

UPDATES FROM US HEALTH AGENCIES

Recent activity in government and non-government agencies may affect readers of *Ethnicity & Disease* and other health care professionals working with ethnic minority and under-served populations. Below are some current items of interest.

FROM THE NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Standard Aplastic Anemia Therapy Improves Patient Outcomes Better Than Newer Version

A comparison clinical study of 2 aplastic anemia treatments found that equine antithymocyte globulin (eATG), currently the only licensed aplastic anemia drug in the United States, improved blood cell counts and survival significantly more than did rabbit antithymocyte globulin (rATG), a similar but reportedly more potent treatment.

While rATG is not licensed for aplastic anemia in the United States, it has been reported to be effective when used in patients who did not respond or who relapsed following eATG treatment. rATG is the only aplastic anemia option available in Europe, Japan, and Latin America. Thus, the findings of this study

have implications for management of this disorder internationally.

“This study suggests that eATG should remain the first-line regimen of choice in treating severe aplastic anemia,” said NHLBI hematologist Phillip Scheinberg, MD.

Aplastic anemia is a rare blood disorder, newly diagnosed in approximately 600 patients in the United States every year. Most patients are children or young adults. The disease destroys bone marrow and lowers the number of functional blood cells in the body. Bone marrow failure can lead to anemia, hemorrhage, and increased risk of infections. In its severe form,

aplastic anemia is often fatal if not treated. Aplastic anemia can occur for a number of reasons, including benzene exposure, radiation, hepatitis, or an inherited defect. In most cases, the patient’s own immune system destroys the marrow.

The NIH study was designed to compare the 2 ATG drug types as treatments for severe aplastic anemia. The research team enrolled 120 patients aged 2–77 years, who were randomly assigned to either the equine or the rabbit ATG (60 participants in each group). Six months after starting treatment, 68% of patients given eATG had improved blood cell counts, compared with 37% of patients given

rATG. After 3 years, survival was also significantly different. Ninety-six percent of eATG patients survived, compared with 76% of rATG patients.

This finding may affect the future treatment of aplastic anemia, particularly in places like Europe where eATG is not available. It may also inspire further studies that compare equine and rabbit ATG to better understand how ATG helps restore bone marrow. Since some patients responded very well to rATG and others responded poorly to eATG, future work might identify the optimal ATG treatment for specific patient subgroups.

FROM THE NATIONAL INSTITUTE ON DRUG ADDICTION

Potential New Target for Smoking Cessation Without Weight Gain

A new study uncovered a brain mechanism that could be targeted for new medications designed to help people quit smoking without gaining weight. This research showed that a specific subclass of brain nicotinic receptor is involved in nicotine's ability to reduce food intake in rodents. Prior research showed that the average weight gain after smoking is <10 lb, but fear of weight gain can discourage some people who would like to quit.

In the study, researchers found that a nicotine-like drug, cytisine, specifically activated

nicotinic receptors in the hypothalamus—a brain center that controls feeding. This resulted in the activation of a circuit that reduced food intake and body fat in a mouse model. This effect was very specific, since a drug that prevented cytisine from binding to its hypothalamic receptors blocked the reduction in food intake.

Through the use of tobacco, nicotine is one of the most heavily used addictive drugs and the leading preventable cause of disease, disability, and death in the United States. According to the Centers for

Disease Control and Prevention, cigarette smoking results in >440,000 preventable deaths each year—approximately 1 in 5 US deaths overall. Despite the well-documented health costs of smoking, many smokers report difficulty quitting.

“These mouse models allow us to explore the mechanisms through which nicotine acts in the brain to reduce food intake,” said Dr. Marina Picciotto, of Yale University, New Haven, Connecticut, and senior author for the article. “We found that nicotine reduced eating and body fat through

receptors implicated in nicotine aversion and withdrawal rather than reward and reinforcement.”

“These results indicate that medications that specifically target this pathway could alleviate nicotine withdrawal as well as reduce the risk of overeating during smoking cessation,” said NIDA director Dr. Nora D. Volkow. “Although more research is warranted, such a highly selective compound might be more effective than drugs that act on more than one type of nicotinic receptor.”

FROM THE NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

NIH Funds New Research Toward an HIV Cure

Three research teams focused on developing strategies that could help to rid the body of HIV are receiving grants totaling >\$14 million per year, for up to 5 years. The grants are part of the Martin Delaney Collaboratory, a funding opportunity designed to foster public-private partnerships to accelerate progress toward an HIV cure. Dela-

ney, an influential AIDS activist, died of liver cancer in 2009.

Although antiretroviral therapy enables many people infected with HIV to effectively control their virus levels and thereby stay relatively healthy, some virus remains hidden in a latent or persistent form in cells and tissues where it is not susceptible to antiretrovirals. Each research team

will pursue a unique and complementary approach aimed at eradicating these remaining HIV reservoirs. To fulfill their role as members of a collaboratory, the teams will also meet periodically as their research progresses to find ways to work together.

“Martin Delaney was a true hero in the fight against HIV/AIDS, and he believed, as we do,

that progress toward a cure for HIV/AIDS can be made through partnerships among scientists in government, industry, and academia,” said NIAID director Anthony S. Fauci, MD. “These new grants, and the collaboratory to which they belong, are one way in which we honor his memory and advance his vision.”