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Dioxins

Thank you for Philip H. Abelson's editorial concerning "Chlorinated dioxins" (24 June, p. 1337). I am always suspicious of articles regarding toxic chemicals written by either the chemical industry or environmental groups. Abelson's concise, informative synopsis of the dioxin issue is one of the most objective I have read.

KAREN ANN WILSON
City of Clearwater Public Works, Post Office Box 4748, Clearwater, Florida 33518

Facial and Cardiac Anomalies

Further evidence to support the hypothesis of Margaret L. Kirby *et al.* (Reports, 3 June, p. 1059) that occipital neural crest cells give rise to the mesenchyme involved in aorticopulmonary septation is found among individuals with certain malformations of both the heart and the face. Abnormalities in the formation, proliferation, or migration of cells of the cephalic neural crest have profound effects upon the facial features of the developing individual, as evidenced by subjects with holoprosencephaly (*1*). In addition to the well-known facial deformities in these patients, anomalies of the conotruncal region may include persistent truncus arteriosus, transposition of the great vessels, and tetralogy of Fallot (*2*). More subtle changes may be seen in patients with the facies and conotruncal or aortic arch anomalies of the DiGeorge syndrome and the fetal alcohol syndrome. Prominent features of the DiGeorge syndrome include persistent truncus arteriosus, coarctation or interruption of the aorta, mild midfacial dysmorphia (downslanting palpebral fissures, short philtrum), and partial or complete thymic and parathyroid agenesis (*3*). Infants with the fetal alcohol syndrome may have cardiovascular defects within or near the conotruncal region (tetralogy of Fallot, ventricular septal defect, coarctation) and midfacial anomalies (cleft lip or palate or both, midface hypoplasia, short nose, and hypoplastic philtrum and upper vermillion (*4*).

The pivotal role of neural crest cells in craniofacial development and branchial arch development continues to be documented in a variety of experimental animals and humans (*5*). Thus, the association between certain facial and cardiac anomalies and topographically related tissues may well come to be understood as an abnormality originating in the region of the cephalic neural crest and most certainly deserves our continuing attention.

JOSEPH R. SIEBERT
Department of Laboratories, Children's Orthopedic Hospital and Medical Center, Seattle, Washington 98105, and *Department of Anthropology, University of Washington, Seattle 98105*

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R-DNA

The Briefing headline "Congress ponders rDNA and environmental risks" (8 July, p. 136) led me to ponder what hazard to public health was represented by the genes for ribosomal RNA. I was relieved that the topic was recombinant DNA (R-DNA). Whether the letter "r" is lowercase or uppercase clearly makes the topic a different case.

LEA K. BLEYMAN
Department of Natural Sciences, Baruch College, City University of New York, 17 Lexington Avenue, New York 10010

Love Canal

Contrary to what Barbara Culliton reported (Briefing, 17 June, p. 1254), our study of persons living near Love Canal (*1*) did not assess incidence of disease, death, reproductive abnormalities, or cancer. We measured the extent of cytogenetic changes (chromosome aberrations and sister chromatid exchanges) in peripheral blood lymphocytes from current and former residents of the Love Canal area and compared the results with those of residents from a control area. As part of this comparison, all study participants were asked about various past illnesses, medical experiences, and environmental exposures that might have been related to increased chromosome damage and hence have hampered detection of damage resulting from exposure to Love Canal chemicals. Taking into account information about prior illnesses and exposures, we found no statistically significant cytogenetic differences between residents of the Love Canal area and those from the control area.

Several other studies have addressed the question of whether residence near Love Canal is associated with increased frequency of illnesses of various sorts, especially cancer and reproductive abnormalities (*2, 3*). Thus far no firm evidence of increased illness frequency has been found. In this regard, however, absence of cytogenetic differences cannot be taken as evidence (directly, at least) that no differences in risk of illness exist. Our understanding of chromosome aberrations and altered frequencies of sister chromatid exchanges in peripheral blood lymphocytes is not yet sufficient to allow prediction of disease.

C. W. HEATH, JR.
MARION R. NADEL
MATTHEW M. ZACK
ANDREW T. L. CHEN
Centers for Disease Control, Atlanta, Georgia 30333
MICHAEL A. BENDER
Brookhaven National Laboratory, Upton, New York 11973
R. JULIAN PRESTON
Oak Ridge National Laboratory, Oak Ridge, Tennessee 37830

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Erratum: In the report "Sequence of 16*S* ribosomal from *Halobacterium volcanii*, an archaebacterium" by R. Gupta *et al.* (12 August, p. 656), the last sentence of the abstract should read: "Since the *H. volcanii* sequence is closer to both the eubacterial and eukaryotic sequences than these two are to one another, it follows that the archaebacterial sequence is more like the common ancestral sequence than at least one of the other two versions." Also, the sentence beginning on line 6, column 3, page 658, should read: "Although the root of this tree cannot be determined, the data demand that the archaebacterial version be closer to the ancestral version common to all than are one or both of the other two versions."