

WHAT HAPPENS WHEN MICE ARE GENETICALLY ENGINEERED SO THEY CANNOT MAKE THEIR OWN VITAMIN C?

Humans, guinea pigs, fruit bats and primates do not produce Vitamin C naturally in their liver or kidneys as most other animals do throughout life. A mutation in the gene to make an enzyme (gulonolactone oxidase) that converts blood sugar to ascorbate (Vitamin C), which likely occurred early in human history, may have shortened the human life span. It's possible that claims of superlongevity among the Bible patriarchs were real, referring to an era when humans produced their own Vitamin C. A recent study conducted at the Tokyo Metropolitan Institute of Gerontology and Wakayama Medical University shows when mice are bred so they cannot make Vitamin C, they age four times faster than normal mice. The enzyme that synthesizes Vitamin C is the same enzyme that decreases as aging proceeds. At six months of age all the normal Vitamin C-producing mice were alive but half of the Vitamin C-non producers had died of old age. [*Proceedings National Academy of Science*, April 11, 2006, 103: 5723-28]

So, what happens when mice are genetically engineered so they do not make Vitamin C as normal mice or most other animals? Researchers at the University of North Carolina inactivated the gulonolactone oxidase gene in mice so they could not produce Vitamin C as a hormone. Then they exposed these genetically flawed mice and long with normal mice to a flu virus. Damage to the lungs of the mice unable to make Vitamin C was considerably higher than mice that secrete their own Vitamin C. Researchers concluded that Vitamin C is required for adequate immune response and protection of tissues from viral damage. The protective effect of Vitamin C was pronounced in males and nil in females. Humans are in the same predicament as the genetically-flawed mice, having lost the ability to synthesize Vitamin C many generations ago. [*Journal of Nutrition* 136: 2611-6, 2006] -Copyright 2006 Bill Sardi, Knowledge of Health, Inc.

NATIONAL HEALTH FEDERATION IN LAS VEGAS, NEVADA

The Federation was represented at the FreedomFest event held in Las Vegas, Nevada, July 9-12th, 2009, at the Bally Convention Center, where the NHF was a Gold Sponsor and NHF president Scott Tips was a speaker.

FreedomFest was billed as "The World's Largest Gathering of Free Minds," to discuss and debate, strategize, socialize, and celebrate liberty. The idea behind Freedomfest was that all liberty lovers can gather together once a year in a single place

to work together for the cause for liberty. Representatives of all the top free-market think tanks and organizations were there, with the theme this year being "Clear and Present Danger."



The NHF booth was manned by NHF member Ann Ferguson as well as NHF board members Susan Negus and Scott Tips. Scott spoke for approximately an hour to the audience on Codex Alimentarius and health freedom in the U.S. and the World, and noted that most attendees in the audience were not even aware of Codex at all. We heard later that a number of people had commented to the event organizers that it was the best speech they had heard, so the NHF made a good impression while raising awareness about the threats to health freedom.