FASEB News

"Quality Life Through Research"

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Senate to Consider Legislation to Prohibit Nuclear Transplantation Techniques

Last year, the House of Representatives passed legislation banning reproductive cloning as well as the use of nuclear transplantation techniques. Legislation sponsored by Senator Sam Brownback (R-KS) – a companion version to the House bill H.R. 2505 – is expected to be considered by the Senate as early as April. Advocates of biomedical research are concerned that the vote for the Brownback bill will be very close, putting at risk vital avenues of research that could find cures for many diseases such as diabetes and Parkinson's. FASEB has supported an alternative piece of legislation sponsored by Senator Dianne Feinstein (D-CA), which bans human reproductive cloning but enables research to continue using nuclear transplantation to produce stem cells.

Over the next month, members of FASEB societies will be asked to weigh in with their Senators on this issue. To help scientists with their advocacy endeavors, FASEB has prepared the following materials – a briefing sheet describing the reasons to oppose the Brownback bill and an information sheet entitled, "Frequently Asked Questions: Human Cloning and Nuclear Transplantation to Produce Stem Cells" – found on pages 6 and 7 of this newsletter. For the latest up-to-date information regarding cloning legislation, please visit the FASEB Public Affairs homepage at http://www.faseb.org/opar/. FN

Helms Amendment to Exclude Rats, Mice, and Birds from AWA Passes in Senate

On February 12th, the Senate adopted an amendment to the farm bill that would permanently exclude rats, mice, and birds from the regulatory provisions of the Animal Welfare Act (AWA). The amendment, offered by Sen. Jesse Helms (R-NC), would write into law the administrative exclusion of these species from the AWA that has been in place for 30 years. The amendment was adopted in the Senate by unanimous consent.

During the week of March 15th, members of the House and Senate conference committee on the farm bill began work to iron out the differences between their respective versions of the proposed legislation. Because a similar amendment does not exist in the House version, the conferees must decide whether to include the Helms language in the final bill. Members of FASEB societies have been urged to write to these conferees, asking them to include the Helms amendment because it is needed to clarify once and for all that USDA should not regulate rats, mice, and birds. If this amendment is not included in the final version of the farm bill, USDA will issue a proposed rule later this year bringing these species under

*see **Helms Amendment**, page 13*

FASEB President Robert R. Rich (right) with Bob Michel, Paul Rogers, John Whitehead, Connie Mack, and John Porter at Campaign for Medical Research Breakfast.

ISSUE HIGHLIGHTS

FASEB News

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A Message from the National Institutes of Health . . .

To the Members of FASEB Societies:

In February 2001, the Center for Scientific Review (CSR) of the National Institutes of Health (NIH) began the second phase of its reorganization activities in accord with the recommendations of the Panel on Scientific Boundaries for Review. In Phase II of our reorganization, we recruit members of the extramural research community to participate on Study Section Boundaries (SSB) Teams, which meet over the course of two and a half days to develop guidelines for the study sections that will constitute an Integrated Review Group (IRG). To date, we have convened seven SSB Teams for the following proposed IRGs: Hematology; Musculoskeletal, Oral & Skin Sciences; Biology of Development & Aging; Cardiovascular Sciences; Bioengineering Sciences & Technologies; Surgery, Applied Imaging and Applied Bioengineering; and Oncological Sciences. In April 2002, four additional meetings will take place for the Immunological Sciences, Digestive Sciences, Renal and Urological Sciences, as well as the Endocrinology, Metabolism and Reproductive Sciences IRGs.

CSR has and will continue to make each IRG's proposed guidelines available for public review and comment via CSR Web at http://www.csr.nih.gov/PSBR/IRGComments.htm. Although we have taken great care in assembling panels with appropriately broad expertise and review experience, CSR recognizes that not all fields could be represented equally and not all guidelines would be comprehensive. Therefore, broad input from the scientific community would be extremely helpful in the overall process of clarifying the guidelines and establishing effective study sections. We strongly encourage FASEB Society Members to submit their comments to the aforementioned website. We need your help to design the best peer review process possible.

Sincerely,

Ellie Ehrenfeld, Ph.D.
Director
Center for Scientific Review

E-FOIA UPDATE:
What's Happened Since Our Last Newsletter?

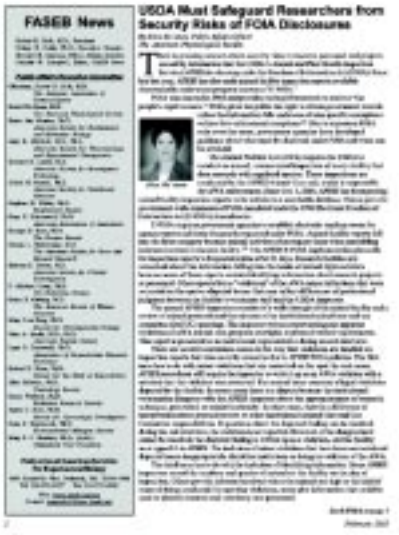
The last issue of the FASEB Newsletter featured an article by Alice Ra'anan, Public Affairs Officer for the American Physiological Society, concerning the USDA's Animal and Plant Health Inspection Service (APHIS) release of sensitive information under the Freedom of Information Act (FOIA). Through a new program known as E-FOIA, APHIS has been posting its animal facility inspection reports electronically, making them available on its website in a searchable database. Ra'anan pointed out a number of potential hazards with this practice including the mislabeling of minor infractions as "violations," disputes between the scientific personnel and the reviewer, and the inclusion of identifying information that could be used to identify research and veterinary care personnel.

In support of these concerns, FASEB's President Robert R. Rich wrote to Dr. Chester Gipson, Acting Deputy Director of the Animal and Plant Health Inspection Service/Animal Care of U.S. Department of Agriculture. In the February 6th letter, Rich called upon the agency to revise its procedures for the release of these inspection reports. "Under current practices," stated Rich, "some facility inspection reports provide excessive detail which can lead to the identification of researchers and the address of their laboratories. Information on researchers or their projects may expose individuals to harassment from animal rights terrorists. Colleagues, students, families and neighbors may also be endangered."

Furthermore, the letter expressed concerns regarding the lack of formal mechanisms for determining the accuracy of facility inspection reports. "The process for disputing a report prior to its posting to the web is inadequate. These preliminary findings should not be considered formal 'records,' but are more properly considered pre-decisional documents. As such, they should not be subject to FOIA requirements for electronic posting."

Rich urged Gipson to train the inspectors to be more sensitized to the security concerns of research facilities and to exclude identifying information from reports that will become available to the general public. "The USDA," he concluded, "should not offer inspection reports on the Internet unless they exclude such identifying information and until they are determined to be accurate, subject to a meaningful review process."

The American Physiological Society, which also wrote to APHIS, suggested that the agency delineate the kinds of information that pose risks to personnel and facilities. "There should be a clear policy that identifying information should not be included in inspection reports," wrote APS President John Hall. "Such information is a violation of privacy and exposes personnel to potential harassment or worse." APS further suggested that APHIS provide its inspectors with guidelines about what information that should be redacted before reports are released under FOIA.


FASEB News

USDA Must Safeguard Researchers from Security Risks of FOIA Disclosures

UPDATE: After meeting with representatives of the research community led by the New Jersey Association for Biomedical Research, USDA has indicated that it is reviewing options that will allow it to fulfill its statutory requirements for releasing and making information available to the public, while protecting research institutions from the threat of unlawful activity from extremist organizations. USDA has halted electronic dissemination of the facility inspection reports "until legal issues are resolved." However, according to a notice posted on the Animal Care home page, the agency will continue to make paper copies of the annual Animal Welfare Act inspection reports available through the regional offices.

The full text of the letter is available on the FASEB website at http://www.faseb.org/opar/news/docs/efoia_ltr.html. FN

Reasons To Oppose Human Cloning Prohibition Act, S. 1899 Sponsored by Senator Brownback

The Brownback bill will:

Ban Potential Treatments for a Host of Diseases and Debilitating Disorders

The goal of nuclear transplantation to produce stem cells, sometimes referred to as 'therapeutic cloning,' is to produce healthy tissue grown from stem cells that may one day be able to replace diseased or damaged tissue. The procedure offers hope to millions of individuals suffering from diseases such as cancer, Parkinson's and Alzheimer's, or spinal cord injuries.

Prohibit Vital Research on Tissue Rejection

By using the nucleus of an individual's own cell to produce a stem cell line, nuclear transplantation could significantly reduce the likelihood of tissue rejection and the need for immunosuppressive drugs that often cause severe and long-term side effects.

Retard Our Understanding of Basic Science

Prohibiting a basic scientific technique such as nuclear transplantation will severely hinder scientific research. U.S. scientists have achieved an unparalleled record of accomplishment by employing new technologies to benefit humankind. New innovations in scientific discovery have historically been controversial, but they have proven to save lives and help manage devastating diseases. An example is the use of recombinant DNA technology, which invoked considerable debate in the 1970's, but has proven to be a mainstay of modern biomedical research.

Threaten U.S. Leadership at the Forefront of Medical Discovery

A ban on nuclear transplantation could well jeopardize our international leadership on biomedical research issues and lead to a brain drain as our best scientists leave to pursue research in other nations. In February, the House of Lords granted authority to begin granting nuclear transplantation licenses to scientists in the U.K. In August, France and Germany proposed an international treaty that would permit human cloning for therapeutic purposes. Scientists in other countries including Israel, Sweden, and China are currently engaged in nuclear transplantation research.

Restrict U.S. Economic Growth and Prosperity

This isn't just a scientific issue, it's an economic one as well. The translation of basic scientific discoveries into medical advances is a rich and vital market for industry – one that promises jobs and economic growth to diverse communities throughout the country.

Deny Americans Access to New Medical Treatments

The Brownback bill will ban the importation of any successful therapies developed through nuclear transplantation produced by scientists in other nations. Americans seeking access to these therapies will have to travel abroad to receive treatment.

Frequently Asked Questions:

Human Cloning and Nuclear Transplantation to Produce Stem Cells

Q: What are the basic differences between reproductive cloning and nuclear transplantation to produce stem cells?

A: Both processes begin with a technique called nuclear transplantation (also known as Somatic Cell Nuclear Transfer). First, the genetic material is removed from an ooctye, or egg cell. Then the nucleus containing the genetic material from a somatic (or body associated) cell is transplanted into this enucleated egg cell. The resulting product is stimulated to begin dividing. At this point, the processes of reproductive cloning and nuclear transplantation to produce stem cells diverge:

Reproductive cloning: The cells resulting from nuclear transplantation are transferred to a uterus, which provides critical factors for further development. Therefore, reproductive cloning will result in a new human being (or animal).

Nuclear transplantation to produce stem cells: The cells resulting from nuclear transplantation are grown in a culture dish in the presence of special nutrients for only a few days, when they will comprise a cluster of about 120 cells that can be used to derive stem cells. Therefore, because the cells are never transferred to a uterus they cannot develop into a human being (or animal) on their own.

Q: How are nuclear transplantation and stem cell research related?

A: As described above, the process of nuclear transplantation can be used to produce stem cells. The advantage of using this technique to produce stem cells is that the cells would have the same genetic makeup as the individual who donated the body cell. This would be beneficial for cellular therapies since the individual's immune system should not reject the stem cells. Stem cells lines derived by nuclear transplantation using specific patients' cells would also allow scientists to study the basic properties of a disease and help develop appropriate treatments.

Q: What are the differences between adult and embryonic stem cells?

A: Scientists think that embryonic stem cells have a much greater utility and potential than the adult stem cells, because embryonic stem cells may develop into virtually every type of cell in the human body. Adult stem cells, on the other hand, may only be able to develop into a limited number of cell types. Embryonic stem cells also continue to divide indefinitely while this may not be the case for adult stem cells. Both adult and embryonic stem cell research should continue simultaneously as they are critical to our understanding of the etiology, progression, and treatment of disease.

Q: How can we distinguish between the technologies used in cloning and stem cell research and the intent of these applied procedures?

A: In reproductive cloning, the intent is to create another human being. In order for this to happen, the nuclear transplantation product must be implanted into a uterus. On the other hand, nuclear transplantation to produce stem cells results in the generation of stem cells that are genetically identical to a patient. There is never implantation into a uterus, and the stem cells on their own cannot produce another human being. These cells can be used for therapeutic and scientific research purposes – they will facilitate scientific research into understanding and treating disease and in developing new cellular therapies.

Q: How does nuclear transplantation to produce stem cells differ from in vitro fertilization?

A: Embryos derived for in vitro fertilization purposes can also be used to derive stem cells. These cells will not be genetically identical to a patient, and therefore may not be as useful in cellular therapies as stem cells derived by nuclear transplantation. In the case of in vitro fertilization, an egg cell is fertilized by sperm and then allowed to develop. In the case of nuclear transplantation to produce stem cells, the egg cell is not fertilized.

Q: How will biomedical research and its translation to the practice of medicine be compromised if nuclear transplantation to produce stem cells is prohibited?

A: It would severely hinder scientific research if the use of a basic scientific technique such as nuclear transplantation were prohibited. Scientific discoveries and translation of these discoveries into medical advances rely on exploring the potential of new technologies. To limit the technologies available to U.S. scientists would jeopardize the pre-eminent position of the U.S. as a world leader in health research. The track record of U.S. scientists in using new technologies to benefit humankind is the best in the world. An example is the use of recombinant DNA technology, which invoked considerable debate in the 1970's but has proven to be a mainstay of modern biomedical research and has produced an understanding of the genetic basis of many diseases, including cystic fibrosis. The evolution of these previous controversial issues has resulted in saving lives and managing devastating diseases as well as increased prosperity for U.S. citizens and their families.

Q: Will countries other than the U.S. develop therapies based on nuclear transplantation technology and would patients in the U.S. have access to these?

A: It is likely that other countries will develop therapies based on nuclear transplantation to produce stem cells.

see ***Reasons to oppose****, page 13*

What We've Been Doing

FASEB President Urges Increased Funds for NSF

In a March 7th letter to members of the House Budget Committee, FASEB President Robert R. Rich urged for a significant increase in funding for the National Science Foundation (NSF). Citing the many outstanding programs of the agency, Rich called upon the lawmakers to include a substantial funding increase for the NSF in the FY 2003 Budget Resolution.

"For more than 50 years, NSF research and education programs have enhanced our quality of life and promoted economic growth and prosperity," Rich wrote. He noted that NSF investments have helped the United States to "become the world leader in information technology, biotechnology and many other fields that are crucial for our nation's security and well being in the 21st century." Rich pointed out that FASEB supports a 15% increase for NSF in FY 2003, as does the Coalition for National Science Funding. For the full text of the letter to House Budget Committee members, view the FASEB website at http://www.faseb.org/opar/news/docs/budget_comm.html.

FASEB Leaders Participate in Advocacy Meetings for NIH

In a display of support for the National Institutes of Health, FASEB leaders participated in two important meetings regarding the agency's funding and policies. On March 13th, FASEB President Robert R. Rich met with the other partners in the Campaign for Medical Research – an advocacy coalition for the doubling of the NIH budget – to listen to long-time champions of biomedical research discuss funding for NIH. Speakers at this gathering included former lawmakers Connie Mack, John Porter, Paul Rogers, and Robert Michel.

In a separate meeting, FASEB Vice President for Science Policy Bettie Sue Masters and former FASEB President Samuel C. Silverstein met with NIH Associate Director for Extramural Research, Wendy Baldwin, on March 18th. Among the topics of discussion were data on NIH funding and stipend levels for graduate students and postdoctorates.

FASEB President's Opinions on Regulatory Burden Published in Science Journal

The April 15th edition of *Issues in Science and Technology* included a letter from FASEB President Robert R. Rich, highlighting some of the challenges of "expanding regulation in the areas of…human subject research, animal research and research integrity (including research misconduct and conflicts of interest)." Written as a comment on an earlier article, "Regulatory Challenges in University Research" (*Issues in Science and Technology*, Winter 2001-02) by David L. Wynes, Grainne Martin and David J. Skorton, Rich concurred with the authors' concerns regarding overly restrictive regulatory burdens placed on university research.

"The increased attention in [the above mentioned areas are] not misplaced, but as Wynes et al. argue, increased regulation can create, as well as fix, problems," Rich wrote. "For example, protection of human research participants is a paramount concern to both the public and researchers. However, the authors make a cogent argument that overly strict and literal interpretation of regulations can divert IRB attention away from its primary charge to carefully evaluate the research risks and protections presented by a research protocol." Rich expressed concern regarding other burdens on IRBs with the upcoming April 2003 implementation of the HIPAA privacy regulation, stating that "[t]he privacy regulations are so

complicated that an entire consulting industry has been spawned to interpret them." He concluded by saying that, "[o]ur nation is diminished whenever research is limited or curtailed and research funds are wasted due to duplicative regulatory requirements."

FASEB President Praises Bush's Budget for Biomedical and USDA Research

In a February 5th press release, FASEB President Robert R. Rich thanked the President for following through on his pledge to complete the doubling of the National Institutes of Health (NIH) budget. The president's budget included a proposed total of $27.3 billion for the NIH in FY 2003 – the same amount recommended by FASEB in its annual funding report, *Federal Funding for Biomedical and Related Life Sciences Research, FY 2003*. "[President Bush's] budget request shows his true commitment to biomedical research and, if adopted by Congress, will complete the doubling of the NIH budget over five years," stated Dr. Rich.

Furthermore, Rich also praised the President's request of $240 million for the National Research Initiative (NRI) Competitive Grants Program at the U.S. Department of Agriculture (USDA). "We are very pleased to see the President's commitment to basic, investigator-initiated research at the USDA," said Rich. NRI is authorized at $500 million a year, but has never received more than $120 million since its creation. FASEB's annual federal funding report to Congress recommended funding for the NRI to at least $200 million. FASEB's report, which also includes recommendations for five other federal agencies, can be found on the Web at http://www.faseb.org/opar/fund2003/fedfund03.pdf.

FASEB President Comments on Issues of Regulatory Reform

In June of 2001, The U.S. Department of Health and Human Services began a Department-wide initiative to reduce regulatory burdens in health care – including in the area of biomedical and health research. DHHS established an Advisory Committee on Regulatory Reform to provide those recommendations regarding regulatory changes that would enable HHS programs to reduce burdens and costs associated with Departmental regulations, while at the same time maintaining or enhancing effectiveness, efficiency, impact, and accessibility. In addition to holding regional hearings to solicit ideas from the public, the Committee requested written comments from those who are affected by issues of regulatory burden. FASEB President Robert R. Rich responded to that request in a March 6th letter to Christy Schmidt, Executive Coordinator of the Regulatory Reform Initiative.

In his letter, Rich stated that "[t]here is strong agreement in the research community that it is possible to reduce excessive and redundant regulations without increasing the risk to both animal and human research subjects, the environment, or the integrity of the research process and that it is critical to do so in order to harvest the tremendous progress that has been made in the battle against disease." Among the topics that Rich elaborated on were the recommendations made in the so-called "Mahoney Report;" the strain placed on IRBs due to increased caseloads, responsibilities, and paperwork; revisions to the Animal Welfare Act to include rats, mice and birds; and other issues of concern.

"The scientific community" pledged Rich, "stands prepared to work with DHHS and other Federal agencies to continue its farsighted efforts to promote research productivity by establishing an appropriate level of regulation and oversight." For the full text of the Rich letter to Christy Schmidt, visit the FASEB Public Affairs website at http://www.faseb.org/opar/news/docs/comm_regburd.html. FN

The Newest Master's: Professional Studies in the Sciences and Mathematics

During the past five years, a movement to *professionalize* the master's degree in the sciences and mathematics has grown from fewer than a dozen programs in doctoral granting institutions to over 60. With expansion into the master's granting institutions underway, this number could double by the year 2007. The new degree programs – about one-third of which are offered in the biosciences – have been designed and developed in concert with business and industry. Even more importantly, these programs are endorsed by industry.

From the students' point of view, the new two-year degree is meant to provide a means of staying *connected* with science and mathematics without having to pursue the Ph.D. or M.D. degrees. Still, some questions remain – for example, what kinds of careers will graduates enter and what kind of career pathways will they take? But as the first graduates in bioinformatics, applied biosciences, industrial microbiology, and biotechnology make their way onto the job market, they appear to be finding positions in association with research and product development, regulatory affairs, management of clinical trials, intellectual property, and finance. The degree is not intended to replace the research degree – but rather to provide an alternate for students who love and do well in science, but wish to pursue a different professional route.

The Master's degree is the fastest growing degree in U.S. higher education, according to statistics from the NCES; yet, until recently that growth did not encompass the fields of mathematics and science. The reason? With the exception of public health and engineering, the Master's degree in the sciences (and mathematics) has long been considered a failed Ph.D., granted to graduate students who embarked on a research career, but did not complete the Ph.D. training. Absent from graduate education in the sciences has been the Master's model – a course-intensive training with an internship or practicum. This is a more typical of pathway to a master's education in this country.

Except for the Keck Graduate Institute – a new all-Master's graduate school located in Claremont California entirely dedicated to training science professionals for the biotech industry – most of the professional master's programs are being founded in well established universities. The American Physical Society, The Society for Industrial and Applied Mathematics, and most recently, the American Chemical Society have undertaken inventories and registries of existing master's degree programs to determine which fit the professional model in order to encourage more of them. Benefits accrue to faculty as well as students: new contacts in industry, enlargement of the total number of graduate students in their departments, and the stimulus and satisfaction of teaching professionals. Instead of competing, programs are moving toward shared standards and collaboration. For example, an all-programs bioinformatics gathering of faculty, enrolled students, and industry scientists, is scheduled for May 12-14 at Granlibakken in Lake Tahoe (visit www.laketahoesymposia.org).

A key asset in these new PSM degree programs are the business/industry advisory committees set up before program launch. They provide input and feedback into curriculum development, opportunities for the all-important internships and practicums, and, eventually, a network for jobs. Programs so far launched include: bioinformatics, industrial microbiology, microbial biotechnology, microbial systems analysis, molecular chemical biology, biological quality systems analysis, biotechnology, and biology for entrepreneurship. The Keck Graduate Institute has a number of concentrations in their overall MBS.

Websites:

General PSM Websites:
www.sciencemasters.com
www.sciencemasters.com/cmb

Keck Graduate Institute: www.kgi.edu

Bioinformatics Jobs Fair Information:
www.laketahoesymposia.org

The U.S. now graduates about 67,000 bachelor's degree holders in the non-agricultural biological sciences. Reportedly, one-third of these individuals do not go on to any graduate or professional school within five years of graduating from college. This suggests a potential pool of professional master's students in the tens of thousands. And as the degree becomes more prestigious, that pool and the total numbers of majors from which it derives may increase as well. Students choose science not just because they love and do well at it, but because they see some meaningful work at the other end. The professional master's provides some post-baccalaureate options which will convey to students that there are many ways of serving science.

Sheila Tobias is the co-author of Rethinking Science as a Career *(Research Corporation, 1995) and has been advising the Alfred P. Sloan Foundation on professional master's programs since 1997. Since 1999, she has been outreach coordinator for the initiative.* FN

List of

Bioscience PSM Programs

funded by the Sloan Foundation:

University of Arizona – applied biosciences

Arizona State University - bioinformatics

Boston University - bioinformatics

Case Western Reserve University – biology for entrepreneurship

Northeastern University – bioinformatics, biotechnology

Georgia Institute of Technology - bioinformatics, human-computer interaction

Keck Graduate Institute of Applied Life Sciences, Michigan State University - industrial microbiology, integrated pest management

New Jersey Institute of Technology - bioinformatics

North Carolina State University - industrial microbiology

Oregon State University – applied biotechnology

Pennsylvania State University – biotechnology

Rensselaer Polytechnic Institute - bioinformatics

Rochester Institute of Technology - bioinformatics

State University of New York at Buffalo – molecular chemical biology

San Jose State University – biotechnology

University of Connecticut – microbial systems analysis

UCLA - bioinformatics

UC Santa Cruz - bioinformatics

University of South Carolina - biotechnology

University of Southern California - bioinformatics

University of Texas-El Paso - bioinformatics

FASEB Publishes Another Article in the *Breakthroughs in Bioscience* Series

There is a dire need for whole-organ transplants today. Current estimates suggest that nearly 80,000 patients are waiting for organs. Millions more could be helped by transplantation of specialized tissues and cells. To help explain the problem of rejection of transplanted organs by the immune system and to highlight exciting new advances to help overcome this challenge, FASEB has published "Transplantation: The Challenging Road Ahead," the latest article in the *Breakthroughs in Bioscience* series.

This article describes the steps that occur during rejection by the immune system. New treatments aimed at "blinding" the immune system are helping to overcome this problem and alleviate the organ shortage. Other advances in tissue engineering and stem cell research could allow transplantation of specialized tissues rather than whole organs.

The *Breakthroughs in Bioscience* series is a collection of illustrated articles that explain recent developments in basic biomedical research and how they are important to society. FN

Other **Breakthroughs in Bioscience** articles:

- Targeting Leukemia: From Bench to Bedside
- Bone Builders: The Discovery Behind Preventing and Treating Osteoporosis
- Making Anesthesia Safer: Unraveling the Malignant Hyperthermia Puzzle
- Magnetic Resonance Imaging: From Atomic Physics to Visualization, Understanding, and Treatment of Brain Disorders
- Cloning: Past, Present, and the Exciting Future
- Unraveling the Mystery of Protein Folding
- Cardiovascular Disease and the Endothelium
- The Polymerase Chain Reaction
- Blood Safety in the Age of AIDS
- Serendipity, Science, and a New Hantavirus
- Controlling Hypertension: A Research Success Story

All Breakthroughs articles are available on the FASEB *Breakthroughs in Bioscience* website at http://www.faseb.org/opar/break/. Reprints may be obtained by calling (301) 571-0657.

***Reasons to Oppose**, from page 7*

Proposed legislation in the Senate would prohibit the importation of these therapies into the U.S., thus severely limiting the number of patients who would have access to such treatments in our country.

Q: Will endless sources of eggs from women be required to develop this technology?

A: Eggs contain special factors to "reprogram" the genes in the nucleus so that the resulting cells are undifferentiated and totipotent, meaning that they can become virtually any cell type. As we learn more about control of genes and this process of reprogramming, alternative methods of creating cell lines to replace or correct defective tissues will be available.

Q: Why can't animal models be used in this type of research?

A: Research in animal models has demonstrated the utility and immense potential of embryonic stem cells in developing therapies for previously untreatable conditions. While animal models provide useful data and research using animal models must continue, only through research on human cells will the mechanisms of interest in human disease be discovered. FN

For more information, please contact:
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***Helms Amendment**, from page 1*

the AWA. The USDA must issue this proposal to comply with the agreement it reached with animal activist plaintiffs in September 2000 in an out-of-court settlement of a lawsuit over the USDA's past exclusion of rats, mice, and birds from AWA.

The "Laboratory Animal Welfare Act," as it was originally known, was passed in 1966 to prevent stolen pets from ending up in research labs and to provide for the humane care of dogs and cats in medical research. Over the years, the law has been amended to include other species, but purpose-bred rats and mice have always been excluded. It has long been a goal of animal activists to extend USDA regulations to rats, mice, and birds. Researchers support animal welfare, but believe that existing oversight already assures high quality animal care. Since the vast majority of these species used in research fall within the other existing oversight systems including the PHS Policy on Humane Care and Use of Animals, AAALAC accreditation, and the FDA's Good Laboratory Practices Act standards, USDA regulation would increase paperwork burdens and administrative effort without enhancing animal welfare.

On February 6th, FASEB President Robert R. Rich sent a letter to all members of the Senate in support of the Helms amendment prior to its consideration. In that letter, Rich urged Senators to vote in favor of the amendment, stating that "[p]lacing these laboratory animals under the jurisdiction of the U.S. Department of Agriculture (USDA) would not improve the care currently provided to these animals under existing federal and private, non-profit regulation, but would instead place the burden of additional inspections, reporting requirements and record-keeping on researchers and the institutions where they perform their work."

Activities on Capital Hill can move very quickly. For the most up-to-date information regarding this issue, please go to the FASEB Public Affairs homepage at http://www.faseb.org/opar/.
To view copies of the FASEB letter to the Senate and the alert to members of FASEB societies, go to http://www.faseb.org/opar/news/news.html. FN

Society News

Protein Society Announces Upcoming Awards

The Protein Society is pleased to announce the following awards to be given at the 16th Annual Symposium, August 17-21 in San Diego, California. The Irving Sigal Young Investigator Award, sponsored by the Merck Research Labs, will be presented to Carolyn Bertozzi of the University of California-Berkeley. The Hans Neurath Award, sponsored by the Hans Neurath Foundation, will be presented to Ad Bax of the National Institutes of Health. The Christian Anfinsen Award, sponsored by the Aviv Family Foundation, will be presented to Roger Tsien of the University of California-San Diego. The Emil Kaiser Award will be presented to Steve Kent of the University of Chicago. The Stein and Moore Award, sponsored by the Merck Company Foundation, will be presented posthumously to Paul Sigler. Finally, the speakers at this session will be Robert Huber, John Walker, and Al Wittinghoffer. The program for the 16th Annual Symposium can be found at http://www.faseb.org/protein. The Society also is cosponsoring the First Indian Symposium, October 18-20, 2002 in Bombay and the First Latin American Symposium, December 1-5, 2002 in Argentina.

ASBMR Prepares for its 24th Annual Meeting in Texas

The American Society for Bone and Mineral Research (ASBMR) will be holding it's 24th Annual Meeting on September 20 - 24, 2002 at Henry B. Gonzales Convention Center in San Antonio, Texas. The Abstract Submission Deadline is April 3, 2002, and can be sent via email to www.asbmr.org. For more information, call (202) 367-1161, email asbmr@dc.sba.com, or check out the ASBMR website at www.asbmr.org.

In the ASBMR tradition, the Committee is preparing an exciting and rigorous scientific program including: this year's Louis V. Avioli Memorial Lecture, titled, "Estrogen, Bone, and Osteoporosis – Emerging Paradigms and a Sea of Change in Conventional Wisdom," presented by B. Lawrence Riggs, and the Gerald Aurbach Memorial Lecture, on angiogenesis, presented by Judah Folkman.

Plenary Symposia include: LEP5 – The Highs and Lows of Bone Mass and G-protein-coupled receptors. State-of-the-Art Lectures include: global growth and growth factors, combination therapy for osteoporosis and placebo-controlled trials, tissue engineering and stem cells, and molecular and cellular mechanisms of bisphosphonates. Mini-symposia focus on new osteoclast targets, calcification of bone and blood vessels, novel biology and recurrent clinical problems of vitamin D, and basic and clinical advances in cancer and the skeleton. New at this year's Annual Meeting will be a session set aside exclusively for the presentation of meritorious late-breaking abstracts.

For future planning, the 25th Annual Meeting of ASBMR will be held from September 19 - 23, 2003 at the Minneapolis Convention Center in Minneapolis, Minnesota. For more information, call (202) 367-1161, email asbmr@dc.sba.com, or check out the ASBMR website at www.asbmr.org.

2002 ASBMR Election Results Announced

ASBMR announces the results of its 2002 ASBMR election: ASBMR's past FASEB Board representative Robert Nissenson, Ph.D., was elected President-Elect and will serve as President of the ASBMR during the 2003-2004 term. The new Councilors elected for three-year terms are: Susan L. Greenspan, M.D., Sundeep Khosla, M.D., and Gary S. Stein, Ph.D. All will assume their roles on Council beginning September 2002.

ASBMR Awards Deadline is May 1, 2002

The deadline for nominations for ASBMR's major awards – Louis V. Avioli Founders Award, William F. Neuman Award, Fuller Albright Award, Frederic C. Bartter Award, Shirley Hohl Service Award, and the ASBMR Excellence in Mentorship Awards – is approaching. Nominations must be received at the ASBMR business office by Wednesday, May 1, 2002. The nomination guidelines are outlined on the ASBMR Website at http://www.asbmr.org/Pages/awards.htm. ASBMR members are encouraged to submit nominations for deserving colleagues. The ASBMR Awardees will be announced and honored at the ASBMR 24th Annual Meeting in San Antonio, Texas, USA, September 20-24, 2002.

ASPET to Host International Meeting

The International Union of Pharmacology (IUPHAR) XIVth World Congress of Pharmacology will be held July 7-12, 2002 in San Francisco. This meeting will be the first time in 30 years that the United States has hosted the IUPHAR Pharmacology Congress. ASPET, the Pharmacological Society of Canada, and the Mexican Pharmacological Society are co-organizers. For registration and program information visit www.iuphar2002.org.

Environmental Mutagen Society Conference

In conjunction with the 8th International Conference on Environmental Mutagens (ICEM) in Shizuoka, Japan, the Environmental Mutagen Society sponsored a Satellite Conference on Functional Genomics that was held in Seattle, WA. Dr. Susan Taylor (UCSD), member of the National Academy of Science, delivered the Keynote of the meeting, highlighting the important role gene structure plays in determining function. Participants at this conference had ample opportunity to see cutting edge science and to visualize the direction for genomics in the future. Among the speakers for this event were Dr. Sam Wilson (Deputy Director, NIEHS); Dr. Tim Zacharewski (U of Michigan); Dr. Christoph Sensen (U. of Calgary); Dr. Dennis Gilbert (Celera); Dr. Michael Orr (GeneLogic); Dr. Chuck Ide (Western Michigan University); Dr. Shoemaker (Rosetta InPharmatics); Dr. Terif Awad (Affymetrix); Dr. Nicholas Schork (UCSD); Dr. William Thilly (MIT); Dr. James Piggott (Lexicon Genomics); Dr. Gary Bader (University of Toronto); Dr. Guy della-Cioppa (Large Scale Biology); Dr. Bob Ireland (Proteome-Incyte); Dr. Jim Tucker (LLNL); Dr. Rick Woychik (Lynx); Dr. Sydney Brenner (Lynx Therapeutics); and Dr. Daniel Kenan (Duke University.) More information will be available on the EMS website www.ems-us.org.

AAA Announces Election Results

Lynn A. Opperman (Baylor College of Dentistry) and Robert Specian (LSU Health Sciences Center) have each been elected to a three-year term on the Board of Directors of the American Association of Anatomists (AAA), commencing April 2002. Opperman is Assistant Professor of Biomedical Sciences and Graduate Faculty; Specian is Professor of Molecular and Cellular Physiology.

In other election results, Patrick C. Nahirney (Weill Medical College of Cornell University) was elected to a second two-year term as postdoctoral representative on AAA's Board, and Robert J. Tomanek, Professor of Anatomy and Cell Biology (University of Iowa) begins a four-year term as Annual Meeting/EB Program Co-Chair.

AAA Posts "Animals in Research: Point/Counterpoint"

The American Association of Anatomists' Public Affairs Committee has worked with the Alternatives Research & Development Foundation (ARDF) to develop a frank exchange of views on the present and possible future regarding the use of animals in research.

"Animals in Research: Point/Counterpoint" is posted on AAA's Website, AnatomyLink, at www.anatomy.org. AAA welcomes comments from all FASEB Society members.

Biophysical Society Holds Annual Meeting in San Francisco

The Biophysical Society 2002 Annual Meeting was held in San Francisco, February 23-27. This year's Annual Meeting again broke all past meeting records for the Society, with an attendance of nearly 6,000, more than 3200 posters programmed, and over 145 exhibit booths.

At the Council meeting, which was held during the Annual Meeting, two Councilors were elected to the Executive Board for two-year terms. Stephen Harvey of the University of Alabama at Birmingham and Cristobal dos Remedios of the University of Sidney Institute of Biomedical Research were elected, replacing outgoing members Joseph Falke of the University of Colorado and Brian Salzberg of the University of Pennsylvania School of Medicine. Timothy Cross of Florida State University was elected Chair of the 2003 Nominating Committee.

Council member Eva Nogales of the University of California, Berkeley, was elected to the Program Committee that will plan the 2004-2007 Annual Meeting programs. She replaces Dorothy Beckett of the University of Maryland, whose work on the 2003 Annual Meeting program ends her three-year term to the Program Committee. FN