

## Embryonic Stem Cell Research: Legislation, Funding and Possible Impact

*by David Crouse, PhD. Professor, Associate Vice Chancellor for Academic Affairs, UNMC  
Nebraskans for Research Board Member*

Scientists who have an interest in studying the basic biology and potential therapeutic applications of human embryonic stem cells (ESC) work in an internationally competitive research arena. Major players in the investigation of ESC reside in the United States, Canada, England, Australia, Israel, China, Japan, South Korea, Singapore and many Scandinavian countries.

Many of the governments of those countries support ESC research while providing strict, ethically based oversight that applies to all research regardless of funding source whereas, in the US federal restrictions, though severe, are only those related to funding by federal agencies. Only a few of our states have restrictions on ESC research, and some of those may be overturned soon (AR, IA, IN, MI, ND and SD). More states have developed dedicated state funding for ESC and adult stem cell research (CA, CT, IL, MA, MD, NJ, WA and WI).

With this as a background, Midwestern states like Nebraska seek to hire and retain many of the same researchers who can work freely in a supportive environment on either coast or elsewhere in the world. The presence of proposed legislation in Nebraska that would not only restrict, but also criminalize research that is not restricted, despite being funded elsewhere in the US, would send a very negative signal to our present and potential faculty.

In the states that do not provide focused funding of their own, the ability to conduct the research in the absence of significant federal funding is noticeable. Indeed, some states with new targeted funding for ESC research have specifically recruited researchers from nearby states where more restrictive laws were proposed by their state legislature.

The major source for all life science research funding in the United States is the National Institutes of Health (NIH). In FY06 the NIH spent about \$38 million dollars on human ESC research - nearly all to bank, distribute and characterize the 22 lines that are currently available with federal funding. That represents 0.13% of the total NIH budget of \$28.461 billion dollars. Stem cell research with human non-embryonic sources (adult, cord blood, placenta, etc) was supported by \$206 million dollars in 2006 - more than 5 times that spent on ESC research. Since NIH funding has been relatively unchanged recently, in the past 4 years human ESC research has had only \$122 million dollars of a total NIH budget of \$111.9 billion dollars.

To compare, California just released \$45 million dollars in funding for work in their state this year, and \$80 million more is expected soon. Detailed summaries of the federal NIH support for all areas

of research including ESC are available (See: <http://www.nih.gov/about/budget.htm> ).

As stated earlier, ESC research on the international front is highly visible, and scientists outside the US are clearly making rapid headway under strict but reasonable regulation in their own countries. The National Academy of Sciences has already provided a set of regulatory recommendations for this country that would support expanded ESC research ("Guidelines for Human Embryonic Stem Cell Research", April 26, 2005), and many scientific groups have called for their formal implementation.

The United States has been a leader in nearly all areas of medical research, allowing it to be a major contributor to the improving the health of our citizens and the rest of world. Indeed, human ESC were first described by US scientists in November, 1998. The world has looked to us to be a leader. But it is clear that other countries are more than willing to "fill our shoes" if we are not going to pursue an area of research that has great potential to alleviate suffering from some of the most debilitating health conditions. Although it is not too late to change, we are falling behind other countries in ESC research. Recent Congressional Research Service reports, requested by members of Congress or Congressional committees and conducted by staff from our Library of Congress, provide a good review of all aspects of ESC research.

(See: <http://ncseonline.org/NLE/CRSreports/06Aug/RL33540.pdf> and <http://www.ncseonline.org/NLE/CRSreports/06Jul/RL33524.pdf> and [http://digital.library.unt.edu/govdocs/crs//data/2006/upl-meta-crs-8295/RL31015\\_2006Jan11.pdf](http://digital.library.unt.edu/govdocs/crs//data/2006/upl-meta-crs-8295/RL31015_2006Jan11.pdf)).

## Greetings From The President

*by Carol Russell*

Nebraskans for Research was formed by a committed group of individuals interested in research being done in Nebraska. Biomedical research contributes to the development and evaluation of new treatments and improves the quality of life for all Nebraskans. The increased longevity of humans over the past century can be significantly attributed to advances resulting from medical research. We are proud of the reputation Nebraska is developing internationally for the research it is conducting and Nebraskans for Research will continue to promote and support Nebraska's role as a leader in this research.

### Nebraskans for Research Salute James Armitage, M.D. at Fifth Annual Tribute Luncheon



Join Nebraskans for Research in saluting James O. Armitage, M.D., an internationally recognized cancer physician, at the annual Tribute luncheon on Monday, April 23. The luncheon will be held from 11:45 a.m. to 1:00 p.m. at Happy Hollow Club, 1710 So. 105th St. in Omaha.

Tables of ten will be available for \$500 and individual seats can be purchased for \$50 by contacting Jean Bell at 290-

9305 or [jeanbell@cox.net](mailto:jeanbell@cox.net).

James O. Armitage, M.D., is the Joe Shapiro Professor of Medicine in Oncology/Hematology at the University of Nebraska Medical Center (UNMC) and is known around the world for his expertise in the research and treatment of lymphoma and bone marrow transplantation.

"Dr. Armitage has had a tremendous impact on Nebraska," said Carol Russell, NFR president. "He has advanced treatment for cancer, establishing Nebraska as a leader, particularly in the treatment of Lymphoma. He has given back to his profession, serving as president of American Society of Clinical Oncology - a very prestigious position. He has given back to his state, serving locally on many boards and contributing to many organizations. He is an inspiration for all of us and we are delighted to honor him."

Dr. Armitage joins other distinguished Nebraskans who have been honored by NFR. They are: 2006 Harold and Marian Andersen in 2006; Rik and Dr. Shannon Bonness in 2005; Dr. Michael F. Sorrell in 2004 ; and Charles Durham in 2003.

A 1973 graduate of the UNMC College of Medicine, Dr. Armitage completed his internship and residency training at UNMC and an oncology/hematology fellowship at the University of Iowa. At the University of Iowa he developed the bone marrow transplant program and served as its director from 1980 to 1982.

He joined UNMC in 1982 to start UNMC's bone marrow transplant program. In addition to his teaching, research and clinical duties, Dr. Armitage has held a series of leadership positions at UNMC, including chief of the section of oncology/hematology, vice chair of the Department of Internal Medicine, chair of the Department of Internal Medicine and Dean of the College of Medicine. He served as dean from 2000 to 2003 when he stepped down to return to teaching and clinical care.

Dr. Armitage's research has focused on the management and understanding of lymphomas and the use of bone marrow transplantation in the treatment of these disorders. He has been the author of more than 500 scientific articles, book chapters, and monographs, and the editor of several textbooks in the field of internal medicine and oncology/hematology. He has developed an international reputation for both his clinical research and patient care.

#### Previous recipients of this honor include:

2006 Harold and Marian Andersen  
2005 Rik and Dr. Shannon Bonness  
2004 Dr. Michael F. Sorrell  
2003 Charles Durham

## Contribute to Medical Research Today!

Select one or both options to continue your support for life-saving research.

#### Nebraskans for Research Membership

Contributions to NFR are tax deductible.  
**Make checks payable to: NFR**

___ Basic Membership	\$25
___ Bronze Membership	\$50
___ Silver Membership	\$100
___ Gold Membership	\$250
___ Platinum Membership	\$500
___ Diamond	\$1000

#### Research Nebraska! Contribution

Contributions to Research Nebraska!, the advocacy arm of NFR, are not tax deductible.  
**Make checks payable to: Research Nebraska!**

My check for \$ \_\_\_\_\_  
is enclosed.



Name \_\_\_\_\_  
(Business if applicable) \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
E-mail \_\_\_\_\_ Phone # \_\_\_\_\_

*Paid for by Nebraskans for Research and Research Nebraska • 1141 H Street, Suite B • Lincoln, NE 68508*

## Notes from the Legislature by Rich Lombardi, Registered Lobbyist

***"To build may have to be slow and laborious task of years. To destroy can be the thoughtless act of a single day."***

Winston Churchill

The Nebraska Legislature's Judiciary Committee held a public hearing on LB700 this past week, a bill to criminalize certain types of biomedical research in the State of Nebraska. It takes the single act of passage of this bill to destroy what many of you have taken years to build in our state.

Winston Churchill also said, *"We make a living by what we get, but we make a life by what we give."* It is time to give some of your time to advocating against passage of LB 700. In the weeks ahead you will be called upon to contact your State Senator to oppose this legislation. Please take the time to do this. It makes a difference.

Your ongoing educational efforts are continuing through the advocacy efforts with your legislative supporters. We are fortunate that a strong group of legislators are leading our efforts to prevent passage of this bill, but they need your help.

The Judiciary Committee of the Nebraska Legislature is comprised of the following members. We have included their email addresses for your convenience of corresponding with them. If you know these Committee Members or know someone who does know these members and who you think supports our position, please let our office know.

### Members of the Judiciary Committee

Senator Brad Ashford	bashford@leg.ne.gov
Senator Ernie Chambers	echambers@leg.ne.gov
Senator Steve Lathrop	slathrop@leg.ne.gov
Senator Amanda McGill	amcgill@leg.ne.gov
Senator Dwite Pedersen	dpedersen@leg.ne.gov
Senator Pete Pirsch	ppirsch@leg.ne.gov
Senator DiAnna Schimek	dschimek@leg.ne.gov

There are two things that you need to do to advocate before your Nebraska Legislature. You need to show up and tell a story.

It is time to show up.

The future of medical research in Nebraska is in your hands.

<b>Lavon Heidemann, District 1</b> 471-2733 mmines@leg.ne.gov	<b>Tim Gay, District 14</b> 471-2730 tgay@leg.ne.gov	<b>DiAnna Schimek, District 27</b> 471-2632 dschimek@leg.ne.gov	<b>Cap Dierks, District 40</b> 471-2801 cdierks@leg.ne.gov
<b>Dave Pankonin, District 2</b> 471-2613 dpankonin@leg.ne.gov	<b>Ray Janssen, District 15</b> 471-2625 rjanssen@leg.ne.gov	<b>Bill Avery, District 28</b> 471-2633 bavery@leg.ne.gov	<b>Vickie McDonald, District 41</b> 471-2631 vmcdonald@leg.ne.gov
<b>Gail Kopplin, District 3</b> 471-2627 gkopplin@leg.ne.gov	<b>Kent Rogert, District 16</b> 471-2728 kroget@leg.ne.gov	<b>Tony Fulton, District 29</b> 471-2734 tfulton@leg.ne.gov	<b>Thomas F. Hansen, District 42</b> 471-2729 rhansen@leg.ne.gov
<b>Pete Pirsch, District 4</b> 471-2621 ppirsch@leg.ne.gov	<b>Pat Engel, District 17</b> 471-2716 pengel@leg.ne.gov	<b>Norman Wallman, District 30</b> 471-2620 nwallman@leg.ne.gov	<b>Deb Fischer, District 43</b> 471-2628 dfischer@leg.ne.gov
<b>Donald Preister, District 5</b> 471-2710 dpreister@leg.ne.gov	<b>Mick Mines, District 18</b> 471-2618 mmines@leg.ne.gov	<b>Rich Pahls, District 31</b> 471-2327 rpahls@leg.ne.gov	<b>Mark Christensen, District 44</b> 471-2805 mchristensen@leg.ne.gov
<b>John Nelson, District 6</b> 471-2714 jnelson@leg.ne.gov	<b>Mike Flood, District 19</b> 471-2929 mflood@leg.ne.gov	<b>Russ Karpisek, District 32</b> 471-2711 rkarpisek@leg.ne.gov	<b>Abbie Cornett, District 45</b> 471-2615 acornett@leg.ne.gov
<b>John Synowiecki, District 7</b> 471-2721 jsynowiecki@leg.ne.gov	<b>Brad Ashford, District 20</b> 471-2622 bashford@leg.ne.gov	<b>Carroll Burling, District 33</b> 471-2712 cburling@leg.ne.gov	<b>Danielle Nantkes, District 46</b> 471-2720 dnantkes@leg.ne.gov
<b>Tom White, District 8</b> 471-2722 twhite@leg.ne.gov	<b>Carol Hudkins, District 21</b> 471-2673 chudkins@leg.ne.gov	<b>Annette Dubas, District 34</b> 471-2630 adubas@leg.ne.gov	<b>Philip Erdman, District 47</b> 471-2616 perdman@leg.ne.gov
<b>Gwen Howard, District 9</b> 471-2723 ghoward@leg.ne.gov	<b>Arnie Stuthman, District 22</b> 471-2715 astuthman@leg.ne.gov	<b>Ray Aguilar, District 35</b> 471-2617 raguilar@leg.ne.gov	<b>John Harms, District 48</b> 471-2802 jharms@leg.ne.gov
<b>Mike Friend, District 10</b> 471-2718 mfriend@leg.ne.gov	<b>Chris Langemeier, District 23</b> 471-2719 clangemeier@leg.ne.gov	<b>John Wightman, District 36</b> 471-2642 jwightman@leg.ne.gov	<b>LeRoy Loudon, District 49</b> 471-2725 lloudon@leg.ne.gov
<b>Ernie Chambers, District 11</b> 471-2612 echambers@leg.ne.gov	<b>Gregory Adams, District 24</b> 471-2756 gadams@leg.ne.gov	<b>Joel Johnson, District 37</b> 471-2726 jjohnson@leg.ne.gov	
<b>Steve Lathrop, District 12</b> 471-2623 slathrop@leg.ne.gov	<b>Ron Raikes, District 25</b> 471-2731 rraikes@leg.ne.gov	<b>Tom Carlson, District 38</b> 471-2732 rcarlson@leg.ne.gov	
<b>Lowen Kruse, District 13</b> 471-2727 lkruse@leg.ne.gov	<b>Amanda McGill, District 26</b> 471-2610 amcgill@leg.ne.gov	<b>Dwite Pedersen, District 39</b> 471-2885 dpedersen@leg.ne.gov	



The Newsletter of  
Nebraskans For Research  
1141 H Street, Ste B  
Lincoln, NE 68508

(402) 475-0727  
[www.NebraskansForResearch.org](http://www.NebraskansForResearch.org)

Research Today for Healthier Tomorrows

FIRST CLASS  
US POSTAGE  
**PAID**  
OMAHA, NE  
PERMIT NO. 798

## BOARD OF DIRECTORS

Carol Russell, President  
Judy Haecker, Treasurer  
Margaret Kirkeby Batt, Secretary  
Jean Bell Omaha  
John Benson MD Omaha  
Rick Boldt Omaha  
Kathy Campbell Lincoln  
Marcy Cotton Omaha  
David Crouse PhD Omaha  
Eunice Denenberg Omaha  
Diana Doyle MD Omaha  
Sandy Goetzinger-Comer Omaha  
Danielle Gordman Omaha  
Sanford M. Goodman Omaha  
Dale E. Gruntorad Lincoln  
Leslie C. Hellbusch MD Omaha  
Marilyn Konigsberg Omaha  
Robert Kully Omaha  
Beverly Maurer Omaha  
Nancy Noddle Omaha  
Ann Pedersen Gleeson Omaha  
William Penry Omaha  
Jene Pierson Omaha  
Lenore Polack Omaha  
Barbara Schaefer Omaha  
Suzanne Singer Omaha  
Ed Vigna DDS Lincoln  
Gail Walling Yanney MD Omaha

## ADVISORY BOARD

Georgene Allen Hastings  
Robert Batt Omaha  
Jan Blank McCook  
Ardyce Bohlke Hastings  
Kenneth Christoffersen Gordon  
Tom Fagot DDS Lexington  
Lynne Friedewald Hastings  
Kiran Gangahar MD Omaha  
Ted Hazer Omaha  
State Sen. Joel Johnson, MD Kearney  
Ruth Koepke Blue Hill  
Luke Lemke MD Columbus  
Carol & Jack Maddux Wauneta  
Nancy O'Brien PhD Waterloo  
Kae Pavlik Yutan  
Betti & Dick Robinson Norfolk  
James Scholz Omaha  
Kay Sedivy Valentine  
Cricket Simmons Scottsbluff  
Al Svajgr Cozad  
Jan Thayer Grand Island  
Kent Whinnery Omaha  
Elaine Wolf Albion  
Elizabeth Young Sidney

## CALL TO COMMITTEES

The following committees have openings for new members. Please call Victoria at 402-475-0727 for more information. We would be delighted to have you volunteer to work on a committee.

Committees with openings:

Membership

Fundraising

Education

Issues Advocacy