

OTHER METABOLIC DISORDERS

Sandhoff disease (hereditary genetic disorder), Hurler's syndrome (hereditary genetic disorder), osteogenesis imperfecta (bone/cartilage disorder), Krabbe leukodystrophy (hereditary genetic disorder), osteopetrosis (genetic bone disorder), cerebral X-linked adrenoleukodystrophy

ADULT & NON-EMBRYONIC
STEM CELL RESEARCH

ADVANCES & UPDATES FOR APRIL 2006

Highlight of the Month—Stem Cell Hope for Liver Patients: British doctors reported treatment of 5 patients with liver failure with the patients' own adult stem cells. Four of the 5 patients showed improvement, and 2 patients regained near normal liver function. The authors noted: "Liver transplantation is the only current therapeutic modality for liver failure but it is available to only a small proportion of patients due to the shortage of organ donors. Adult stem cell therapy could solve the problem of degenerative disorders, including liver disease, in which organ transplantation is inappropriate or there is a shortage of organ donors."—*Stem Cells Express*, Mar. 30, 2006

ADVANCES IN HUMAN TREATMENTS USING ADULT STEM CELLS

Buerger's Disease: Scientists in Korea using adult stem cell treatments showed significant improvement in the limbs of patients with Buerger's disease, where blood vessels are blocked and inflamed, eventually leading to tissue destruction and gangrene in the limb. Out of 27 patients there was a 79% positive response rate and improvement in the limbs, including the healing of previously non-healing ulcers.—*Stem Cells Express*, Jan. 26, 2006

Bladder Disease: Doctors at Wake Forest constructed new bladders for 7 patients with bladder disease, using the patients' own progenitor cells grown on an artificial framework in the laboratory. When implanted back into the patients, the tissue-engineered bladders appeared to function normally and improved the patients' conditions. "This suggests that tissue engineering may one day be a solution to the shortage of donor organs in this country for those needing transplants," said Dr. Anthony Atala, the lead researcher.—*The Lancet*, Apr. 4, 2006; reported by the AP, Apr. 4, 2006

Lupus: Adult Stem Cell Transplant Offers Promise for Severe Lupus—Dr. Richard Burt of Northwestern Memorial Hospital is pioneering new research that uses a patient's own adult stem cells to treat extremely severe cases of lupus and other autoimmune diseases such as multiple sclerosis and rheumatoid arthritis. In a recent study of 50 patients with lupus, the treatment with the patients' adult stem cells resulted in stabilization of the disease or even improvement of previous organ damage, and greatly increased survival of patients. "We bring the patient in, and we give them chemo to destroy their immune system," Dr. Burt said. "And then right after the chemotherapy, we infuse the stem cells to make a brand-new immune system."—*ABC News*, Apr. 11, 2006; *Journal of the American Medical Assn*, Feb. 1, 2006

Cancer: Bush policy may help cure cancer—"Unlike embryonic stem cells . . . cancer stem cells are mutated forms of adult stem cells. . . . Interest in the [adult stem cell] field is growing rapidly, thanks in part, paradoxically, to President George W. Bush's restrictions on embryonic-stem-cell research. Some of the federal funds that might otherwise have gone to embryonic stem cells could be finding their way into cancer [adult]-stem-cell studies."—*Time: Stem Cells that Kill*, Apr. 17, 2006

Heart: Adult stem cells may inhibit remodeling and make the heart pump better and more efficiently. Researchers in Pittsburgh have shown that adding a patient's adult stem cells along with bypass surgery can give significant improvement for those with chronic heart failure. Ten patients treated with their own bone marrow adult stem cells improved well beyond patients who had only standard bypass surgery. In addition, scientists in Arkansas and Boston administered the protein G-CSF to advanced heart failure patients, to activate the patients' bone marrow adult stem cells, and found significant heart improvement 9 months after the treatment.—*Journal of Thoracic and Cardiovascular Surgery*, Dec, 2005; *American Journal of Cardiology*, Mar., 2006

Stroke: Mobilizing adult stem cells helps stroke patients—Researchers in Taiwan have shown that mobilizing a stroke patient's bone marrow adult stem cells can improve recovery. Seven stroke patients were given injections of a protein—G-CSF—that encourages bone marrow stem cells to leave the marrow and enter the bloodstream. From there, they home in on damaged brain tissue and stimulate repair. The 7 patients showed significantly greater improvement after stroke than patients receiving standard care.—*Canadian Medical Association Journal* Mar. 3, 2006

Mr. BROWNBACK. What did we get for our research investment in adult and cord blood in human clinical trials? This is the folder—it is getting heavy—of what we have discovered in human clinical trials with adult and cord blood stem cell research; real people being treated for real diseases such as bladder disease, lupus, cancer, heart, strokes, immunodeficiency areas, liver disease, neuro degenerative diseases, ocular, wounds and injuries, autoimmune diseases, anemias and other blood conditions, metabolic disorders, 69 human diseases being treated with adult and cord blood stem cells.

For my money on this, I would rather treat people—get real human treatments—than in this area of embryonic stem cell research where we are getting no cures. We are seeing a lot of cancer cells growing out of the embryonic stem cell areas and treatments.

Let's go for what is real. And let's do what is real. I further note, as I close, there is no prohibition in this country on embryonic stem cell research. None. No prohibitions. Yet why do the private companies not go into funding more embryonic stem cell research? It is because they are getting no results with embryonic stem cells. Nothing is happening results wise. Let's invest our money in adult stem cell research where we can actually treat people. That is important.

I yield the floor.

GASOLINE

Mr. BURNS. Mr. President, there has been a lot of concern around the country about the escalating fuel prices. Americans get concerned whenever we see spikes in energy costs. No one is more concerned than we are in agriculture. We have a unique situation in agriculture. We sell wholesale, buy retail, and pay the freight both ways.

Every one of those stages involves energy, drives energy and drives prices.

It seems to me we are concerned about the traffic around Washington, DC, trying to get into work. I could take care of the gas prices and the traffic all in one fell swoop. All we have to do is pass a law that you cannot cross the 14th Street bridge with a car that is not paid for. That would help a lot. There would be a lot of folks finding other means.

This has been a wakeup call to all in this country. We are dealing with a worldwide commodity that is driven by emerging economies as well as our own demand for transportation fuels. The demand has outstripped our ability to move crude, natural gas or coal to the processing plants and refineries.

I tell my colleagues that in Montana we are producing more oil than in the history of our State. Yet we cannot get it on a pipeline because we have not built a pipeline for quite a while. We have also not built a new refinery in this country for over 30 years. There are a variety of reasons, the majority of which is the ability to permit and to site a plant. So we find ourselves not being able to produce enough product for the market. Anybody who took economics 101 will tell you, when demand outstrips production, then you are going to have the price go up.

Now, I would imagine this will drive us in another direction. It will drive us in the direction of alternative fuels and, of course, renewable energy. No other administration in our Government's history has spent more money on research as far as alternatives and renewables. We are on the cusp of cellulosic ethanol, which helps my State. Also in this business of alternative fuels is biodiesel, which will be one of the great renewables. Coal to liquids or coal to diesel will also be one of our great fuels. This technology is as old as World War II. Since then it has been refined and affords another source for developing resources where we have great deposits of coal. In Montana we are the "Saudi Arabia" of coal and we have the process and technology to easily get this done.

Now, if we can do that, and we can also increase farm income, and solve the problem of being dependent on foreign oil, who can oppose that?

Does that give us relief in the near term? No, it does not. There is nothing the Government or anybody else can do in the near term to prevent these kinds of spikes in a time of high demand.

So we will say that necessity is the mother of invention. We will be forced to drive less, to drive slower. We will not jump in our car and go down and buy a loaf of bread. The trip has to be necessary. And you will probably have a little sticker in the middle of your steering wheel saying: Is this trip necessary? The necessity will also drive us to alternatives and other ways of powering our car.

The demand for oil seems little affected by high prices. If it doesn't

change our behaviors, then it is wrong to say prices are too high. Maybe we do not like it, but we all like to sell our product for as much as we can get for it. And that is how the market actually works and sometimes it becomes very painful.

No, it is not good. It is not good for my agriculture because that affects the price you are going to pay for food in the grocery store. There is no part of our economy that is not affected by what we are experiencing in this country right now.

But Americans have imagination. They have great ingenuity. And I am satisfied we will take this little spike in the market and make good use of it and start using our brains to power America.

If anybody thinks if you beat up on the companies—beat up all you want to—but part of the problem lies within this body because we have said “no”—resoundingly no—to a multitude of programs and projects that could have partly prevented this.

Mr. President, I yield the floor.

Mr. COCHRAN. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. COCHRAN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. COCHRAN. Mr. President, what is the regular order?

The PRESIDING OFFICER. There is 1 minute remaining in morning business, at which time it will end and we will proceed under the regular order.

Mr. COCHRAN. I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Morning business is closed.

MAKING EMERGENCY SUPPLEMENTAL APPROPRIATIONS FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2006

The PRESIDING OFFICER. Under the previous order, the Senate will resume consideration of H.R. 4939, which the clerk will report.

The assistant legislative clerk read as follows:

A bill (H.R. 4939) making emergency supplemental appropriations for the fiscal year ending September 30, 2006, and for other purposes.

Pending:

Thune amendment No. 3704, to provide, with an offset, \$20,000,000 for the Department of Veterans Affairs for Medical Facilities.

Vitter/Landrieu modified amendment No. 3728, to provide for flood prevention in the State of Louisiana, with an offset.

The PRESIDING OFFICER (Mr. EN-SIGN). Under the previous order, the Senator from Mississippi, Mr. COCHRAN, and the Senator from West Virginia, Mr. BYRD, will be recognized for up to 10 minutes each.

The Chair recognizes the Senator from West Virginia.

Mr. BYRD. Mr. President, I thank the Chair.

I thank the distinguished and very able chairman of the Senate Appropriations Committee, Mr. COCHRAN, for all of his hard work on this bill. He has worked hard. He has again proved himself to be a very able chairman, very knowledgeable of the contents of the bill.

The President has asked the Congress to approve over \$92 billion of emergency spending—man, that is a lot of money; \$92 billion of emergency spending—including \$72.5 billion for the wars in Iraq and Afghanistan and \$19.8 billion for the Federal response to the terrible hurricanes that struck the Gulf States in August and September of 2005.

The Appropriations Committee held several hearings on the request, and we have now debated the bill for nearly 2 weeks. It is a good bill. It is a good bill. I am proud to recommend it to the Senate.

But, regrettably, the President has threatened to veto the bill based on his assertion that it is too expensive. In a Statement of Administration Policy that has been made a part of the RECORD, the administration threatens that the President will veto the bill if it exceeds \$94.5 billion. OK. Have at it. Have at it, Mr. President. Currently, the bill totals \$108.9 billion. The President complains that the Senate has added funding for purposes other than the wars in Iraq and Afghanistan and for assisting the victims of Hurricanes Katrina and Rita.

Nowhere—nowhere—is it written in stone, nowhere is it etched in brass, on golden pillars, that this supplemental—which is likely to be the only supplemental considered for this fiscal year—has to be limited to the costs of the war and Hurricane Katrina. Nor is it etched in stone that the Congress must approve a bill that is below \$94.5 billion.

The Senate has added funding for a number of critical programs. Despite the administration's rhetoric about securing our borders and providing a layered defense of our ports, the President did not request a dime—not one thin dime—for border security or port security. He did not request a dime for making the coal mines safer for our coal miners. He did not request a dime for our farmers who have been hit with drought and hurricanes, despite the

fact that 78 percent of all U.S. counties were designated as primary or contiguous disaster areas by the Secretary of Agriculture or the President in 2005. He did not request a dime for compensating potential victims of pandemic influenza vaccines. The President's request for Katrina victims is inadequate and leaves critical gaps in housing and education.

The Senate recognized the weaknesses of the President's request in these areas and judiciously added funds. When the bill is in conference, I will urge the conferees to approve these items. You bet.

The conferees should send to the President a bill that meets the needs of this country. That is our duty. If the President wants to veto a bill that funds the troops, if he wants to veto a bill that funds victims of Hurricane Katrina, if he wants to veto a bill that provides critical resources for combating a potential avian flu, if he wants to veto a bill that secures our borders and our ports and helps our farmers to recover from disaster and makes our coal mines safer, have at it, have at it. That is his right under the Constitution. But the Congress should not be bullied by the President into neglecting its responsibility, our responsibility, to provide required funds to meet priority national needs.

Because my State of West Virginia is often hit by floods and other damaging disasters, such as the recent accidents in our coal mines, I am quite sensitive to the ability of our Federal Government to prepare for—and respond to—disasters promptly and with competence, which is what our citizens need and what our citizens deserve. Sadly, many of our Federal agencies are no longer up to these fundamental tasks. But this bill includes resources to help Federal agencies restore their capabilities.

I am especially grateful to and I especially thank the chairman for including, at my request and the request of others, an amount of \$35.6 million for improved mine safety and health programs. In the wake of 18 coal-mining deaths in the State of West Virginia this year—18 coal-mining deaths in the State of West Virginia this year—and another 16 mining deaths in other States, it is imperative that the Congress act immediately to ensure that an adequate number of safety inspectors will be provided for our Nation's mines and to expedite the introduction of critical safety equipment.

This week, we have heard testimony from the families of those killed in the Sago explosion in January. We have heard from the coal operators. We have heard from experts. In all of this testimony, one truth is clear: Lives can be saved when the Federal Mine Safety and Health Administration places miners' safety and health at the very top of its priority list. We must have more inspectors on the job, yes. We must have better rescue teams trained and