Forward Steps for Science

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Source: BioScience, 59(5) : 363

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1525/bio.2009.59.5.1

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BioScience (ISSN 0006-3568; e-ISSN 1525-3244) is published 11 times a year (July/August combined) by the American Institute of Biological Sciences, 1444 I Street, NW, Suite 200, Washington, DC 20005, in collaboration with the University of California Press. Periodicals postage paid at Berkeley, CA, and additional mailing offices. **POSTMASTER:** Send address changes to *BioScience*, University of California Press, Journals and Digital Publishing, 2000 Center Street, Suite 303, Berkeley, CA 94704-1223.

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BioScience

Organisms from Molecules to the Environment

American Institute of Biological Sciences

Forward Steps for Science

The century of biology is almost a tenth complete, and its first decade seems to have delivered more pain than progress. Yet in March, biologists of all stripes were relieved when two scientists with impeccable credentials and broad experience in energy and marine policy—John P. Holdren and Jane Lubchenco—were confirmed as director of the Office of Science and Technology Policy (OSTP) and administrator of the National Oceanic and Atmospheric Administration. Despite the national preoccupation with the country's economic woes, the Senate finally recognized the pettiness of further delay in approving these crucial appointments. Holdren and Lubchenco, together with Steven Chu, the previously sworn-in secretary of energy, should have excellent opportunities to effectively inform US policies in vital areas. The growing threats to ecosystems worldwide—climate change among them—will surely receive full weight in their decisions. Coming just a few days after President Obama had issued a memorandum directing the head of OSTP to guarantee scientific integrity throughout the executive branch, the confirmations reinforce the impression that science is being taken seriously by the new administration.

It is also encouraging that immediately after his confirmation, Holdren publicly praised the investments in innovation contained in the stimulus bill that Congress passed, including funding for research efforts in potentially large-payoff areas such as biotechnology, nanotechnology, renewable energy, and energy efficiency. Many big-picture thinkers hold that breakthroughs in these areas will be needed to mitigate the threats human population growth poses to health and world food supplies. Breakthroughs in biotechnology should also translate into progress against incapacitating and killing diseases, an outcome made more likely now that the president has removed Bush-era restrictions on federal funding for embryonic stem cell research.

Few people oppose medical progress, but critics nonetheless criticized Obama's decision on stem cells for seeming to give scientists a green light to ignore ethical sensitivities. That worry is understandable but seems overblown. Federal research on the cells will go forward only after intense scrutiny and deliberation by governmental advisory bodies. And the president stated that some projects, such as human cloning for reproductive purposes, will remain off-limits. Doubtless others will too.

Yet human embryos are hardly the only living things deserving attention. How the planet can supply food for the burgeoning human population—and do it sustainably and securely—is a question that scientists around the world must seek to answer. To support that search for answers, AIBS has made "Sustainable Agriculture: Greening the Global Food Supply" the topic of its 2009 annual meeting, to be held 18–19 May in Arlington, Virginia; see p. 448 for more information, or visit *www.aibs.org/annual-meeting/annual_meeting_2009.html.*

The biggest problems facing the world cannot be solved by any one country. Nor can they be solved without science. That this White House supports sound science is promising, as are the appointments of scientists who can inform sound policymaking. But another hurdle must be cleared: the public also must understand the nature of science and its value to society to ensure that the best policies are put in place. All biologists can help advance such understanding.

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doi:10.1525/bio/2009.59.5.1