CONTACT SCIENCE

Letters to the Editor
May be submitted via e-mail (at science_letters @aaas.org), fax (202-789-4669), or regular mail (*Science*, 1200 New York Avenue, NW, Washington, DC 20005, USA). Letters are not routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for clarity or space. They may appear in print and/or on the Internet. Letter writers are not consulted before publication.

Subscription Services
For change of address, missing issues, new orders and renewals, and payment questions, please contact AAAS at Danbury, CT: 800-731-4939 or Washington, DC: 202-326-6417, FAX 202-842-1065. Mailing addresses: AAAS, P.O. Box 1811, Danbury, CT 06813 or AAAS Member Services, 1200 New York Avenue, NW, Washington, DC 20005 • Other AAAS Programs: 202-326-6400

Member Benefit Contacts
For Credit Card: MBNA 1-800-847-7378; Car Rentals: Hertz 1-800-654-2200 CDP#343457, Dollar 1-800-800-4000 #AA1115; AAAS Travels: Betchart Expeditions 1-800-252-4910; Life Insurance: Seabury & Smith 1-800-424-9883; Other Benefits: AAAS Member Services 1-202-326-6417.

Reprints
Ordering/Billing/Status 800-407-9190; **Corrections** 202-326-6501 **Permissions** 202-326-7074, FAX 202-682-0816

Internet Addresses
science_editors@aaas.org (for general editorial queries); science_news@aaas.org (for news queries); science_letters@aaas.org (for letters to the editor); science_reviews@aaas.org (for returning manuscript reviews); science_bookrevs@aaas.org (for book review queries); science@science-int.co.uk (for the Europe Office); membership@aaas.org (for member services); science_classifieds@aaas.org (for submitting classified advertisements); science_advertising@aaas.org (for product advertising)

Information for Contributors
See pages 99 and 100 of the 1 January 1999 issue or access www.sciencemag.org/misc/con-info.shtml.

Editorial & News Contacts
North America 1200 New York Avenue, NW, Washington, DC 20005 Editorial: 202-326-6501, FAX 202-289-7562 News: 202-326-6500, FAX 202-371-9227 • Bureaus: Berkeley, CA: 510-841-1154, FAX 510-841-6339, San Diego, CA: 760-942-3252, FAX 760-942-4979, Chicago, IL: 312-360-1227, FAX 312-360-0537
Europe Headquarters: Bateman House, 82-88 Hills Road, Cambridge, UK CB2 1LQ; (44) 1223-326500, FAX (44) 1223-326501 Paris Correspondent: (33) 1-49-29-09-01, FAX (33) 1-49-29-09-00
Asia News Bureau: Dennis Normile, (81) 3-3335-9925, FAX (81) 3-3335-4898; dnormile@twics.com • Japan Office: Asca Corporation, Eiko Ishioka, Fusako Tamura, 1-8-13, Hirano-cho, Chuo-ku, Osaka-shi, Osaka, 541 Japan; (81) 6-202-6272, FAX (81) 6-202-6271; asca@os.gulf.or.jp • China Office: Hao Xin, (86) 10-6255-9478; science@public3.bta.net.cn • India correspondent: Pallava Bagla, (91) 11-271-2896; pbagla@ndb.vsnl.net.in

Basic Research in China

Zhu Lilan

Although ancient China contributed greatly to many of the world's major scientific and technological developments, it fell behind Western countries starting with the late Ming Dynasty. With the founding of the People's Republic, China's science and technology sector started to grow rapidly. During the past four decades, China has successfully set up a modern science and technology system whose research capability is more advanced than that of other developing countries and even reaches international levels in some areas. But China's infrastructure for basic research still has a long way to go before it catches up with the developed world.

Some of the measures China has already undertaken to promote basic research include setting up the National Natural Science Foundation and about 156 national key laboratories as well as many ministry-affiliated laboratories. Among China's advanced research facilities are the Beijing Electron-Positron Collider, the Lanzhou Heavy Ion Accelerator, an aerodynamic testing facility, and several large telescopes. Chinese scientists have made significant international achievements in the areas of high-temperature superconductors, condensed-matter physics, genetic engineering, and East Asian Monsoon research. In the emerging disciplines such as molecular biology, surface chemistry, surface physics, nonlinear sciences, and earth system sciences, rapid progress has also been made.

China is now promoting basic research to improve its stature in world science.

The number of publications authored by mainland Chinese scientists in major international academic journals has been increasing yearly, ranking 20th in the world in 1985, 11th in 1996, and 9th in 1997. In terms of articles indexed by Science Citation Index (SCI), China ranked 14th in 1996 and 12th in 1997.

Even with these achievements, China's scientific development is still far behind that of the developed world. In 1996, the number of publications authored by mainland Chinese scientists and indexed by SCI was only 5% of that of U.S. scientists and 19% of that of British scientists. China is internationally competitive in only about 5% of basic science fields and enjoys a relatively high level of performance in only about 20% of these fields. Basic research in China faces problems because of the lack of innovations and major breakthroughs with an international impact, the lack of an effective mechanism for optimal personnel flow, and the lack of young people involved in basic research.

To help alleviate these problems, the Chinese government has created the "State Key Program of Basic Research," identifying the targets and tasks of Chinese basic research up to the year 2010. As part of this program, we hope to carry out multidisciplinary research to address key problems arising in national economic and social development and in science and technology development, in such areas as agriculture, energy, information, resources and the environment, population and health, and materials. We also hope to set up a number of world-class scientific projects that represent China's comprehensive science and technology capability, to train high-caliber innovative scientists, and to establish a group of high-level research bases that can undertake key national science and technology tasks.

China expects to improve its processes for selecting research projects, allocating funds, and publishing results, as well as its systems for academic evaluation and conferring awards, to make them more effective and fair. Even with limited financial resources, we plan to provide adequate technical and logistical support for conducting basic research. To create an environment for innovation, we will emphasize selecting and fostering research leaders who will then be able to balance national science priorities and policies with academic autonomy. And we will encourage scientists to cooperate with international partners.

With the continuing development of the Chinese economy, we will increase our input into basic research step by step. I believe that, as long as we uphold the strategy of "revitalizing the nation through science and education," China's basic research will catch up with the advanced level of the developed world by the middle of the next century. The Chinese people will undoubtedly make new contributions to world scientific development.

The author is the minister of science and technology of the People's Republic of China.