

Dyslexia gene region identified

Researchers have zoomed in on a section of human DNA they believe contains a gene for dyslexia.

As many as 10 percent of U.S. school children suffer from the substantial reading difficulties caused by dyslexia. Previous work suggested the disorder runs in families. Now, Lon R. Cardon and his colleagues report finding evidence that a gene for dyslexia sits on chromosome 6, one of the 23 pairs of human chromosomes.

In the Oct. 14 *SCIENCE*, Cardon, a statistical geneticist at Sequana Therapeutics in La Jolla, Calif., and his team describe their study of two groups of children. One group consisted of 114 pairs of siblings from families with a history of dyslexia. The other contained 50 fraternal-twin pairs; at least one of the twins in each pair had a history of reading difficulties.

The team's analysis revealed that children with this learning disability had a distinctive pattern of DNA on chromosome 6. The search is now on to identify the actual gene involved in the disorder, Cardon says.

If scientists can sequence the gene, this may enable them to fashion a test that would identify dyslexic youngsters. An early diagnosis would allow parents to arrange for extra help in reading right from the start, Cardon adds.

Good news for women who use hair dye

For the past 2 decades, the worrisome question of a possible connection between hair-coloring products and cancer has lingered over the heads of dye users.

For example, mice treated with hair dye can develop tumors. And some human studies have reported a link between cancer and these coloring agents, especially dark-colored permanent dyes such as brown or black.

In February, researchers reported that women who had relied on black hair dye for 20 years or longer ran a slightly increased risk of dying from certain blood-based cancers, such as non-Hodgkin's lymphoma (SN: 2/5/94, p.86).

Now, epidemiologist Francine Grodstein and her colleagues at the Harvard School of Public Health in Boston have reexamined the question of hair dye and blood-based cancers. The Boston team focused on 99,067 registered nurses participating in the Nurses' Health Study.

The investigators asked the women about their current and past use of permanent hair dye. They also tracked cases of blood-based cancer among the nurses, from the study's start in 1976 until 1990.

The researchers sorted the women into two groups: hair-dye users and nonusers. Next, they looked at the number of women who developed certain blood-based cancers during the study period.

"There was no difference between the two groups," Grodstein says. The study, which appears in the Oct. 5 *JOURNAL OF THE NATIONAL CANCER INSTITUTE*, found no evidence of a link between the use of permanent hair dye and such cancers, including non-Hodgkin's lymphoma, Hodgkin's disease, multiple myeloma, and leukemia.

Still, the study suffers from some flaws. Among them: The researchers didn't ask the women specifically whether they used dark-colored hair dye.

To compensate, the team looked at hair dye use among women whose natural hair color was brown or black. Such women showed no increased cancer risk. (The researchers assume that women with naturally dark hair will rely on dark hair dye to color their gray.)

Despite this mostly good news, Grodstein and colleagues aren't ready to call a halt to the speculation regarding dark-colored hair dye. They suggest further studies must prove that long-term use of such coloring agents poses no cancer risk.

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Elemental upset

The contentious grumbling over the naming of elements 104 through 109 of the periodic table has risen to an angry howl.

In what some chemists furiously call "a surprise move," a committee of the International Union of Pure & Applied Chemistry (IUPAC) recommended renaming several "transfermium" elements, those with atomic numbers above 100.

This action has raised some eyebrows, largely because of the committee's rejection of the name seaborgium for element 106, which its discoverers had put forth in March (SN: 3/19/94, p.180).

The name honors Glenn T. Seaborg, a Nobel laureate who codiscovered plutonium and nine other heavy elements.

Controversies surrounding credit for the discoveries of elements 104, 105, and 106 have stewed for nearly 20 years, mostly involving competing claims by scientists at the Lawrence Berkeley Laboratory in Berkeley, Calif., and the Joint Institute for Nuclear Research in Dubna, Russia. In 1992, an international committee resolved the matter, giving U.S. and Russian scientists joint discovery credit for elements 104 and 105 and the Berkeley researchers credit for 106.

In keeping with the tradition that discoverers of an element may choose its name, the Berkeley team in March nominated Seaborg, associate director-at-large of the lab, for the honor. In August, however, IUPAC's Commission on Nomenclature of Inorganic Chemistry voted to adopt a rule that no element may bear the name of a living person and rejected the nomination.

In addition, the panel selected the name dubnium for element 104, joliotium for 105, and rutherfordium for 106. Elements 107 through 109 will bear the names bohrium, hahnium, and meitnerium, respectively.

The commission's actions still need approval by the IUPAC Council, which will meet in Guildford, England, in August 1995.

"The whole thing is absurd," says Albert Ghiorso, a physicist at Lawrence Berkeley and a codiscoverer of element 106. "Should we honor tradition or allow an ephemeral committee to impose its will on the scientific community? Who cares if the person is alive or dead? The name is what matters. This must be a political thing."

Seaborg, who is "disappointed," told *SCIENCE NEWS* that he nevertheless anticipates "widespread argument around the world over this action" and does not think "it will stand in the long run."

"The idea that an element has never been named after a living scientist is incorrect, since elements 99 and 100 were named

einsteinium and fermium while Einstein and Fermi were alive, though the names were not sanctioned officially until after they had died.

"It's unprecedented," he adds. "It's the first time in history that the discoverers of an element have been denied the privilege of naming it."

"If I'd died last month, they probably would have kept the name," Seaborg said lightheartedly. "My main crime here is still being alive."

IUPAC's recommended element names revealed

Atomic number	Name	Symbol	Voting in favor ^a
101	Mendelevium	Md	20
102	Nobelium	No	20
103	Lawrencium	Lr	20
104	Dubnium	Db	19
105	Joliotium	Jl	18
106	Rutherfordium	Rf	18
107	Bohrium	Bh	20
108	Hahnium	Hn	19
109	Meitnerium	Mt	20

^a Voters were the 20 members of the International Union of Pure & Applied Chemistry's Commission on Nomenclature of Inorganic Chemistry.

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