittsburgh, University of Rochester Medical Center, University of Southern California, University of Wisconsin-Madison, Vanderbilt University and Medical Center, Washington University in St. Louis, WiCell Research Institute, Wisconsin Alumni Research Foundation, Wisconsin Association for Biomedical Research and Education (CAMR, Coalition for the Advancement of Medical Research, "Members" http://www.camradvocacy.org/members.cfm) Valencia M. (student advocate/prospective law student), Derek D. (student advocate), Tyler L. (student advocate/stemcelltracker.com) *et al.*

Yours Respectfully,

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Molecular Cardiology Research Center
Department of Cell and Developmental Biology

Laura Grabel, Ph.D.
Wesleyan University, Grabel Lab
Honored by the Connecticut Women's Hall of Fame 2008
Member of the Connecticut Academy of Science and Engineering
Co-Principal Investigator, University of Connecticut-Wesleyan Stem Cell Core

Barth A. Green, M.D., FACS
University of Miami Miller School of Medicine
Professor and Chairman of Neurological Surgery
Chair and Co-Founder (with Nicholas Buoniconti) of Miami Project to Cure Paralysis

Robert C. Griggs, M.D., FAAN
University of Rochester, Department of Neurology
Professor of Neurology, Medicine, Pediatrics, Pathology and Laboratory Medicine
President, American Academy of Neurology
Editor-in-Chief Neurology (1997-2006)

Roger Guillemin, M.D.
The Salk Institute for Biological Studies
Nobel Laureate in Physiology or Medicine 1977
The National Medal of Science (Bestowed by Gerald R. Ford, Jr. in Biological Sciences) 1976

Michael G. Hadfield, Ph.D.
University of Hawaii at Manoa
Professor of Zoology
Advisory Board, **Defend Science**

Jeffrey C. Hall, Ph.D.
University of Maine
Professor of Neurogenetics
Gruber Neuroscience Prize 2009

Alberto Hayek, M.D.
University of California San Diego-Pediatric Diabetes Research Center
Professor of Pediatrics
Scientific Director, The Scripps Whittier Institute for Diabetes

Mary J.C. Hendrix, Ph.D.
Northwestern University Feinberg School of Medicine
Medical Research Institute Council Professor
President and Scientific Director, Children's Memorial Research Center
Board of Directors, National Cancer Institute
Appointee to the National Institutes of Health Council of Councils

Matthais Von Herrath, M.D.
La Jolla Institute for Immunology
Director, Center for Type 1 Diabetes Research
Council Member for the International Diabetes Society
Grotzky Award from the Juvenile Diabetes Foundation International 2006
Outstanding Scientific ('Lilly') Achievement Award by the American Diabetes Association 2008

Dudley R. Herschbach, Ph.D.
Harvard University
Department of Chemistry and Chemical Biology
Nobel Laureate in Chemistry 1986
The National Medal of Science (Bestowed by George H.W. Bush in Chemistry) 1991

Roald Hoffmann, Ph.D.
Cornell University
Department of Chemistry and Chemical Biology
Nobel Laureate in Chemistry 1981
The National Medal of Science (Bestowed by Ronald W. Reagan in Chemistry) 1983

Leroy Hood, M.D., Ph.D.
President, Institute for Systems Biology
Albert Lasker Award for Basic Medical Research 1987
Kyoto Prize Laureate in Advanced Technology 2002
Lemelson-MIT Prize for Invention and Innovation 2003
The Heinz Award by the Heinz Family Foundation for Technology, the Economy and Employment 2005

David H. Hubel, M.D.
Harvard University
Nobel Laureate in Physiology or Medicine 1981
Helen Keller Prize for Vision Research 1996

Louis J. Ignarro, Ph.D.
UCLA (University of California, Los Angeles)
Nobel Laureate in Physiology or Medicine 1998
Distinguished Science Award from the American Heart Association 2008

Lanetta Jordan, M.D.
Memorial Regional Hospital
Director, Sickle Cell Services
Chief Medical Officer, Sickle Cell Disease Association of America, Inc.

Timothy J. Kamp, M.D., Ph.D.
University of Wisconsin Medical School
Professor of Medicine and Physiology
Co-Director Stem Cell and Regenerative Medicine Center

Eric R. Kandel, M.D.
Columbia University Medical Center
Nobel Laureate in Physiology or Medicine 2000
The National Medal of Science (Bestowed by Ronald W. Reagan in Biological Sciences) 1988

John Kessler, M.D.
Northwestern University Feinberg School of Medicine
Davee Professor of Stem Cell Biology
Chairman, Department of Neurology
Director, Northwestern University Stem Cell Institute
PBS, 'Independent Lens': Mapping Stem Cell Research-Terra Incognita (2008 Peabody Award)

Rick A. Kittles, Ph.D.
The University of Chicago, Department of Medicine
Associate Professor
Section of Genetic Medicine
Scientific Director and Co-Founder of African Ancestry Inc.
Featured in PBS Special Oprah's Roots and "Roots" a 60 Minute Report by Leslie Stahl (2007)

Roger D. Kornberg, Ph.D.
Stanford University School of Medicine
Professor, Structural Biology
Nobel Laureate in Chemistry 2006

Mathilde Krim, Ph.D.
Founding Chairman
amfAR, The Foundation for AIDS Research
Presidential Medal of Freedom Award (Presented by William J. Clinton) 2000

Marc Lalande, Ph.D.
University of Connecticut Health Center
Chair, Department of Genetics and Developmental Biology
Director, University of Connecticut Stem Cell Institute
Member of the Connecticut Academy of Science and Engineering

Robert Lanza, M.D.
Chief Scientific Officer, Advanced Cell Technology
Adjunct Professor, Institute for Regenerative Medicine
Wake Forest University School of Medicine
All Star Award for Biotechnology 2006

Allan I. Levey, M.D., Ph.D.
Emory University
Director, Emory Center for Neurodegenerative Disease and Alzheimer's Disease Center
Professor and Chair of Neurology
Best Doctors in America 2005-present
Team **Hope** Award-Medical Leadership by the Huntington's Disease Society of America 2005

Jeanne Loring, Ph.D.
The Scripps Research Institute
Professor and Founding Director
Center for Regenerative Medicine
Regulatory and Ethics Board for the Bill and Melinda Gates Foundation Global Challenge
Scientific Advisory Council of the Alzheimer's Association

David C. Magnus, Ph.D.
Stanford University School of Medicine
Director, Stanford Center for Biomedical Ethics
Vice President (and President Elect) of the Association of Bioethics Program Directors
Co-Editor of the American Journal of Bioethics

Jeff McCaffrey
Founder, UMKC Chapter of Student Society for Stem Cell Research
National Student Advocacy Award 2007
Spirit of Juvenile Diabetes Research Foundation (JDRF) Award 2004

"In the fall of 2002, I was a college freshman, playing football at the U.S. Air Force Academy. A cadet, my aspirations were to graduate and serve as a commissioned officer. I had every intention of leading a life of leadership and responsibility. Just before Thanksgiving that year, while on a weekend trip to the mountains with some buddies, I suffered a spinal cord injury in a car accident. I have been paralyzed ever since."

Craig C. Mello, Ph.D.
University of Massachusetts Medical School
Howard Hughes Medical Institute
Nobel Laureate in Physiology or Medicine 2006

Marsel Mesulam, M.D.
Northwestern University Feinberg School of Medicine
Ruth and Evelyn Dunbar Professor of Neurology, Psychiatry and Psychology
Director, The Cognitive Neurology and Alzheimer's Disease Center
Former Vice President, American Association of Neurology

Randall T. Moon, Ph.D.
University of Washington School of Medicine
Director and William and Marilyn Conner Professor of the Institute for
Stem Cell and Regenerative Medicine
Howard Hughes Medical Institute and Department of Pharmacology

Robert M. Nerem, Ph.D.
Director, Georgia Tech/Emory University Center for Regenerative Medicine
Member of National Academy of Engineering and the Institute of Medicine
Senior Advisor for Bioengineering at the NIH (2003-2006)

Bonna W. Neuhauser *, RN
SAINT FRANCIS Care
"Responding to the scriptural call to heal…"
Neonatal Intensive Care Unit (1963-2005)

Mark J. Neuhauser +, J.D.
Attorney at Law

Douglas D. Osheroff, Ph.D.
Stanford University
Nobel Laureate in Physics 1996
MacArthur Prize Fellow 1981

Arnall Patz, M.D.
John Hopkins University & Walter Reed Army Medical Center
Albert Lasker Medical Research Award (Presented by Helen Keller)
The Helen Keller Prize for Vision Research 1994
Presidential Medal of Freedom Award (Presented by George W. Bush) 2004
Laureate Recognition Award from the American Academy of Ophthalmology 2005

Renee A. Reijo Pera, Ph.D.
Stanford University School of Medicine
Institute for Stem Cell Biology and Regenerative Medicine
Director Center for Human Embryonic Stem Cell Research and Education
Director Reproductive Biology and Stem Cell Program
Noted as one of Twenty Influential Women in the USA (Newsweek, 2006)

Mahendra S. Rao, M.D., Ph.D.
Vice President of Stem Cell Research at Life Technologies Corporation
International Society for Stem Cell Research Task Force on Clinical Translation of Stem Cells
NIH Stem Cell Committee (1999)
Food and Drug Administration (FDA) Stem Cell Advisory Committee (2000)
Stem Cell Section Chief, NIH-National Institute on Aging (2001-2005)

Camillo Ricordi, M.D.
University of Miami
Distinguished Professor of Medicine
Scientific Director, Diabetes Research Institute and Cell Transplant Center
Nessim Habif World Prize of Surgery 2001 "The Ricordi Method"
Outstanding Scientific ('Lilly') Achievement Award by the American Diabetes Association 2002

Sir Richard Roberts, Ph.D., F.R.S.
New England Biolabs
Chief Scientific Officer
Nobel Laureate in Physiology or Medicine 1993

Lewis P. Rowland, M.D.
Columbia University Medical Center (Neurological Institute)
President, Parkinson's Disease Foundation
Founder of the Eleanor and Lou Gehrig MDA/ALS Center (Former Co-Director)
Muscular Dystrophy Association Directors' Award 2009
The Forbes Norris Award for Outstanding Research (ALS) 2001

Janet D. Rowley, M.D.
University of Chicago
Gruber Genetics Prize 2009
Presidential Medal of Freedom Award (Presented by Barack H. Obama) 2009
Albert Lasker Clinical Medical Research Award 1998

Randy Schekman, Ph.D.
University of California, Berkeley
Howard Hughes Medical Institute
Department of Molecular and Cell Biology
Editor-in-Chief, Proceedings of the National Academy of Sciences
Albert Lasker Award for Basic Medical Research 2002

James Shepherd
Chairman, Shepherd Center, Inc.
U.S. News & World Report-Top 10 Rehabilitation Hospitals in the Nation
"Seeing Beyond Injury"

M. Celeste Simon, Ph.D.
University of Pennsylvania School of Medicine
Professor, Department of Cell and Developmental Biology
Scientific Director and Investigator, Abramson Family Cancer Research Institute
Investigator, Howard Hughes Medical Institute
Cancer Foundation Young Investigator Award 1993

Tanya Simuni, M.D.
Northwestern University Feinberg School of Medicine
Medical Director, Parkinson's Disease and Movement Disorders Center
Associate Professor of Neurology

Jonathan M.W. Slack, Ph.D., F.Med.Sci.
University of Minnesota
Director, Stem Cell Institute
Waddington Medal (British Society for Developmental Biology) 2002

Hamilton O. Smith, M.D.
J. Craig Venter Institute
Scientific Director of the Synthetic Biology Group
Nobel Laureate in Physiology or Medicine 1978

Oliver Smithies, D.Phil.
University of North Carolina at Chapel Hill
Excellence Professor, Department of Pathology and Laboratory Medicine
Nobel Laureate in Physiology or Medicine 2007

Evan Y. Snyder, M.D., Ph.D., F.A.A.P
Sanford-Burnham Medical Research Institute
Director, Program in Stem Cell & Regenerative Medicine
Director, Stem Cell Research Center
Scientific Steering Committee, San Diego Consortium for Regenerative Medicine

Gary S. Stein, Ph.D.
University of Massachusetts Medical School
The Gerald L. Haidak, M.D. and Zelda S. Haidak
Distinguished Professor and Chair of Cell Biology
Director, International Stem Cell Registry
Deputy Director, UMass Memorial Cancer Center
Interim Director, Center for Stem Cell Research and Regenerative Medicine

Lawrence Steinman, M.D.
Stanford University
George A. Zimmerman Professor of Neurology and Neurological Sciences
Chair, Interdepartmental Program in Immunology
National MS Society/AAN John M. Dystel Prize for Multiple Sclerosis Research (2004)
Senator Jacob Javits Award, US Congress (1988-2002)

Ralph Steinman, M.D.
Rockefeller University
Henry G. Kunkel Professor and Senior Physician
Laboratory of Cellular Physiology and Immunology
Gairdner Foundation International Award 2003
Albert Lasker Award for Basic Medical Research 2007

Bruce Stillman, Ph.D., F.R.S.
President, Cold Spring Harbor Laboratory
Alfred P. Sloan Prize for Cancer Research 2004

Keith E. Tansey, M.D., Ph.D.
Emory University and Atlanta VA Medical Center
Director, Spinal Cord Injury Research, Shepherd Center Inc.
Board, American Spinal Injury Association

Doris A. Taylor, Ph.D.
University of Minnesota
Medtronic Bakken Chair
Director, Center for Cardiovascular Repair
Finalist for TIME Magazine's Most Influential People of 2009

Steven L. Teitelbaum, M.D.
Washington University in St. Louis-School of Medicine
Wilma and Rosewell Messing Professor
Department of Pathology and Immunology
Former President, Federation of American Societies for Experimental Biology

E. Donnall Thomas, M.D.
Fred Hutchinson Cancer Research Center
Nobel Laureate in Physiology or Medicine 1990
The National Medal of Science (Bestowed by George H.W. Bush in Biological Sciences) 1990

Robert Tjian, Ph.D.
University of California, Berkeley
President, Howard Hughes Medical Institute
California Scientist of the Year 1994
Alfred P. Sloan Prize for Cancer Research 1999
Louisa Gross Horwitz Prize from Columbia University 1999

Andrew A. Toledo, M.D.
Medical Director, Reproductive Biology Associates
In Vitro Fertilization Physician
Reproductive Endocrinologist
RESOLVE 2009 **Hope** Award for Advocacy

J. Craig Venter, Ph.D.
Founder and President of the J. Craig Venter Institute
National Medal of Science Award (Bestowed by Barack H. Obama in Biological Sciences) 2009
Time Magazine's 2007 and 2008 List of the Most Influential People in the World
The 10 Most Influential People in Science by Discover Magazine 2008

John E. Wagner, M.D.
University of Minnesota
Division Director, Pediatric Hematology, Oncology, Blood and Marrow
Transplantation Program
Scientific Director, Clinical Research of the Stem Cell Institute
Invited Speaker on the Clinical Applications of Stem Cells at the United Nations 2004

Nancy S. Wexler, Ph.D.
Columbia University
Department of Neurology and Psychiatry
President of the Hereditary Disease Foundation
Benjamin Franklin Medal in Life Science 2007
Albert Lasker Public Service Award 1993

Torsten N. Wiesel, M.D.
Rockefeller University
Rockefeller University President Emeritus
President, Rockefeller University (1992-1998)
Nobel Laureate in Physiology or Medicine 1981
National Medal of Science (Bestowed by George W. Bush in Biological Sciences) 2005
Helen Keller Prize for Vision Research 1996

Robert W. Wilson, Ph.D.
Harvard University
Nobel Laureate in Physics 1978
Henry Draper Medal 1977 by the National Academy of Sciences

Christopher V.E. Wright, D. Phil.
Vanderbilt University Medical Center
Director of the Program in Developmental Biology
Endowed Chair in Molecular Diabetes Research

Ren-He Xu, M.D., Ph.D.
University of Connecticut Health Center
Director, University of Connecticut Stem Cell Core
Outstanding Science Achievement Award from the NCI-Frederick, NIH

Charles Yanofsky, Ph.D.
Stanford University
Department of Biological Sciences
Louisa Gross Horwitz Prize from Columbia University 1976
The National Medal of Science (Bestowed by George W. Bush in Biological Sciences) 2003

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