

### **CANCER: GENENTECH AND ABBOT FORM ALLIANCE ON CANCER DRUGS**

Abbott and Genentech have formed a collaboration for the global research, development and commercialization of two of Abbott's investigational anti-cancer compounds. Each of the compounds represent unique scientific approaches to treating a variety of cancers. The first restores apoptosis—a natural process by which damaged or unwanted cells die and are cleared from the body. The other compound suppresses tumor growth by preventing the growth of new blood vessels that supply the tumor with oxygen and nutrients by inhibiting key signaling pathways. Both compounds are currently in early-stage clinical trials in a number of tumor types.

### **STEM CELLS: HUMAN STEM CELL LINES CREATED WITH UNFERTILIZED EGGS**

Scientists at Lifeline Cell Technology, a wholly-owned subsidiary of Oceanside, California-based International Stem Cell, said they have successfully created six unique human stem cell lines that appear capable of differentiation into any cell type found in the human body using an efficient method that does not require the use of fertilized embryos. The creation of these new and unique stem cell lines, called parthenogenetic stem cells, was reported in the online edition of *Cloning and Stem Cells Journal*. The paper said these new cell lines have the same potential to become any cell in the human body, as do traditionally-derived embryonic stem cells made from fertilized embryos. Such a method could serve as an alternative to deriving cells from fertilized embryos or from somatic cell nuclear transfer technology, an approach that has caused political controversy.

### **LIVER CANCER: ONYX AND BAYER ASK FDA TO EXPAND USE OF NEXEVAR**

Bayer HealthCare Pharmaceuticals and Onyx Pharmaceuticals said they submitted an application to the FDA to expand the approved uses of their drug Nexavar to include hepatocellular carcinoma, the most common form of liver cancer. Nexavar is currently approved in more than 50 countries for the treatment of advanced kidney cancer. The companies are also planning to launch a late-stage trial of the drug as an adjuvant treatment for hepatocellular carcinoma following the complete removal of early stage liver cancer. This form of liver cancer is responsible for about 90 percent of the primary liver cancers in adults and is the fifth most common cancer in the world.

### **PANDEMIC FLU: TAMIFLU COULD CUT DEATH TOLL IN HALF**

Treatment with the oral antiviral Tamiflu and prophylaxis for people exposed to infected patients could be a cost-effective strategies for reducing illness and death during an influenza pandemic, according to researchers at the University of Toronto, Canada. The researchers' modeling determined a stockpile of Tamiflu sufficient to cover 65 percent of a country's population could cut deaths by approximately half. The study was announced at the influenza conference Options for the Control of Influenza VI in Toronto. The reality is that country stockpiles of Tamiflu are limited and are targeted at treatment only rather than treatment and prevention. However, some governments are now planning for sufficient antiviral stockpiles that will allow them to provide Tamiflu preventatively to close contacts of infected individuals. Tamiflu was invented by Foster City, California-based Gilead Sciences and licensed to Roche in 1996.

### **NANOPARTICLES: POTENTIAL NEW METHOD FOR DELIVERING DRUGS**

Researchers at the University of California at Santa Barbara have discovered that attaching polymeric nanoparticles to the surface of red blood cells dramatically increases their ability to remain in the blood. The research, published in the journal *Experimental Biology and Medicine*, could offer applications for the delivery of drugs and circulating bioreactors. Polymeric nanoparticles protect drugs from degradation until they reach their target and provide sustained release of drugs. However, these nanoparticles are quickly removed from the blood, sometimes in minutes, rendering them ineffective in delivering drugs. The researchers, though, found that nanoparticles can be forced to remain in circulation when attached to red blood cells. The particles eventually detach from the blood cells due to shear forces and cell-to-cell interactions and are cleared from the system by the liver and spleen.

### LEGISLATION: SENATE CRAFTS RULES FOR BIOTECH COPYCATS

A U.S. Senate committee approved legislation that would create a pathway for generic drug makers to produce their own versions of biotechnology products that have come off patent, Reuters reported. The legislation could open the door to costly competition to the more mature biotechnology companies, such as Thousand Oaks, California-based Amgen and South San Francisco, California-based Genentech. The bipartisan legislation would require at least one human clinical trial to determine there are no significant differences between the follow-on product and the branded one, unless the FDA decides those requirements are not necessary. The proposed legislation would also permit the FDA to decide if pharmacists could substitute a generic biologic for a brand name product. The biotechnology industry expressed concern the law would weaken approval standards.

### HEPATITIS B: HIV DRUG SHOWS POTENTIAL AS TREATMENT

Foster City, California-based Gilead Sciences said its once-daily HIV drug Viread met its primary endpoint of reducing liver inflammation viral loads in a late-stage clinical trial of the drug as a treatment for Hepatitis B. The study was the second of two late-stage pivotal studies to evaluate the efficacy, safety and tolerability of Viread to meet its primary endpoints. The company said it is working with regulators in the United States and Europe to move to file an application to market the drug to treat chronic hepatitis B in the fourth quarter of this year.

### METHAMPHETAMINE: ABUSE LINKED TO CARDIOVASCULAR DISEASE

Researchers at the La Jolla, California-based Scripps Research Institute have found long-term methamphetamine use changes endogenous proteins in drug users, causing aberrant immune responses that can lead to cardiovascular disorders such as vasculitis, an inflammation of the blood vessels. Until about six years ago, methamphetamine use was seen mostly in the western and rural United States. The study was published in an online edition of the *Proceedings of the National Academy of Sciences*

### HEALTH INSURANCE: CALIFORNIANS SAY MAJOR CHANGES NEEDED

Three-quarters of all California residents and likely voters say the number of people without health insurance is a big problem in the Golden State, according to a survey from the Public Policy Institute of California. The private, nonprofit public policy research organization found Californians also think the state's healthcare system is in need of major changes, with 72 percent of residents and 65 percent of likely voters saying they strongly support Gov. Arnold Schwarzenegger's plan to require residents to have health insurance and have employers, healthcare providers and individuals share the costs. Among residents who currently have health insurance, two-thirds are either worried (40 percent) or somewhat worried (27 percent) about having to pay more for healthcare or insurance.

### INFECTIOUS DISEASE: ARMY ENTERS INTO AGREEMENT WITH AETHLON

San Diego, California-based Aethlon Medical said it executed a Cooperative Research and Development Agreement with the U.S. Army Medical Research Institute of Infectious Diseases. The focus of the agreement is to explore the therapeutic efficacy of Aethlon's Hemopurifier against viral hemorrhagic fever targets, including, but not limited to Ebola virus, Marburg virus, Lassa virus, and Machupo virus. The Hemopurifier is a first-in-class medical device targeted to be a broad-spectrum treatment solution for drug- and vaccine-resistant bioweapons, naturally-evolving pandemic threats and chronic infectious disease conditions including Hepatitis C and the HIV.



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