Editorial & Letters

EDITORIAL

Reaching out for World Health

In this century, there have been more gains in public health than in the entire previous history of humankind. Many of the major achievements are due principally to science and scientists—John Snow, Louis Pasteur, Robert Koch, and many others rescued civilization from the dark ages of fear of the unknown and the dread shadow of diseases such as cholera and plague. More recently, the conscience and concern of scientists have often been driving forces in advancing health, enhancing the development of new tools, and stimulating international research and control of major global health problems. Consider an example that spans most of this century: poliomyelitis. Its discovery as an infectious disease, the amplification of the virus in tissue culture, the development of killed and live attenuated vaccines, the strategy for their use through an expanded program of vaccination, the introduction of national immunization days, and recent research into improved safety and monitoring methods have all led to an approaching milestone in global public health—the worldwide eradication of polio.

However, there is little reason for complacency. Victories are often temporary. Our microbial enemies are incredibly adept at developing new defenses and weaponry and at jumping to new species to create new emerging infections. The very progress of our civilization can threaten our health; for example, transportation technology moves millions of people around the world every day, facilitating the spread of epidemics. And political and economic mismanagement can increase the deprivation of populations; today, less than 10% of the global research and development budget is used to address the largest disease burden, which is found among the poorer populations of the world, and we have no effective vaccines against major scourges such as malaria and AIDS.

How can current and future challenges be met? Research is crucial. It is also essential that scientists from different specialities approach problems in an interdisciplinary way. This is a call for talented young scientists from many branches of knowledge to reach out to improve world health and for science policy-makers in governments, agencies, foundations, and industry to underwrite their mission. The stunning pace of change in the health sciences and their engagement with other disciplines such as informatics, chemistry, physics, and social science provide a new opportunity for health in the 21st century. This call is not only for scientists and policy-makers in the industrialized world but also, and perhaps more important, for those in the developing world. The potential, passion, and perception of scientists close to the major problems of world health need to be tapped. This is especially true as the distance between the laboratory and the field continues to shrink rapidly, providing the best-ever scientific opportunity to address global health needs. We should make deliberate use of it, bearing in mind that investment in health is investment in development.

Research networks that span national borders will provide essential support for intensified public health efforts. In this context, I welcome the Multilateral Initiative for Malaria (MIM) research.* The efforts by MIM to accelerate capacity building in Africa will be a cornerstone for the "Roll Back Malaria" program on that continent.† Indeed, research will be an integral part of all World Health Organization (WHO) programs, strategically placed to make a difference where it matters most: on the ground.

I will put great emphasis on the scientific underpinning of policy in a renewed WHO. I intend to establish a separate function, devoted to health information and the development of evidence-based policy. WHO will be a leading advocate for health. In addition to the scientific evidence required for policy setting, WHO will gather information on the needs of researchers and on advances made in research. These will be reported to decision-makers around the world. Health ministers need little convincing, but WHO will remind presidents, prime ministers, finance ministers, and science ministers that they are health ministers themselves, key to bringing the science of health to bear on the well-being of their people. Our message will be that healthy people help build healthy economies.

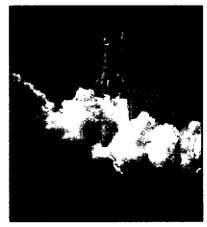
Gro Harlem Brundtland

The author will become Director-General of WHO in July 1998.

*B. Mons, E. Klasen, R. van Kessel, T. Nchinda, *Science* **279**, 498 (1998). †D. N. Nabarro and E. M. Tayler, *ibid.* **280**, 2067 (1998).

LETTERS

Into orbit



NASA

A reader advocates that scientists be considered for diplomatic careers. The work of Spacelab is defended (right, Neurolab's launch). Reconstructions of global temperature patterns are explored and clarified. The history of the "Henneman size principle" is elucidated. And methods for estimating population diversity are discussed.

Scientist-Diplomats

I read with great interest the News & Comment article "State Department sees S&T [science and technology] weaknesses" by Andrew Lawler (15 May, p. 998). The answers to resolving the serious lack of scientific expertise in U.S. foreign policy are simple and straightforward, which suggests why they have remained unfathomable within the gargantuan State Department bureaucracy. Here is a simple and easy-to-follow suggestion: The U.S. State Department should abandon the rather arrogant and somewhat unfounded assumption that the few scientists who are interested in applying for foreign service officer positions lack international affairs knowledge and experience. While it is true that, historically, the American educational system has not promoted broad intellectual development across the boundaries of the sciences, social sciences, and the humanities, this sad condition is not entirely without remedy. There currently exists in the United States a pool, albeit small, of well-trained scientists who have made the effort to develop a comprehensive understanding of foreign affairs. The entire American foreign policy process suffers if these individuals are not considered for careers in the foreign service.

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Spacelab's Worth

In the article "Research drought looms after Neurolab mission"(News & Comment, 24 Apr., p. 515) Andrew Lawler presents nega-