



<http://eaglefeather.org>

## EAGLE FEATHER RESEARCH NEWSLETTER

VOL III, NO. 7, July, 2010

Welcome, Willkommen, Bienvenue, Bienvenidos, Benvenuto. Welcome to our July issue in which we cover technological news, China's health system, food poisoning issues, energy sources, embryonic stem cells and Native American proverbs.

### CHINA'S HEALTH CARE SYSTEM

China's 1.3 billion people are placing an undue burden on a health system that is in disarray. Recently, it launched a three year, \$124 billion program that aims to improve health services by building 2,000 county hospitals and 29,000 township hospitals ensuring that each of the country's 700,000 villages has a clinic. This will expand the state health insurance from 70 percent to 90 percent or an additional 200 million people. It would moreover, reduce drug costs by controlling prices for medications deemed essential. Sixty percent of the funding will come from regional governments. Much of the schemes or strategies will be monitored to see which promotes the best results. One example is *Shenmu* County in the north which is offering free care for its 390,000 residents. Other counties are managing urban and rural insurance programs together while some are offering rural cooperative insurance programs for \$4.40 per year that allows them to see a village doctor for 20 common illnesses for only one *yuan* or 15 cents, including medication. Before, China had universal health care under socialism; workers were provided cradle to grave medical care while an army of "barefoot doctors" or paramedics vaccinated children, applied acupuncture, used natural remedies and improved sanitation in the countryside. When it shifted to free market capitalism, the health care system suffered greatly. It went from state owned coverage to individual insurance programs. Medical costs soared faster than incomes and now treatment today depends on one's ability to pay. Nearly a third of the poor say health problems are the cause of poverty. In 1981 71% had

access to health facilities but it dropped to 21% when China went into free market reform. In 2005, out of pocket expenses were 100 times more than a decade before. A recent survey reveals that 70% of the population foregoes recommended hospitalization because they cannot afford it. There are many parallels to the U.S. health scenario. There is a gap between the rich and the poor. Doctors are being co-opted by the drug companies either through rewards or direct pay. Patients no longer trust doctors since there is now a tendency to over prescribe. With the uncontrolled rise of toxic pollution in the air and rivers, the health of each Chinese citizen becomes more compromised each day. Once again, health takes a back seat to big business and money. There seems to be striking pattern with our situation in the U.S. and the consequence is the effects of globalization. Nonetheless, Health Minister Chen Zhu declared recently that they are determined to transform these challenges into opportunities.

#### **FOOD POISONING: TIPS FROM A FOOD SAFETY TRIAL LAWYER**

Below a few tips from attorney William Marler:

- No raw oysters or raw fish
- No sprouts. (Check for local and reputable source.)
- No bagged leafy greens. Different types increase contamination.
- No hot dogs
- No unpasteurized juice or milk.
- No hamburgers. Scrap meat from thousands of cows get mixed together.
- Organics. (Make sure it is from a local and reputable source.)

President Obama recently declared our nation's lax food safety policies to be a "hazard to public health." Then a major report warned it would be way too easy for terrorists to poison the food supply. Then 80 people got poisoned with E coli by eating Nestle cookie dough while three were killed and 500 others sickened by undercooked hamburgers from *Jack in the Box*. Attorney Marler knows the system to protect us from food-borne illness has many loopholes. Regulations are a hodgepodge; Oversight authority is scattered between the *U.S. Department of Agriculture* which covers meat and poultry, and the *Food and Drug Administration*, which covers everything else. Generally, the government deems it the food companies' responsibility to make a safe product. For example, the *FDA* does not require food processors to test for pathogens; the company can decide whether to do it, according to the *Pew Charitable Trusts*, which is pushing for tougher regulation. For meats, the *USDA* can inspect, but it has limited power to close plants or order change. While it is illegal to sell hamburger that tests positive for E coli 0157, food processors are not required to test for it in their finished product. This untested meat nonetheless gets stamped with a *USDA* label and sold to consumers. Marler believes the government is as complicit in the process as are the companies. The *Centers for Disease Control and Prevention*

estimates that 300,000 Americans are hospitalized and 5,000 die from food-borne illnesses each year. Approximately 76 million additionally are sickened each year.

#### **TECHNOLOGICAL NEWS: INTEL'S 48 CORE PROCESSOR**

There is a major shift in computer chip design that will have computers and other devices undergo a major transformation. Consumers in the near future will be able to fix their automobiles while your car gives you step-by-step advice, attack physical ailments by making computer models of various treatments or go into virtual fitting rooms to try on a store's clothes without leaving home. The change will be from creating an ever increasing number of transistors (1 billion) crowding your microprocessor that are less energy efficient and prone to damaging amounts of heat to multiple computing engines called cores. These will boost performance by processing streams of data simultaneously and be energy efficient, partly because they can be programmed so the cores not in use at a given moment do not drain energy. Some of the future applications include:

- *Virtual dressing rooms*: using a computer with 3-D camera, a person could create a virtual model of their body, then use it try clothes at store's web site. This could be in place within five years.
- *Attacking tumors*: using a similar computerized model of a patient's tumor and the medical information in terms of the disease, a multi-core chip could simulate the effects of treating the tumor with a variety of approaches.
- *Surveillance and data output*: Homes equipped with multi-core powered computers connected to wireless cameras could monitor and offer advice and reminders to its owners. Other applications include smart cars that instruct their owners on repairs, instruction for small-time investors on how to manipulate financial databases like Wall Street and notebooks that can do complex video simulations on any subject.

#### **EMBRYONIC STEM CELLS AND REGENERATION OF HEART TISSUE**

Scientists have grown a piece of heart muscle and watched it beat. This is the work of Dr. Kenneth Chien and a medical team from *Harvard* and *Massachusetts General Hospital* researchers. The problem heretofore has been how to coax embryonic cells into producing pure cardiac muscle. They found a master heart stem cell present in both human and mouse embryos. By winnowing out such cells, they able to grow a thin strip of mouse heart muscle right in the laboratory. Moreover, it began to beat as a normal heart tissue strip would do. Chien is working on repeating the work with human cells. He believes that within five years they will be ready to try it on humans.

## ENERGY SOURCES: THE OLD AND THE NEW

<b>Nuclear</b>	<b>Coal</b>	<b>Natural Gas</b>	<b>Wind Farm</b>	<b>Solar</b>	<b>Wood Biomass</b>
----------------	-------------	--------------------	------------------	--------------	---------------------

**(Annual operating costs per megawatt)**

\$66,000	\$27,000	\$12,000	\$29,000	\$55,000	\$63,000
----------	----------	----------	----------	----------	----------

**(Fuel Cost per million BTU)**

70 cents	\$1.90	\$6.30	None	None	\$5.00
----------	--------	--------	------	------	--------

**(Construction time)**

6 years	4 years	3 years	2 years	3 years	4 years
---------	---------	---------	---------	---------	---------

**Notes:** Nuclear has low fuel costs but has hazardous spent fuel waste with high water use. Coal has large supply but has high particulate and greenhouse gas emissions with high water use. Natural gas has less minimal emissions but potential limited supplies with price fluctuations and high water use. Wind farm has no emissions or water use and free fuel but limited to wind accessible areas. Solar is exempt from carbon rules and is free fuel but limited to higher access areas for sun

## PROVERBS

- *Our first teacher is our own heart. (Cheyenne Nation)*
- *Do not wrong or hate your neighbor for it is not he that you wrong but yourself. (Pima Nation)*
- *With all things and in all things, we are relatives. (Lakota Nation)*

Happy and Insightful Reading,

Arnoldo Carlos Vento, Ph.D