years 1990 through 1992 chairman, of its Board of Scientific Counselors, I feel compelled to raise this issue.

Intramural research and the postdoctoral training that goes with it have flourished at the NIDR because Abner Notkins, the deposed scientific director, is a person of a major stature in science. He not only has created a prime laboratory of his own but also has raised the standards of all the other laboratories in the institute. The research portfolio of the NIDR—in proportion to its size and budget—has been on a par with those of its larger and richer sister institutes at the National Institutes of Health (NIH). The list of its former trainees is no less impressive. Without exaggeration or hyperbole, one can classify the NIDR as a prime scientific enterprise to which the NIH can point with pride.

Why then should a scientific leader with so meritorious a record be removed by the very person who originally appointed him? I disagree with the argument posited by the director, Harald Löe, in support of his decision that the NIDR's research needs to be more sharply focused on dental concerns. Setting up some criteria of relevance a priori is a prescription for mediocrity!

Much of the research that is conducted at the NIDR is clearly relevant to dental—or in Notkins' view—oral health, and it is of high quality. Notkins, whose contributions to science have been recognized internationally and who has been a devoted and loyal servant of the NIH for the past 30 years, appears to have been fired for a contrived reason.

I am deeply concerned by the anti-intellectual aura that the quest for the so-called dental focus has created. The recent events at the NIDR are nothing short of a tragedy. The Philistines are on the march, and the only relevance to dentistry that has been achieved is a gnashing of teeth by those of us who are helpless as we watch the damage being inflicted.

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Dendrimer Development

In his Research News article "How to drive nucleic acids up a tree" (23 Apr., p. 491), Ivan Amato discusses the intriguing paper by Robert H. E. Hudson and Masad J. Damha "Nucleic acid dendrimers: Novel biopolymer structures," which recently appeared in the *Journal of the American Chemical Society* (*1*). Amato quotes Donald Tomalia as saying that Hudson and Damha's report constitutes "the first time that biological polymers have been synthesized in this architectural form." Polymers we refer to as branched DNAs (bDNAs), not "bRNAs," were reported by us in 1989 (*2*). We described the synthesis of bDNAs, including "forked" structures and a proposed "outburst" approach, in some detail.

Amato also cites Tomalia as saying that "dendrimers based on RNA or other nucleic acids could be designed as diagnostic tools." In fact, they have been. We have reported methods based on the use of bDNA for signal amplification for the detection of *Chlamydia trachomatis*, *Neisseria gonorrhoea*, β-lactamase, and tetracycline resistance (*3*). More recently, we and our colleagues have developed research assays for the detection and quantification of hepatitis B DNA, hepatitis C RNA, and human immunodeficiency virus RNA (*4*). The bDNA design we currently use consists of 15 branches of 66 nucleotides and a single 3′ sequence for 1068 bases total. Indeed, Amato's proposal that biological polymers "might serve as selective fishing hooks capable of snagging those [RNAs]" is correct.

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2. T. Horn and M. Urdea, *Nucleic Acid Res.* **17**, 6959 (1989).
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Supersymmetry Predictions

Some comments are needed on the worthwhile article "Practicing the poor man's brand of particle physics" by Faye Flam (Research News, 30 Apr., p. 622). I strongly endorse the importance of carrying out the experiments looking for electric dipole moments of neutrons and of atoms as a way of getting possibly very significant information about the fundamental questions of particle physics. I also fully agree that supersymmetry is the "physicists' current best hope for extending their understanding of particles and forces."

The article suggests that supersymmetry predicts an electric dipole moment just around the corner, but for rather subtle reasons that is probably not so. More precisely, our present knowledge of the theory does not yet allow us to determine its predictions in these areas, although this is a

subject of active research. The problem is that the simplest form of supersymmetry, with the most natural assumptions, predicts too large an electric dipole moment for the neutron. The simplest way to improve that situation leads to the opposite extreme, where the predicted electric dipole moments are much too small to measure. In-between situations are possible, but no one has yet proved that they are implied by the supersymmetry theory.

Thus a positive experimental result would have major implications because it would tell us some properties of the basic theory, and a negative result would help almost as much by telling us the theory does not have those properties. The results of these "low-budget" experiments would complement the Superconducting Super Collider (SSC) physics. The SSC will detect or exclude most of the new particles predicted by supersymmetry, including the light Higgs boson, and thus arrive at definite conclusions about whether supersymmetry is indeed the next stage of understanding of particles and their interactions. Eventually data from the SSC and other colliders can lead to a basic theoretical description if nature is supersymmetric; but one of the most difficult tasks for the SSC would be getting data on the relative phases of various parts of the basic theory, and it is just these phases to which the complementary information from the electric dipole moment experiments is most sensitive.

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Corrections and Clarifications

In the report "Secondary and tertiary structural effects on protein NMR chemical shifts: An ab initio approach" by Angel C. de Dios *et al.* (4 June, p. 1491), the abscissas of figure 1, B and D, on page 1492 were inadvertently transposed during production. Figure 1B's abscissa should have read, "Cutoff radius (Å)," and figure 1D's abscissa should have read, "Experiment (ppm)."

In John Travis' article "Novel anticancer agents move closer to reality" (Research News, 25 June, p. 1877), work by investigators at the Eisai Research Institute in Andover, Massachusetts, is mentioned. This work will appear in a forthcoming issue of the *Journal of Biological Chemistry*, not the *Journal of Biochemistry*, as implied.

Explanatory material was omitted from the bar graph accompanying the article "World Bank report calls for network to bolster research" by Peter Aldhous (News & Comment, 9 July, p. 155). The y axis should have been labeled "Disability-adjusted life years per 1000 population."

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