Research Tips

Vice Chancellor for Research: RJ Traystman

OFFICE OF GRANTS AND CONTRACTS (OGC)

Stem Cell Research Suit Update - here is the most recent status of the lawsuit concerning federal funding of human embryonic stem cell research at NIH - while there is progress, the matter and policy are still in process. We'll keep you posted as we learn more about how or if the plaintiffs will respond to this new ruling.

The following is provided by COGR: U.S. District Judge Royce Lamberth ruled in favor of the Obama Administration https://ecf.dcd.uscourts.gov/cgi-bin/show_public_doc?2009cv1575-84-1 (please cut/paste the url into your browser window) on July 27, 2011 in the lawsuit over federal funding of human embryonic stem cell (ESC) research, dismissing the case brought by two adult stem cell scientists and allowing federal funding to continue.

Judge Lamberth initially dismissed the case nearly two years ago for lack of standing on the part of the plaintiffs, but the Court of Appeals overturned that ruling last April. Upon reexamining the case, Lamberth found in favor of the plaintiffs and ordered an immediate halt of federal ESC funding through a preliminary injunction. The Court of Appeals then overturned the injunction, allowing funding to move forward, but consideration of the merits of the case remained in the lower court. Judge Lamberth ruled on the merits of the case.

The plaintiffs presented two arguments in opposition to federal funding of ESC research. First, they argued that ESC research funding violated the Dickey-Wicker amendment, which is attached to the bill that funds NIH each year and forbids federal funds from being used for destruction of embryos. Judge Lamberth ruled that, because Dickey-Wicker is ambiguous and does not specifically apply to ESC, NIH's interpretation that the provision allows funding of ESC research was reasonable. The plaintiffs' second argument was that in promulgating guidelines for conduct of ESC research NIH violated the Administrative Procedures Act because the agency ignored comments that stated the government should not fund ESC research at all. The judge found that NIH acted correctly in gauging those comments to be irrelevant, since the question asked was not whether the government should fund such research, but under what ethical guidelines it should move forward.

The plaintiffs have 60 days to appeal the ruling, so there may be additional action in the lawsuit. In addition, as part of today's ruling, Judge Lamberth reaffirmed the Court of Appeals finding which granted standing to the plaintiffs based on competitive disadvantage stating, "[b]ecause there is a fixed amount of money available for research grants, and because the Guidelines will increase the number of grant applications involving embryonic stem cells" the plaintiffs have a smaller pool of funds available to them for which to compete. This remains a troubling precedent, since it implies that decisions made by NIH to direct funding towards one type of research versus another could be subject to a lawsuit.

The court decisions and a brief statement from NIH Director Francis Collins are available on the NIH website at: http://stemcells.nih.gov

Dr. T's CORNER

Telomeres, the body’s own cellular clocks, may be an important factor in the development of emphysema. In mice that have short telomeres there was an increased risk of developing emphysema after exposure to cigarette smoke. Telomeres are DNA protein structures that protect chromosome ends from degrading. Their length is genetically determined but they also shorten progressively with cell division. Short telomeres are considered one marker of aging in cells. With age, short telomeres acclimate and cause cells to stop dividing. Telomeres can also be thought of as “biological clocks”. The question was whether telomere length itself could account for why emphysema increases with age. So, mice with shortened telomeres were exposed to cigarette smoke for 6hrs/day, 5 days/week for 6 months. Mice had no lung disease at baseline, but after cigarette smoke exposure they developed emphysema. Mice with long telomeres did not develop lung disease. With emphysema, alveoli, the small air sacs in the lung where oxygen exchange occurs, are permanently lost. Emphysema changes are normally found in older individuals, and occasionally even in those who have never smoked. But they are most commonly found in smokers. The results described above are one of the clearest examples of telomere length, an inherited factor, interacting with an environmental insult to cause disease.

OFFICE OF RESEARCH COMMITTEE SUPPORT (ORCS)

The Office for Research Committee Support (ORCS) provides support to the Institutional Biosafety Committee (IBC). All inquiries regarding IBC protocol submission deadlines, IBC protocol status, review process, etc. may be directed to this Office. Our contact numbers are listed below:

New Protocol Submission Email for Institutional Biosafety Committee (IBC): IBC@ucdenver.edu

Institutional Biosafety Committee (IBC) Contact Information:

Candace Berryman  Mark A Douse, PhD
Coordinator, IBC  Director, ORCS
Anschutz Medical Campus  Anschutz Medical Campus
Bldg. 500, Rm 3025N  Bldg. 500, Rm. 3025N
Phone: 303-724-5541  Phone: 303-724-1057
Fax: 303-724-0989  Fax: 303-724-0989
Email: IBC@ucdenver.edu  Email: Mark.Douse@ucdenver.edu

Email: Dr. T's CORNER 

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REGULATORY COMPLIANCE

ANNOUNCING.....

InfoEd 2011 Conflict Of Interest Disclosure Collection

The 2011 Conflict of Interest Disclosure collection period will commence on Thursday, September 1, 2011. You can access the disclosure form at https://era.cu.edu. Detailed instructions for completion of your disclosure can be found on the Office of Regulatory Compliance-Conflict of Interest website at (cut and paste the url into your browser address window):

http://ucdenver.edu/academics/research/AboutUs/regcomp/conflictofinterest/Pages/default.aspx

The Office of Regulatory Compliance will be holding the following step-by-step, hands-on training labs for submission of the 2011 COI Disclosure form, beginning in September, 2011.

Downtown Campus
Wednesday, Sept. 14th 1:00 - 3:00pm
Auraria Library - ELC-B

Thursday, Sept. 22nd Noon - 2:00pm
Auraria Library - ELC-B

Wednesday, October 12th 1:00 - 3:00pm
Auraria Library - ELC-B

Thursday, October 20th Noon - 2:00pm
Auraria Library - ELC-B

Anschutz Medical Campus
Friday, Sept. 16th 1:00 - 3:00pm
ED2 North P28-CTL-2201DE

Thursday, Sept. 22nd 3:00 - 5:00pm
ED2 North P28-CTL-2201DE

Wednesday, October 12th 9:00 - 11:00am
ED2 North P28-CTL-2201DE

Thursday, October 20th 3:00 - 5:00pm
ED2 North P28-CTL-2201AB

Registration: Please contact the COI Manager at COI@ucdenver.edu or (303) 724-0034 to register for one of above training labs.

REMINDER: COI Disclosures are due by October 31, 2011.

RESEARCH CORNER

Patti J. Thureen, MD, received her MD from the University of Pennsylvania in 1979. She completed her Residency in Pediatrics at the University of Wisconsin Hospitals in 1982. She then spent almost 2 years as the Director of the Neonatal Nursery at the University of West Indies in Jamaica. Following a Fellowship in Neonatology at UC Denver School of Medicine (1988-1991), she joined the faculty of the Department of Pediatrics at the University of Colorado and Children's Hospital in 1991. In 2005, Patti was appointed Professor of Pediatrics. She is Co-Director of Children and Maternal Health Research here at UC Denver.

Much of her research over the past 15 years has focused on defining and achieving “optimal” nutrition in the vulnerable population of very preterm neonates. Her research group is just completing a 5-year study focused on this significant clinical problem. Unfortunately, current national and international nutritional strategies for very preterm infants commonly result in postnatal growth failure from which the preterm infant does not recover by the time of hospital discharge. Some studies have shown that critical organ growth, especially brain development, is impaired by conventional nutritional practices in the first few weeks of life.

Rather than increase protein delivery gradually over the first weeks of life, she began a relatively high amino acid intravenous nutritional solution within 1-2 hours of life, and accelerated to 3.0 to 3.5 g/kg/day within the first 24 hours. She and her group previously showed that this was a safe clinical practice. Growth parameters and determinations of safety were followed meticulously. She wanted to determine if the growth over time would be improved by this regimen, hopefully leading toward a new standard growth curve. Overall calorie intake was rigorously maintained to prevent the use of protein as an energy source. To ensure that she was not simply increasing fat mass, but producing lean growth, various measurements of body composition were performed. These included the cutting edge Pea Pod plethysmograph, which measures whole body lean mass.

Patti J. Thureen, MD