

saves lives. It means a mom or dad with an incurable disease can live long enough so their kids will remember them.

Between the prohibition on stem cell research and the cuts to NIH funding, lifesaving medical research under the Bush administration in this country is sadly on the ropes. We can do something about it. We can pass H.R. 810. We can tell President Bush that his budget priorities are wrong, that we are going to put the money into stem cell research.

There are unused embryonic stem cells in eggs donated voluntarily by couples who no longer need them, which can be used for this valuable research. Otherwise they will be discarded, thrown away. Estimates suggest there are 400,000 of these unused embryonic stem cells currently available for research. What is stopping those cells from moving from storage in these frozen environments to laboratories where they may find cures? The decision of the President of the United States to stop the research. When we lift this restriction on Federal research dollars, it will provide stem cells that medical science tells us have the ability to change lives and save lives and to transform into almost every type of cell and tissue. Research will show us how to harness that ability to heal and repair damage done by disease.

We owe it to the families of those who are affected by disease and disability. The stem cell issue will not go away. I urge Senator FRIST to show the same leadership today that he showed last year when he announced his support for stem cell research by announcing when he will schedule this for a vote, give us a time certain, do not leave the floor of the Senate today without a time certain on a vote on stem cell research. We owe it to the millions of families across America who are counting on us.

Mr. President, I reserve the remainder of my time.

I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. ISAKSON). The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. KENNEDY. Mr. President, I ask unanimous consent that the order for the quorum call be dispensed with.

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

Mr. KENNEDY. Mr. President, today I come to the Senate floor to speak briefly about stem cell research and the hope it holds for millions of Americans in the years ahead.

Hope is one of the qualities of spirit that make us human. Hope allows us to dream of a better life for our children, our community, and our world, especially for loved ones now suffering or in pain.

Hope is what stem cell research holds for the parents of children with diabetes, who dream of a day when their constant fears for their children's well-being are things of the past.

Hope is what stem cell research brings to those with Parkinson's disease, who think of the time when the tremors of that disease are banished forever.

Hope is what stem cell research brings to millions of Americans who seek better treatments and better drugs for cancer, diabetes, spinal injury, and many other serious conditions.

Hope cannot be extinguished or destroyed but it can be frozen. And it has now been frozen for 5 long years, ever since President Bush shut down the stem cell research program begun in the Clinton administration, and imposed arbitrary and unwarranted restrictions on this lifesaving research, based on ideology, instead of science.

For 5 years, we have watched as America has abdicated its global leadership in this important new field, by keeping our best scientists on the sidelines.

In those 5 years, we have squandered the opportunity to set strong ethical guidelines for this research through the oversight that NIH funding can bring. Through NIH, we have made progress consistent with our values in new fields of in as recombinant DNA research, which once also seemed strange and controversial. We can do the same for stem cell research but only if NIH is allowed to become a leader in this new field.

Hope soared anew a year ago, when the House of Representatives set aside partisan differences and courageously approved legislation to end those restrictions, and give our scientists the tools they need to make progress in the fight against disease.

The same strong bipartisan support exists in the Senate for ending the unwarranted restrictions on stem cell research.

There is no one in the Senate with stronger pro-life credentials than Senator HATCH, but he knows that supporting stem cell research is the pro-life position to take.

There is no greater supporter of medical research in the Senate than Senator SPECTER, and he feels strongly that stem cell research is one of the great breakthroughs of modern medicine.

There is no one with a greater depth of conscience than Senator SMITH, and he has searched his heart and prayerfully decided that support for stem cell research is the moral choice.

Bipartisan legislation was passed by a vote of 238 to 194 in the House of Representatives on May 24, 2005, a year ago this month. It was ordered placed on the Senate Calendar on June 6, where it has remained stalled ever since. If the House bill was put to a Senate vote today or tomorrow or next week, it would pass by a solid bipartisan majority in the Senate too.

Why? Because the Republican Senate leadership stands in the way. Summer came and went with no action in the Senate, then the winter, then the

spring, and now we are about to reach an anniversary none of us ever wanted to see. On May 24, it will be 1 year since the House acted, and the Senate still refuses to act.

Let us vow that we will not mark this anniversary with yet more inaction and indifference.

The Senate has had a busy schedule, but in that schedule we have found time for all manner of giveaways to those who already have much in the way of wealth and power.

Now, it is time to turn our attention to those who need our help the most. And that includes the millions of Americans who have seen their hopes blocked by the administration's cruel policies and the Senate's shameful inaction.

The Senate leadership has scheduled a Health Week for later this month. Will we use this opportunity to debate the flawed Medicare drug program? Or the soaring number of the uninsured? Will we do what we need to do to unlock the vast potential of stem cell research? Sadly, the answer to each of these questions is probably no. These and many other major priorities for the Nation will remain unaddressed.

I urge my colleagues to join me in asking the Senate leadership to schedule a vote on House Resolution 810, the House-passed stem cell research bill, during the coming Health Week and to do so before May 24, the first year anniversary of its approval by the House of Representatives.

Millions of patients and their families look with hope to stem cell research, and they should not have to tolerate any greater delay or any further failures.

I yield the floor.

Mr. BROWNBACK. Mr. President, how much time remains?

The PRESIDING OFFICER. The majority time is 19 minutes 10 seconds.

NORTH KOREAN REFUGEES

Mr. BROWNBACK. Mr. President, I will draw attention to two topics today. I will address the comments made about stem cell research because we have exciting things happening in that field that I will report to my colleagues.

First though, there is breaking news, with Reuters, the Associated Press, and several other outlets reporting that shortly we may have a group of North Korean refugees formally accepted by the United States for the first time since the Korean peninsula was divided by war over half a century ago. This is being reported by a couple of news outlets. I ask unanimous consent to have printed in the RECORD the news report and a related article.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From the Associated Press, May 3, 2006]

OFFICIALS: U.S. ASSISTS N. KOREAN REFUGEES

(By Foster Klug)

WASHINGTON.—The Bush administration is working to bring a group of North Korean

refugees to the United States and could have them in the country within two weeks, a State Department official said Wednesday.

The group would be the first from North Korea given official refugee status since passage of the North Korean Human Rights Act in 2004, officials say.

The State Department official, who spoke on condition of anonymity because of the issue's sensitivity, said the refugees are in a Southeast Asian nation, and if bureaucratic hurdles can be cleared, they could be in the United States soon.

A separate U.S. government source said the six refugees include several women who were sold into sexual slavery or forced marriages. The source, who also spoke on condition of anonymity, has been in contact with a person who helped shepherd the refugees into the Southeast Asian nation and who has had regular contact with them.

Both officials would not identify the nation, saying they were worried the refugees or their families could be harmed by North Korean agents. Officials also worry that publicity could slow down or scuttle the painstaking bureaucratic process that must be completed before the refugees can leave the Southeast Asian nation for the United States.

The issue of North Korean human rights has gained attention in Washington as international diplomatic efforts to rid the North of its nuclear weapons programs have stalled.

Lawmakers and human rights activists have expressed frustration at the State Department's slow pace in helping North Korean refugees settle in the United States; part of the North Korean Human Rights Act specifies that the department make it easier for North Koreans to apply for refugee status.

The U.S. special envoy on North Korean human rights, Jay Lefkowitz, told a congressional hearing last week: "We need to do more—and we can and will do more—for the North Korean refugees."

"We will press to make it clear to our friends and allies in the region that we are prepared to accept North Korean refugees for resettlement here," he said.

President Bush appointed Lefkowitz last year.

North Korea long has been accused of torture, public executions and other atrocities against its people. Between 150,000 and 200,000 people are believed to be held in prison camps for political reasons, the State Department said in a report last year.

Human rights activists have said that U.S. Embassy workers in Asian countries have refused to help North Korean refugees.

Last year, Timothy Peters, founder of Helping Hands Korea, told lawmakers at a hearing that embassy officials in Beijing rebuffed him when he tried to arrange help for a 17-year-old North Korean refugee.

"I thought to myself, 'Is this the State Department's implementation of the North Korean Human Rights Act?'" he said.

NORTH KOREA: POLICY CHANGES MAY FOSTER NEW HUNGER

SEOUL, May 4, 2006.—Recent decisions by the North Korean government to suspend the operation of the World Food Programme, ban the private sale of grain, and fully reinstate the discredited Public Distribution System could lead to renewed hunger for North Korea's already poor and destitute people, Human Rights Watch said in a new report released today.

The 34-page report, "A Matter of Survival: The North Korean Government's Control of Food and the Risk of Hunger," examines recent worrisome developments in North Ko-

rea's food policies, its marginalization of the World Food Programme (WFP), its refusal to allow adequate monitoring of food aid, and the implications of the government's new policies. Human Rights Watch noted that only a decade ago, similar policies led to the famine that killed anywhere from 580,000 to more than 3 million, according to independent researchers and nongovernmental organizations (NGOs).

"While most international discussion of North Korea is about nuclear weapons, hunger remains a serious problem," said Brad Adams, Asia director at Human Rights Watch. "Regressive policies from a government that doesn't allow free expression or independent observers to monitor the situation could someday lead to a repeat of the food crisis of the 1990s."

In October 2005, North Korea reversed some of its most applauded economic reforms by banning the private buying and selling of grain, the main source of nutrition for most North Koreans. The government asked the WFP, which had been feeding millions of the nation's most vulnerable people for a decade, to end emergency food aid. The agency believes the request is premature, and proposed a new, considerably smaller aid package. The North Korean government had not formally accepted the offer as of the end of April.

The government also announced in October that it was fully reinstating the Public Distribution System (PDS), which provided coupons for food and consumer goods to North Koreans through their places of work or study. During the food crisis of the 1990s, millions of people who depended on their PDS rations died from starvation. Many more suffered severe malnutrition and hunger as the system broke down. The crisis ended by massive amounts of international food aid and the tolerance of private markets, helped in recent years by improved harvests.

"Forcing the World Food Programme to radically reduce its food shipments and monitoring, and making it illegal for ordinary North Koreans to buy and sell grain, is a recipe for disaster," said Adams.

Recent news reports suggest that North Koreans in many parts of the country were not receiving rations, six months after the authorities announced they were fully reinstating the PDS. A Chinese man of Korean descent who recently visited his relatives in the northeastern part of North Korea told Human Rights Watch that none of the five homes he visited had received any rations since November 2005. "They received half a month's worth of corn for the months of October and November, but that was it," he said. "And that, I heard, was only for working men, and nobody else in the families."

The South Korean NGO Good Friends also reported in the April edition of its monthly newsletter, North Korea Today, that residents of Pyongyang received only 10 days of food rations in April. Citing an unnamed official at Pyongyang's food management administration, the report said that in May there would be no rations at all.

North Korea has a long history of providing food on a priority basis, feeding the preferred class, such as Workers' Party members and high-ranking military, intelligence and police officers, while discriminating against the so-called hostile class. If past patterns hold true this year, the government will first send food to "war-preparation storage" and preferred citizens, and only then to the general public through the PDS, leaving many North Koreans hungry.

Until the famine in the 1990s, food rationing was perhaps the single most important way of controlling the population in North Korea. As people could receive rations only from their place of work or study, the sys-

tem largely kept the population immobile and obedient, so that they wouldn't risk losing their only source of food.

"The government is apparently trying to turn back the clock to regain some of the control lost when it allowed people greater freedom to move around and buy grain," said Adams. "The government should reverse its new policies, which make it harder for hungry people to find the food they need to survive and stay healthy."

The government should prioritize assisting the vulnerable population by providing aid to those who can't obtain food through their work. North Korea should allow international monitors unfettered access to beneficiaries. Major food donors, including China and South Korea, should monitor distribution of their aid in a way that meets international standards as employed by the WFP. Human Rights Watch urged the North Korean government to:

Allow international humanitarian agencies, including the WFP, to resume necessary food supply operations and to properly monitor aid according to normal international protocols for transparency and accountability;

Ensure its distribution system is both fair and adequately supplied, or permit citizens to obtain food in alternative ways, through direct access to markets or humanitarian aid; and

End discrimination in the distribution of food in favor of high-ranking Workers' Party officials, military, intelligence and police officers, and against the "hostile" class deemed politically disloyal to the government and Party.

Human Rights Watch takes no position on whether countries should have market or command economies. But it is clear from the devastating famine and pervasive hunger of the past—well documented by the United Nations and NGOs—that the PDS and the country's official food industry have miserably failed North Korea.

"Millions of North Koreans died painful deaths from starvation while the rationing system was in place," said Adams. "There is little reason to believe the North Korean government is now capable of providing enough food to all its citizens."

Mr. BROWNBACK. I certainly hope and pray the reports are true. I hope that the six to eight refugees being referred to in the articles will soon have a chance to be welcomed by thousands of Americans who have worked hard for their freedom, especially those of Korean heritage in this country.

I particularly recognize the Korean Church Coalition and a number of people who risked their own lives to form an underground railroad of sorts—reminiscent of what happened in my State and many other places across this country years ago—along the Korean-Chinese border. We have a fairly open border between Korea and China. You can get from North Korea into China, but you cannot get out of China. The Chinese have, to date, not been very cooperative in allowing North Korean refugees to pass. They have even captured North Korean refugees and sent them back to North Korea to an uncertain future and possible death, and in many cases, as well as a lot of persecution and mistreatment in a North Korean gulag, of which we have satellite photographs. I have held hearings on gulags containing, we believe, around 200,000 North Koreans. We also

believe, over the last 15 years, approximately 10 percent of the North Korean population has died, primarily of starvation, although also from the gulags and at political prisoner camps.

The people are walking out of North Korea. They are walking into China. We do not know how many, but the estimates have been as many as 100,000 to 300,000. They are now living off the land there in an illegal status, in great difficulty, and in harm's way in China.

If we get these refugees coming into the United States, they will be the first refugees coming into the United States. It is built on the North Korean Human Rights Act, which this Senate and this Nation passed a year and a half ago, allowing these refugees from North Korea to enter into the United States.

The act basically builds on what took place toward the Soviet Union before it had collapsed where we were in negotiations on nuclear talks, we were not getting anywhere, and we raised human rights issues of what took place regarding two Soviet dissidents in the Soviet Union.

We said it was not fair how they are treating their own people. The same thing is happening in North Korea in how North Korea is treating their own people, to the point this oppressive regime of Kim John is trying to build weapons of mass destruction; they are a weapon of mass destruction on their own people, killing, as I noted, we believe around 2 million North Koreans through starvation. This is abhorrent.

If the refugees do come to the United States, this is a moment of celebration, even though it is only a few. It is a statement by this country that we will not tolerate the mistreatment of people taking place in North Korea. I applaud this effort.

I applaud the administration for working on this particular topic, and particularly Jay Lefkowitz, the special envoy from the administration on human rights in North Korea.

If reports this morning from Reuters and the Associated Press as well as various other news outlets prove to be accurate, we may shortly have a group of North Korean refugees formally accepted by the United States for the first time since the Korean peninsula was divided by war over half a century ago.

I hope and pray that these reports are true, and I hope that the six to eight refugees referred to in the articles will soon have a chance to be welcomed by the thousands of Americans who have worked so hard for their freedom, especially by those of Korean heritage.

A year and a half ago, Congress passed and President Bush signed into law the North Korean Human Rights Act. It was the first significant piece of legislation dealing with that nation's dictatorial regime since the cessation of hostilities in July 1953. The act called for a U.S. policy on North Korea based on a commitment and respect for

human rights and human dignity, and fundamental freedoms, including the freedom of thought, conscience religion or belief. By referring in the act to core Helsinki principles adopted in 1975 that informed and animated our dealings with then Soviet Union and its eventual dissolution and the resulting freedom for millions without a single shot being fired, the act similarly commits the United States to pursue in North Korea the same devotion to human dignity and human rights.

Yet since the passage of the North Korean Human Rights Act, the negotiating approach has been to subordinate the human rights and human dignity of the North Korean people. Instead, what we have done is to pin our hopes on the possibility of another framework agreement in which the parties would be coerced yet again into tossing more lifelines to a fragile but oppressive regime in Pyongyang in exchange for the possible exchange of yet another promise not to use weapons of mass destruction.

In none of these negotiations have we been able to engage in talks—either in the multiparty context or even unofficial bilateral discussions—on issues that promote and do justice to both American and universal ideals. Rather than focusing the debate on the regime's policies of persecution and starvation and to the massive failure of its economic policies that in the mid-90s directly resulted in the deaths of millions of North Koreans, the parties have done little to strengthen democracy and promote human rights in North Korea.

I appreciate that there are strong political pressures especially from our allies to negotiate over the North Korean regime's so-called "peace for security" demand. And in the interest of searching for a diplomatic solution, the President and Secretary Rice have done precisely that. In fact, the recent rounds of six party talks were the most sustained effort by the United States.

But the President himself has also done much more, in both word and deed. In the past 2 months, the President released two of the most remarkable statements of his presidency. Last month, the President called to attention China's treatment of a North Korean refugee named Kim Chun Hee. Missing since December, when Miss Kim was arrested in China and deported back to North Korea, it isn't known whether she is dead or alive. As the President's envoy for North Korean Human Rights Jay Lefkowitz said of Miss Chun in a Wall Street Journal editorial, "Every movement needs heroes. . . . Either she will be a living figure in a jail somewhere or, God forbid, she'll be a martyr." As far as I know, we have no word from the Chinese Government and certainly not from the North Koreans on the fate of Miss Chun.

The President also issued a statement after a meeting that he himself called one of the most moving of his

presidency. He spoke of a grieving mother and brother who yearned to be united with her daughter and his sister, Megumi, who was only 13 when she was abducted by the North Korean regime more than 30 years ago; he met with a young child of 6 named Han Mee Lee who with her family were at the center of an international controversy created by vivid video footage of their valiant struggle for freedom at the gates of an embassy in China; and he met with a former North Korean soldier who defected to South Korea in pursuit of what his conscience and his heart told him were his inalienable and God-given right to liberty and freedom.

I ask unanimous consent at this time that this statement by the President be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

STATEMENT ON CHINA'S TREATMENT OF KIM CHUN-HEE BY THE PRESS SECRETARY

The United States is gravely concerned about China's treatment of Kim Chun-Hee. Despite U.S., South Korean, and UNHCR attempts to raise this case with the Chinese, Ms. Kim, an asylum seeker in her thirties, was deported to North Korea after being arrested in December for seeking refuge at two Korean schools in China. We are deeply concerned about Ms. Kim's well-being. The United States notes China's obligations as a party to the U.N. Convention relating to the Status of Refugees and its 1967 Protocol, and believes that China must take those obligations seriously. We also call upon the Government of China not to return North Korean asylum seekers without allowing UNHCR access to these vulnerable individuals.

Mr. BROWNBACK. Last July, the President also met with Kang Chol Hwan, whose book the *Aquariums of Pyongyang*, chronicled Mr. Kang's life as a 9-year-old gulag inmate to his eventual freedom. Just as Natan Scharansky was Reagan's symbol of what freedom from the Soviet communist system meant to free people everywhere, Kang is Bush's symbol of what freedom means to North Koreans.

History will record these acts by President Bush to unilaterally broaden the narrow agenda of the Six-Party Talks as among the wisest and humane—acts that trump and negate the false perception that the President is indifferent to concerns about human rights in North Korea. These bold and compassionate acts will figuratively place on the bargaining table—if the Six Party Talks are to ever resume—the faces and names of North Koreans who have suffered and continue to do so.

By so publicly raising human rights issues to the highest level, the Oval Office of the President no less, President Bush is merely following the examples set by President Reagan and Pope John Paul during their struggles with a much larger and more threatening nuclear power.

We may now have an opportunity—if the press reports are accurate—to take an additional but necessary step to demonstrate not just by words but by

action what human rights mean. We need to accept North Korean refugees into the United States as provided by the North Korean Human Rights Act.

That it appears to have taken more than a year and half for the possibility of officially accepting North Korea refugees has been troubling to Members of Congress on both sides of the aisle. In a bipartisan letter to Secretary Rice, Congressman FRANK WOLF and others called on the administration to do more. And last year, both Congressman WOLF and I wrote to Secretary General Kofi Annan to pressure China into allowing UNHCR, the U.N. agency for refugees, into Yanji Province near the North Korean border and other affected areas to assess the situation with respect to the North Korean refugees.

I was disappointed to learn that the first report required under the North Korean Human Rights Act was issued with the statement that no progress had been made on accepting refugees. As the act makes clear, admission would be conditioned upon a thorough vetting process by DHS and other appropriate agencies. But without any

action by us, it is difficult for us to demand that the Chinese should also change its policies, and it presents a problem for us in asking other countries to do the right thing if we have not been able to do the same. If the U.S. cannot admit what may be less than 10 refugees in total if the press reports are correct, then the whole premise of the act itself is unsustainable.

I am hopeful that this may be changing and I hope it is changing. The hopes and prayers of thousands in the faith community and among Korean American communities are vested in this possibility of the first admission of North Korean refugees into the United States.

If and when these people come, it will offer hope to millions and put American on the right side of history. Such an act is consistent with the bold steps that Ronald Reagan took and Pope John Paul urged during the years of the cold war, and in the process made the world a better place.

If ever there were huddled masses yearning to be free, it's the North Ko-

reans, whether hiding out in the forests of China or working as trafficked victims in brothels or as orphans prowling marketplaces for crumbs.

If these refugees are granted refuge in the United States, it would constitute one of the great acts of compassion by this nation.

And I hope we take this opportunity to lift our lamps and show a way out of the darkness for the North Korean refugees.

STEM CELLS

Mr. BROWNBACK. Mr. President, another topic I will discuss is embryonic stem cell and adult stem cell research. I will show two books because we have a lot going on regarding stem cells and in stem cell research.

I ask unanimous consent to have printed in the RECORD a chart on Federal funding of stem cell research.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

U.S. FEDERAL TAXPAYER FUNDING TOTAL NIH STEM CELL RESEARCH FY 2002–FY 2006

(Dollars in millions)**

	FY 2002 Actual			FY 2003 Actual			FY 2004 Actual			FY 2005 Actual		
	Non embryonic	Embryonic	Total	Non embryonic	Embryonic	Total	Non embryonic	Embryonic	Total	Non embryonic	Embryonic	Total
Human, subtotal	170.9	10.1	181.0	190.7	20.3	211.0	203.2	24.3	227.5	199.4	39.6	239.0
Nonhuman, subtotal	134.1	71.5	205.5	192.1	113.5*	305.6	235.7	89.3*	325.0	273.2	97.0	370.2
NIH, total	305.0	81.6	386.6	382.9	133.8*	516.6	439.0	113.6*	552.5	472.5	136.7	609.2

*Decrease from FY03 to FY04 is the result of a change in methodology used to collect nonhuman embryonic funding figures. This methodology change also contributed to an increase in nonhuman non-embryonic.

**Numbers may not add due to rounding.

Mr. BROWNBACK. Mr. President, noting for the record the actual spending in 2005 on embryonic stem cell research, the U.S. Federal Government spent nearly \$40 million on human embryonic stem cell research. We spent \$97 million on nonhuman embryonic stem cell research, for a total of \$136 million the Federal Government spent on embryonic stem cell research.

That is a fair investment. We also spent \$472 million in nonembryonic. What did we get for \$136 million in embryonic stem cell research? Here is the folder that contains the human clinical trials of embryonic stem cell research in humans, treating and healing humans. This is the list of research results we have from a nearly \$40 million Federal investment last year of human clinical trials with embryonic stem cell research. This is research where a young, embryonic human life is destroyed and stem cells harvested and taken out and applied.

I note that this folder is empty. This is the list of research results we have from embryonic stem cell research on humans.

We also invested in adult and cord blood stem cell research. The cord between the mother and child is rich in stem cells that can be used in a lot of treatment areas, along with adult stem cells. You have stem cells in your body and I have them in my mine. They are akin to a repair kit.

I ask unanimous consent to have printed in the RECORD the listing of 69 different human illnesses being treated by adult and cord blood stem cells.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

69 CURRENT HUMAN CLINICAL APPLICATIONS USING ADULT STEM CELLS

ANEMIAS & OTHER BLOOD CONDITIONS

Sickle cell anemia, sideroblastic anemia, aplastic anemia, red cell aplasia (failure of red blood cell development), amegakaryocytic thrombocytopoiesis, thalassemia (genetic [inherited] disorders all of which involve underproduction of hemoglobin), primary amyloidosis (a disorder of plasma cells), diamond blackfan anemia, Fanconi's anemia, chronic Epstein-Barr infection (similar to mono)

AUTO-IMMUNE DISEASES

Systemic lupus (auto-immune condition that can affect skin, heart, lungs, kidneys, joints, and nervous system), Sjogren's syndrome (autoimmune disease w/symptoms similar to arthritis), myasthenia (an autoimmune neuromuscular disorder), autoimmune cytopenia, scleromyxedema (skin condition), scleroderma (skin disorder), Crohn's disease (chronic inflammatory disease of the intestines), Behcet's disease, rheumatoid arthritis, juvenile arthritis, multiple sclerosis, polychondritis (chronic disorder of the cartilage), systemic vasculitis (inflammation of the blood vessels), alopecia universalis, Buerger's disease (limb vessel constriction, inflammation)

CANCERS

Brain tumors—medulloblastoma and glioma, retinoblastoma (cancer), ovarian

cancer, skin cancer: Merkel cell carcinoma, testicular cancer, lymphoma, non-Hodgkin's lymphoma, Hodgkin's lymphoma, acute lymphoblastic leukemia, acute myelogenous leukemia, chronic myelogenous leukemia, juvenile myelomonocytic leukemia, cancer of the lymph nodes: angioimmunoblastic lymphadenopathy

Multiple myeloma (cancer affecting white blood cells of the immune system), myelodysplasia (bone marrow disorder), breast cancer, neuroblastoma (childhood cancer of the nervous system), renal cell carcinoma (cancer of the kidney), soft tissue sarcoma (malignant tumor that begins in the muscle, fat, fibrous tissue, blood vessels), various solid tumors, Waldenstrom's macroglobulinemia (type of lymphoma), hemophagocytic lymphohistiocytosis, POEMS syndrome (osteosclerotic myeloma), myelofibrosis

CARDIOVASCULAR

Acute heart damage, chronic coronary artery disease

IMMUNODEFICIENCIES

Severe combined immunodeficiency syndrome, X-linked lymphoproliferative syndrome, X-linked hyper immunoglobulin M syndrome

LIVER DISEASE

Chronic liver failure

NEURAL DEGENERATIVE DISEASES & INJURIES

Parkinson's disease, spinal cord injury, stroke damage

OCULAR

Corneal regeneration

WOUNDS & INJURIES

Limb gangrene, surface wound healing, jawbone replacement, skull bone repair