

National Cancer Institute

A female scientist with dark hair pulled back, wearing a white lab coat, is shown in profile, looking down at a small vial with a white cap containing a red liquid. She is in a laboratory setting, with shelves of other vials and equipment visible in the background. The image is partially overlaid with a purple graphic element on the right side.

Office Of China
Cancer Programs

U.S. DEPARTMENT
OF HEALTH AND
HUMAN SERVICES

National Institutes
of Health



About OCCP

The Office of China Cancer Programs (OCCP) of the National Cancer Institute (NCI) promotes, supports, and informs the development of cooperative research projects between U.S. and Chinese scientists, research teams, and institutions to accelerate progress against cancer.

Now is a unique time for the NCI to build cooperation in China, as the Chinese Government has made substantial investments in several areas of science and technology, and many Chinese scientists who have trained in the United States are returning to China to assume leadership positions in key research institutions. This provides the opportunity both to work with world-class scientists and to participate in the development of China's biomedical research enterprise.

Mission

OCCP promotes, supports, and informs the development of cooperative research projects between U.S. and Chinese scientists, research teams, and institutions to accelerate progress against cancer. OCCP works with the Fogarty International Center of the National Institutes of Health (NIH) and NCI Offices and Divisions to increase awareness of the cancer research enterprise in China, and to build sustainable partnerships in the areas of basic, translational, and clinical research and research training.

OCCP Roles

OCCP has three primary functions:

New Program Development

- Assists the NCI leadership in identifying, prioritizing, and implementing new cancer research activities in China
- Convenes workshops and conferences of U.S. and Chinese experts in scientific areas of high priority and mutual interest to build new collaboration in research and research training
- Develops new guidelines, policies, resources, and mechanisms to support cooperation

Outreach

- Disseminates information about NCI priorities, plans, programs, policies, and initiatives to biomedical research leaders in China
- Represents the NCI in China

Facilitation

- Identifies important cancer research initiatives in China
- Identifies opportunities for collaboration in cancer research between the United States and China
- Supports and enables scientific activities for key NCI and NIH staff visiting China

Cancer Research in China

Cancer Burden in China

Each year, approximately 2.2 million Chinese citizens are diagnosed with cancer and 1.6 million die from the disease.¹ A 2008 national mortality survey estimated that cancer accounts for 25% of deaths in urban areas of China and 21% of deaths in rural areas. The growing burden of cancer in China is attributable to several factors, including an aging population, dietary changes, environmental hazards, certain infectious diseases associated with cancer, and smoking. As in the United States, lung cancer is the most common cause of cancer-related death in China, but liver, stomach, and esophageal cancers are the next most deadly cancers in China as contrasted with breast, prostate, and colon cancer in the United States.²

Achievements to Date

In January 1979, U.S. President Jimmy Carter and China's leader Deng Xiaoping signed the U.S.–China Agreement on Science and Technology, initiating government-to-government research and exchange programs that continue to this day. Later that year, the Director of the NCI visited the Chinese Academy of Medical Sciences (CAMS) to establish a framework for cancer research collaboration between the United States and China.

Since that time, NCI Intramural and NCI-supported extramural researchers have worked with several top institutions in China on collaborative efforts that have provided unique opportunities to understand cancer disease mechanisms and quantify risk factors by providing access to:

- Groups that are afflicted with cancers more common in China than in the United States
- Populations that have been exposed to chemical and/or infectious agents that increase cancer risk
- Cohorts with unique dietary habits that may affect susceptibility to cancer

Research

NCI-supported researchers work with many institutions in China including the Chinese Center for Disease Control and Prevention, Chinese Academy of Sciences, CAMS, and many universities. These research collaborations have resulted in several outstanding achievements, including:

- Informing the development of new regulations to lower benzene occupational exposure in China and affecting the risk assessment process and regulatory action for benzene exposures in the U.S. based on studies of benzene exposure in Chinese factories.

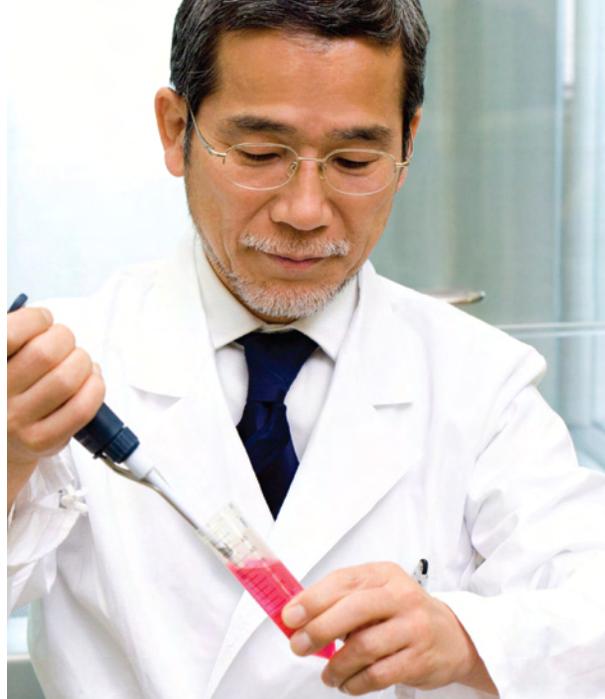
¹ Derived from International Agency for Research on Cancer, GLOBOCAN 2002 database.

² GLOBOCAN 2002 combined data for males and females.

- Contributing to the International Agency for Research on Cancer designation of household combustion of “smoky coal” as a human carcinogen.
- Identifying cancer prevention strategies for esophageal and gastric cancers.
- Investigating tobacco use prevention programs in China.
- Evaluating traditional Chinese medicine approaches, such as acupuncture and herbal formulas, for decreasing side effects associated with cancer, and investigating botanicals with anti-cancer properties.
- Conducting studies about the role of environmental exposures and p53 mutations in liver carcinogenesis.

Training

Since passage of the National Cancer Act of 1971, NCI has taken seriously its statutory mandate to support the training of foreign scientists in the United States. In FY 2008, the institute welcomed 926 visiting scientists from 84 countries who trained as fellows in NCI’s laboratories and clinics or took intensive summer courses. China currently sends the most visiting scientists to NCI each year. Many of these Chinese scientists that trained in the United States return to leadership positions in China. This exchange strengthens the relationship between our two countries—facilitating communication and mutual understanding. The connections formed among U.S. and Chinese colleagues create additional opportunities for collaboration.



Developing New Partnerships in China

There are several approaches to creating new research partnerships in China. Many projects evolve from discussions between individual Chinese and American scientists at international scientific meetings, between researchers who have trained in the United States and their former mentors, or among U.S. and Chinese scientists who work together to organize scientific workshops. In recent years, Chinese and foreign scientists have launched joint research institutes co-led by Chinese and international directors. OCCP is developing several key cancer research contacts in China and provides information to NCI-supported scientists about possible partnership opportunities.

U.S. and Chinese funding agencies maintain several funding programs to support international research collaboration. In addition, international funding agencies are increasingly working together to issue joint calls for proposals in scientific areas of common interest. For more information about specific funding opportunities please see <http://occp.cancer.gov>.

Future Opportunities for Research Partnerships in China

China's investment in science and technology has increased rapidly in the past decade and accounts for an estimated 1.5% of its GDP in 2010. This growth provides a tremendous opportunity for NCI to expand collaborations with China. In addition, researchers in the United States and China share several common cancer research priorities both in scientific areas addressed through previous collaborations and in several new areas surrounding the development of the future of personalized cancer medicine. NCI is working to support U.S.-based principal investigators and institutions to create new research partnerships with Chinese scientists in several key areas of mutual interest, including:

Biobanking

Working towards common technical, operational, and ethical principles for biobanking on an international basis.

Cancer Genomics

Studying rare cancers and investigating genetic differences between geographically-diverse populations that may affect cancer risk, progression, outcome, and/or drug response.

Computational Biology and Informatics

Developing innovative approaches to analyze and integrate data generated from large-scale cancer genomics efforts.

Cancer Nanobiology and Nanomedicine

Advancing research progress in use of nanomaterials for oncology applications, pre-clinical research, and safety and standardization of nanomaterials.

Clinical Research

Accelerating patient enrollment for cancer clinical trials.

Environmental Pollutants and Cancer

Exploring the various differences in environmental exposures between the United States and China.

NCI is employing a phased approach to support U.S.-based scientists and institutions to expand activities with top researchers in China in these and other areas by

- Completing due diligence, feasibility assessment, and pilot project design
- Launching pilot projects
- Evaluating these efforts to develop mature collaborative scientific programs



For More Information

If you have any questions or need more information about cancer research collaborations between NCI and scientists in China, contact OCCP at the e-mail address and phone number below. Please include your e-mail address and telephone number.

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