Proposed Research Budget a Starting Point

CONGRESS SHOULD FUND THE NATIONAL Science Foundation (NSF), the U.S. Department of Energy, and other research agencies at a much higher rate than proposed by the Bush Administration, as Donald Kennedy urges in his Editorial "A budget out of balance" (23 Mar., p. 2275). However, this goal should not impede the effort to double funding for the National Institutes of Health (NIH) by fiscal year 2003.

Last year the Agency for Healthcare Research and Quality, Centers for Disease Control and Prevention, NSF, and NIH all received historic increases (36%, 28%, 14%, and 14%, respectively), and this year's budget should be no different. The Administration's proposed research budget is the starting point. Already this year, Secretary of State Colin Powell has appointed a science advisor as reinforcement of science's role in national security and global health. President George Bush has set forth a $2.8-billion increase for NIH. Senators Christopher Bond (R-Mo) and Barbara Mikulski (D-Md) have introduced a bill to double funding for NSF over 5 years.

Better health, a growing economy, and improved quality of life are national priorities. Congress needs to hear from the entire science community on how engineering, mathematics, life sciences, and physical sciences are the key to maintaining our world leadership in these areas. The historic national commitment to NIH should set the standard, not be the exception to the rule. Scientists must tell the story of how much progress we are making, how many people are benefiting, and how many programs could be funded. When science delivers this message, Congress delivers on the funding. It's a national mandate when one considers that 85% of those surveyed by Research!America (*1*) say it is very important that the United States maintains its role as a world leader in scientific research. It's a mandate to our elected officials, but even more so, it's a mandate to America's scientific enterprise.

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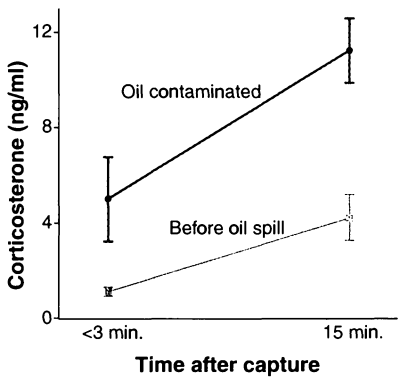
References and Notes
1. Opinion poll results are available at http://www.researchamerica.org/opinions/

Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the previous 6 months or issues of general interest. They can be submitted by e-mail (science_letters@aaas.org), the Web (www.letter2science.org), or regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

Marine Iguanas Oiled in the Galápagos

THE OIL TANKER *JESSICA* RAN ASHORE ON San Cristobal Island in the Galápagos Natural World Heritage Site on 17 January 2001. Several days later, 750,000 gallons of diesel and bunker oil spilled throughout the archipelago. Although few animals died immediately, the long-term effects of oiling might be severe (*1*).



Galápagos marine iguanas affected by the oil spill from *Jessica* (above) showed highly elevated plasma levels of the stress hormone corticosterone (mean ± SE) (*5*).

We have studied marine iguanas (*Amblyrhynchus cristatus*) on Santa Fe Island 32 kilometers west of the oil spill since 1981 (*2*). Marine iguanas eat intertidal algae and are extremely sensitive to environmental perturbations such as El Niños. Three days before the oil spill, we conducted a routine blood sampling survey and then collected samples 10 days later to look for hormonal indications of stress. At this time, oil patches were visible in tide pools throughout the study area, and of the 170 individuals examined, 70% had oil residue on their skin. Plasma levels of corticosterone, the species-specific stress hormone, were highly elevated in animals sampled after the oil spill (see the graph). This was true for baseline (with 3 minutes of capture) and constraint stress–induced levels (*3*). Corticosterone levels were indistinguishable between animals that had externally visible oil blotches [5.0 ± 1.7 nanograms per milliliter (ng/ml)] and those without (4.0 ± 1.5 ng/ml). We suggest that corticosterone was elevated because iguanas ingested oil residues while feeding in polluted intertidal areas.

In marine iguanas, corticosterone levels are linearly related to survival rates (*4*). During an El Niño event, only individuals that died within 2 to 4 weeks after sampling had levels elevated to the same degree as oiled iguanas; thus, marine iguanas appear to be extremely sensitive to oil contamination.

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References and Notes
1. R. T. Paine *et al.*, *Annu. Rev. Ecol. Syst.* **27**, 197 (1996).
2. M. Wikelski *et al.*, *Ecology* **78**, 2204 (1997).
3. Blood samples were taken within 3 minutes of capture, and then animals were restrained in cloth bags

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