STATEMENT OF SENATOR GORDON H. SMITH
Senate Special Committee on Aging Hearing
Exploring the Promise of Embryonic Stem Cell Research
June 8, 2005

Good Afternoon. I'd like to welcome you all to what is sure to be an interesting and highly informative hearing of the Senate Special Committee on Aging: Exploring the Promise of Embryonic Stem Cell Research.

Stem cell research is one of today's most exciting and rapidly advancing fields in modern medicine. It holds the key to potentially unlocking the secrets of diseases that have mystified scientists for years, namely Alzheimer's, Parkinson's, diabetes and cardiovascular disease. This becomes particularly important as our nation's population ages and more and more of our seniors become afflicted with ailments that take as great a toll on the families of loved ones as the victims themselves.

Scientists are just beginning to scratch the surface of the knowledge and benefits that can be reaped by a thorough understanding of stem cells, and their potential for creating breakthroughs in therapeutic disease treatment.

This hearing will examine some of the important progress being made in the area of embryonic stem cell research, the need for new stem cell lines and the reason these additional lines should receive federal support.

Among the elderly, diseases such as diabetes, Alzheimer's, Parkinson's and cardiovascular disease are among the most prevalent and costly. Together the estimated annual direct and indirect cost of caring for patients with these diseases is $650 billion.

Alzheimer's alone is a disease that afflicts one in 10 Americans over the age of 65 and nearly half of all persons over age 85. As baby boomers begin to age, the prevalence of Alzheimer's is expected to grow by 350 percent, from four million Americans today to an estimated 14 million by 2050, which will make it the most costly disease in our society. The impact on Medicaid, Medicare, and our private health care system will be enormous.

However, if we can find a way to delay the onset of Alzheimer's by just five years, we could reduce the number of cases and spending on the disease by more than 50 percent.

In addition, diabetes, neurodegenerative and cardiovascular diseases also happen to be areas for which stem cell therapy seems most promising. Although a limited number of human embryonic stem cell lines are eligible for use in federally funded research, many scientists are concerned about the usefulness of these lines.

While some claim a total of 78 embryonic stem cell lines are listed, in reality only 22 lines are currently available to researchers. Furthermore, scientists have serious concerns about the quality, longevity and availability of these existing lines because they were

grown in culture dishes coated with mouse cells which contaminated them. At the time this method was created, the mouse cells were necessary to nourish the stem cells and foster growth. However, in a dramatic new achievement earlier this year, scientists were successfully able to maintain stem cell lines without using animal feeder cells.

In order to allow researchers the opportunity to fully explore the possibilities and promise of stem cells, we must ensure they have expanded access to uncontaminated stem cell lines.

The Stem Cell Research Enhancement Act, S.471 (Specter), and H.R. 810 (Castle) would allow researchers to receive federal funding for the study of embryonic stem cells derived from excess embryos created for fertility treatments and willingly donated by patients. Last month, H.R. 810 passed the House on May 24, 2005, by a vote of 238-194. It is now time for the Senate to act.

I am also currently working on legislation, titled the Stem Cell Research Investment Act, which would build upon S. 471 to promote cutting-edge research to fight devastating chronic diseases and health conditions. Modeled after California's recently-passed Proposition 71, the bill encourages states to issue up to $30 billion in zero-interest bonds to fund their own stem cell research initiatives and provides bondholders a federal tax credit in lieu of interest payments. As with S. 471, such funding could only be used for embryonic stem cell research that uses excess embryos from fertility clinics donated by patients.

In the field of medicine, there's no such thing as Republican Science or Democrat Science; there's just science. New advances in technology have allowed us to understand the nature of the human body like never before, and with it the ability to prolong life and cure disease.

Responsible research, grounded in the roots of scientific principles and conducted with the ultimate goal of saving lives, must be allowed to flourish. We owe a moral obligation to the sufferers of these debilitating diseases and their loved ones to provide our best and brightest scientists with the tools they need to undertake their quest in a safe and ethical environment free from arbitrarily placed government barriers.

I am eagerly anticipating the testimony of our experts, who understand the financial, emotional and physical cost of these diseases, and who are among the leaders in cutting-edge research that is being done in this field. It is my hope that by the end of today's hearing we will all have a greater understanding of embryonic stem cell research and a deeper appreciation of the incredible potential of this exciting branch of medicine.