Indeed, before the meeting in Washington DC, these individuals held solid reason for concern. The “adult” stem cell described by Caplan and Pittenger as a mesodermal or mesenchymal stem cell had not been widely publicized as a replacement for embryonic stem cells at all. Most hematologists, who by and large controlled the stem cell field, considered these cells to be laboratory artifacts. Rare in the marrow and of unknown function and identity, the non-adherent HSC had been clearly defined.

Further, less than a month before the proclamation was announced by Bush, investigators from Johns Hopkins University announced to the Press (but not in any scientific publication) stunning results based on the very recent discovery by James A. Thomson, of the existence of human embryonic stem cells, a discovery that in its own right created a media frenzy of hyped expectations. The Hopkins Investigators claimed that fetal stem cells could repair spinal cord injuries and inferred strongly that these cells held the capacity to mend a severed spine. Chris Reeves dedicated his foundation to the work of these individuals, hoping to recover from the devastating spinal cord severance he sustained from an equine accident. The two announcements, the defining of human embryonic stem cells and the inference soon thereafter that embryonic stem cells could mend a severed spine led to a frenzy of scientific activity to reproduce and extend results which were universally undoubted while they led to a public frenzy.

If ES cells could mend severed spines, then why not replace limbs lost in combat, cells lost in brains diseased with Alzheimers, Cancer or Parkinsons disease/ Chronic lung disease, and other diseases of aging would soon become illnesses of the past. Individuals who had saved for retirement all their working live only to be afflicted with a chronic and fatal disease eagerly lined up to be the first transplant recipients. Some would pay any amount for a cure and the cure certainly appeared to be well at hand. Young individuals with diabetes and other devastating diseases found new hope; they would be cured by stem cell therapy. Chris Reeves announced when seeing the Hopkins results on the evening news, “I will walk again” as tears welled up in the eyes of announcer Dan Rather. Even Mr. Rather’s scientific advisor John Stossel fully bought the hype as inevitable cure all, and so stated on a news show upon questioning by Mr. Rather and Mr. Reeves.

But the investigators didn’t publish these incredible results in a peer-reviewed journal. However, they made no hesitation to disseminate them throughout the world in the Press and to the public as well as to a receptive scientific community. New Biotechs began to spring from everywhere. None had a cure for anything. But in the absence of any ability to show the fallacy of the results from Hopkins, ES companies enjoyed an 8 year long stretch of private investment that turned many good scientists into very rich liars (Allen Eaves quote).

Enforcement of the Presidential ban-Why?

The Presidential ban which would prevent any continuation, confirmation, employment or extension of these results as it was vigorously enforced throughout the world and was so more widely than the ban on Nuclear Proliferation. Attendees of the meeting of stem cell research leaders were placated with enhanced grant support. NIH staffs were clearly led to know that they served at the pleasure of the President and if any questioned the ban, they were asked to resign, so few did. But some investigators who were not stem cell researchers yet knew of the fallacies of the ban and spoke out, were harshly treated. One premise that was widely employed to justify the ban was that “stem cells” were considered to be “immortal” if not pushed to differentiate. Nothing is immortal, many argued. The second premise used to justify the ban was that adult human equivalents of embryonic stem cells existed, increased funding and RFA’s to find and use these cells abounded and indeed, these cells were quickly found and employed widely to well funded investigators. It was widely appreciated that at the end of the Bush term, his replacement would not be adverse to ES cell research. However, an initiative began to make ES-like cells called iPS cells from non-embryonic sources. Everyone, it seems was happy and science went on. One could easily get rich by endorsing the clinical potential of adult stem cells and one could easily find a federal prison called “home” if they defied the ban. So, during the entire Bush Administration, not one productive experiment with human ES cells was carried out in the world.

Bush proclamation seemed to be an effort to commercialize embryonic stem cell research as many private companies entered into the field after ban. Prohibition of federal funding was the demand of that time for US as embryonic stem cell research was the field with enormous future potential.

Most research in this direction was through US federal funding. Even Bush Proclamation was only binding to the federal funds but not with state or private funds. Billions of money was invested during the ban which shifted this business towards private sector. Biggest question among scientific community is that, should research be a puppet in hand of an individual who represents a country but not the world as a whole? Should a research programme lag behind years due to single proclamation? Who will bear the loss of time and research from August 9, 2001 to 9 March, 2009 in the potential field of human embryonic stem cell research? Only science can give answer to this question.

Political realities and questions:

It is not clear how this was legally accomplished or why it was put into effect. We recall that as stated, the Bush proclamation applied only to US government funded research. However, investigators in the USA soon found that the ban applied to them regardless of who actually funded their studies. Some aspect of everything in America is government supported. The Federal Code first reduced the Proclamation to law. The penalty was steep and not well defined due to the simultaneous “Patriot Act” which led individuals to believe that they could be arrested and held without charge or right to council for as long as 6 month at the whim of the government. In fact, this applies only to individuals not born in the USA but investigators were not going to change it. The Postal Code, the Treasury code and the Code of Public Health each reduced to the fallacy of the results from Hopkins, ES companies enjoyed an 8 year long stretch of private investment that turned many good scientists into very rich liars (Allen Eaves quote).
supported. To enhance fears, because of the mass hysteria of 9-11, the federal government was able to arrest a few scientists who were American citizens but who were not born in America without charge. Two Muslim Professors from University of Texas were held for months in an atrocious abuse of authority, as was a Professor from Harvard. Stem cell fear was further enhanced by termination of opposing employees even from non government institutions with no support of the EEOC or other agency. Fear of research was finalized when the FBI arrested a physician in Minnesota for merely saying he thought of using stem cells for a boy shot fatally in a hunting accident. Before the issue was even discussed as a therapeutic possibility, the physician was arrested and allowed to be released only after he pled guilty to a lesser offense. ES cell research was clearly dead in the USA when the cell lines, as predicted, mutated and died off.

(…………to be continued in next issue)

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