世界卫生组织
媒介生物监测与管理合作中心
WHO Collaborating Centre for Vector Surveillance and Management

2012年10月23日世界卫生组织（WHO）命名中国疾病预防控制中心传染病预防控制所媒介生物控制室为世界卫生组织媒介生物监测与管理合作中心（WHO Collaborating Centre for Vector Surveillance and Management），任命刘起勇研究员为合作中心主任，任期四年。

合作中心主要职责

- 基于媒介生物综合管理（IVM）原理，为建立和完善全球媒介生物性疾病监测和管理策略及指南提供技术支持；
- 开展WHO登革热媒介监测与管理培训；
- 为世界卫生组织农药评估计划（WHOPES）开展公共卫生杀虫剂测试和评价，促进其正确使用和管理；
- 在有需要时提供鼠类控制及其他体表寄生虫和鼠传疾病控制技术支持。

合作中心主任

刘起勇研究员，博士生导师，首席科学家（973），中华预防医学会媒介生物学及控制分会主任委员，中国实验动物学会媒介实验动物专业委员会主任委员，世界卫生组织媒介生物控制专家，媒介生物控制创新联盟（IVCC）理事，亚洲新发传染病研究伙伴组织常务理事。长期从事媒介生物学与控制技术研究。

人力资源

合作中心现有职工15人，其中研究员3人，副研究员5人，助理研究员3人，副主任技师3人，技工1人。

合作中心现有博士生导师1人，硕士生导师2人。2004年至今培养毕业研究生43位（博士6人，硕士37人），目前有18位在读研究生（博士5人，硕士13人）（均包括联合培养），博士后1人。近十年共接受省市疾控系统60多名，香港2人、澳门2人，美国2人专业技术人员进修。

合作中心下设功能组及负责人

1.	病媒生物监测、预警与应急反应组	刘起勇
2.	病媒生物抗药性及媒介实验动物组	孟凤霞
3.	兽类媒介控制组	鲁　亮
4.	媒介生物分类与控制组	吴海霞
5.	巴尔通体等病原检测与媒介效能评价组	刘起勇
6.	蚊类媒介控制组	郭玉红
7.	卫生杀虫药械评价组	任东升
8.	疟疾消除媒介按蚊控制组	刘起勇

条件设施

合作中心有6个媒介生物饲养室、2个卫生杀虫剂生物测定实验室、2个病媒生物人工气候模拟实验室、1个病媒生物抗药性实验室、1个昆虫鉴定与标本制作室、1个兽类鉴定与标本制作室、3个BSL-2实验室、1个细胞培养室、1套分子生物学实验室、1个菌毒种保藏室、1个样品储藏室及其它配套实验室。

实验室饲养有蚊、蜱、蚤、蝇、蟑螂和臭虫等15种共26个品系的实验用媒介生物（见下表）

种　类 Species		品　系 Strains	
		敏感 Sensitive	抗性 Resistance
白纹伊蚊	*Aedes albopictus*	2	1（PY）
埃及伊蚊	*Aedes aegypti*	1	
中华按蚊	*Anopheles sinensis*	1	
淡色库蚊	*Culex pipiens pallens*	3	1（PY）
三带喙库蚊	*Culex tritaeniorhynchus*	1	
家蝇	*Musca domestica*	2	3（DDT, PY）
德国小蠊	*Blatella germanica*	2	
美洲大蠊	*Periplaneta americana*	1	
温带臭虫	*Cimex lectularius*	1	
猫栉首蚤	*Ctenocephalides felis felis*	2	
印鼠客蚤	*Xenopsylla cheopis*	1	
缓慢细蚤	*Leptopsylla segnis*	1	
长角血蜱	*Haemaphysalis longicornis*	1	
中华硬蜱	*Ixodes sinensis*	1	
血红扇头蜱	*Rhipicephalus sanguineus*	1	

合作中心可开展媒介生物的分类学、生物学、生态学、病原学、分子生物学、流行病学、毒理学、控制技术和策略研究，是农业部认证的卫生杀虫剂检测资质单位，可进行进行多种剂型杀虫剂的药效和毒力测定，监控器械评价，及其模拟现场的生物测定等。

媒介生物监测平台

全国重要病媒生物监测系统：监测覆盖19个省（自治区、直辖市）的43个市的100多个区/县，是中国疾控中心“重点传染病与病媒生物监测”系统之一。

全国重要病媒生物抗药性监测系统：监测覆盖30个省（自治区、直辖市）的重要病媒生物抗药性监测。

合作中心编制了各种标准操作规程，制定了多项病媒生物监测与控制的方案，并建立了国家重要病媒生物监测预警及重要病媒生物交互检索等网络平台。

科学研究

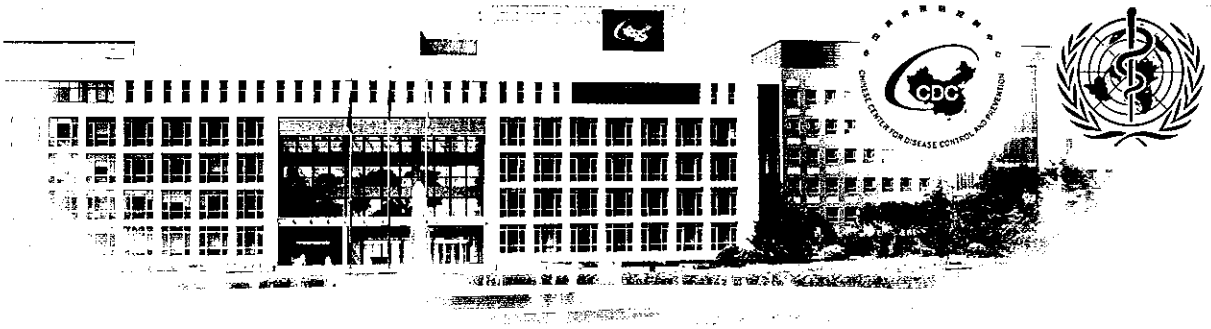
合作中心承担了国家重大科学研究计划（973）、国家科技攻关、传染病国家科技重大专项、国家科技支撑计划、国家卫生行业科研专项、国家自然科学基金等十余个国家级科研项目，发表论文500余篇，出版著作10余部。

疾控应急反应

近年来，合作中心人员多次参加国内外突发事件及病媒生物相关疫情处置，如2004东南亚海啸卫生救援，2006年非洲基孔肯雅热大流行的应对，2006–2014年国内多次登革热暴发应急处置、2007蒙古鼠疫等人兽共患病应对，2008年“5•12”汶川特大地震救灾防病，2010年“4•17”玉树抗震救灾防病，2010我国基孔肯雅热疫情处置，青藏铁路卫生保障，疟疾消除国家示范点等几十项疾控工作，出色地完成了任务，获得多项奖励。

通讯地址：北京市昌平区昌百路155号（102206）
电话：010-58900741 传真：010-58900739
E-mail: whoccvsm@icdc.cn; whoccvsm@chinacdc.cn
网址：http://www.chinavbc.cn

WHO Collaborating Centre
for Vector Surveillance and Management



WHO Collaborating Centre for Vector Surveillance and Management

On 23 October 2012, the World Health Organization (WHO) designated the Department of Vector Biology and Control of National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control and Prevention (China CDC) as the WHO Collaborating Centre for Vector Surveillance and Management. Professor Qiyong Liu was appointed as the director of the collaborating centre for a four-year term.

Terms of reference of the collaborating centre

- To provide technical support on development of global strategies and guidance on surveillance and management of vector-borne diseases based on principles of integrated vector management;
- To conduct WHO certified training on dengue vector management;
- To support testing and evaluation of public health pesticides and their sound management for WHOPES;
- To provide technical support for rodent control (plague) and control of other ecto-parasites and rodent-borne diseases as and when necessary.

Director of the collaborating centre

Professor Qiyong Liu, Supervisor of PhD Candidates, Chief Scientist of 973 Program, Chairman of the Society for Vector Biology and Control, CPMA, Chairman of the Society for Vector Laboratory Animal, CALAS, WHO Vector Control Expert, Trustee of Innovative Vector Control Consortium (IVCC), and executive member of the Council of Asian Partnership on Emerging Infectious Diseases Research, has long been engaged in vector biology and control research.

Human Resources

The collaborating centre has 15 staff members, including 3 professors, 5 associate professors, 3 assistant professors, 3 associate chief technicians, and a supporting worker.

The collaborating centre has 1 supervisor of PhD candidates and 2 supervisors of Masters candidate. 6 PhD and 37 Masters students have graduated from the centre since 2004; currently, there are 5 PhD and 13 Masters candidates (including those in joint PhD and Masters programs) and 1 postdoctoral fellow in the centre. Over the past decade, more than 60 professionals from provincial and municipal disease control sectors, as well as 2 from Hong Kong, 2 from Macau, and 2 from USA, received professional training here.

Functional groups and persons in charge in the collaborating centre

Group of Vector Surveillance, Early Warning and Emergency Response	Qiyong Liu
Group of Pesticide Resistance and Vector Laboratory Animals	Fengxia Meng
Group of Rodent Control	Liang Lu
Group of Vector Taxonomy and Control	Haixia Wu
Group of Bartonella Detection and Vectorial Capacity Evaluation	Qiyong Liu
Group of Mosquito Control	Yuhong Guo
Group of Hygienic Insecticide and Equipment Evaluation	Dongsheng Ren
Group of Malaria Elimination and Anopheles Control	Qiyong Liu

Facilities

In the collaborating centre, there are 6 insectaries, 2 bioassay laboratories for hygienic insecticides, 2 climate simulation chambers, 1 pesticide resistance research laboratory, 1 insect identification and specimen preparation room, 1 rodent identification and specimen preparation room, 3 BSL-2 laboratories, 1 cell culture chamber, 1 set of molecular biology laboratory, 1 culture collection room, 1 sample storage room, and other supporting laboratories.

A total of 26 laboratory strains of 15 species of vectors are reared, including 5 species of mosquitoes, 3 species of ticks, 3 species of fleas, 2 species of cockroaches, 1 species of fly, and 1 species of bedbug (See the table on the other side).

WHO Experts and the staff in the center
WHO专家与合作中心人员

Climate Simulation Chamber
人工气候模拟实验室

The researches on the taxonomy, biology, ecology, etiology, molecular biology, epidemiology, toxicology, and control technologies and strategies for vectors can be carried out in the collaborating centre. The centre is one of the units for hygienic insecticide evaluation authorized by the Ministry of Agriculture of China; also, determination of the efficacy and toxicity of various insecticides, vector surveillance equipment evaluation, and simulated field bioassay can been done in the centre.

Vector surveillance platform

National principal vector surveillance system: covering more than 100 districts or counties of 43 cities in 19 provincial regions. It is one of the "the principal infectious disease and vector surveillance" systems of the China CDC.

National surveillance system for pesticide resistance of principal vectors: covering 30 provincial regions.

The collaborating centre has developed a variety of standard operating procedures, established a number of vector surveillance and control schemes, and set up national network platforms for the surveillance & early warning and interactive retrieval of principal vectors.

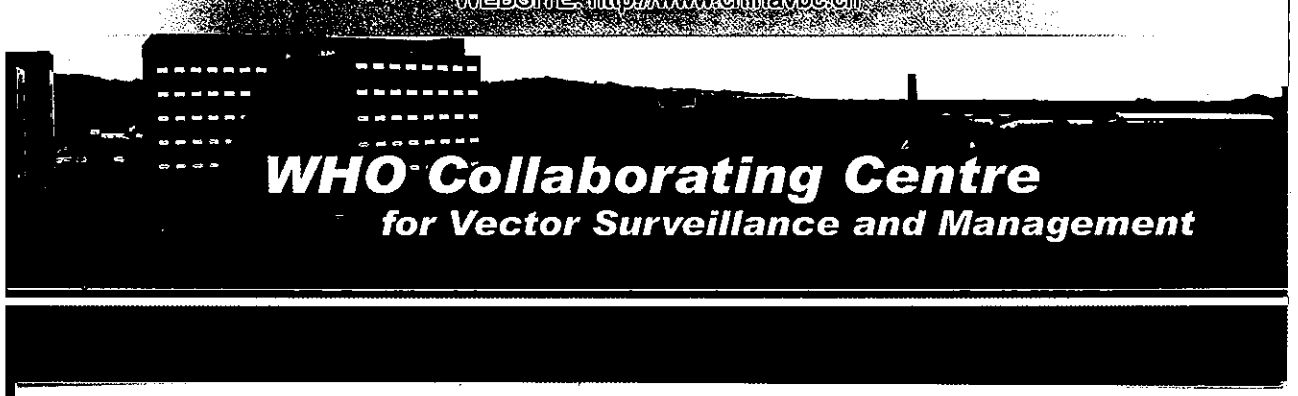
Scientific research

The collaborating centre took on more than 10 national scientific research projects, such as those supported by National Basic Research Program of China (973), National Programs for Science and Technology Development, Special Infectious Disease Program of MOST, National Science and Technology Support Program, Special Program in the national health sector, and National Natural Science Foundation, and published more than 500 papers and more than 10 books.

Disease control and emergency response

In recent years, the staff members of the collaborating centre have participated many times in the disposal of emergency events and epidemic outbreaks of vector-borne diseases in China and abroad, such as tsunami in Southeast Asia in 2004, Chikungunya fever outbreak in Africa in 2006, several dengue fever outbreaks in China between 2006 and 2014, plague outbreak in Mongolia in 2007, earthquake in Wenchuan, China on 12 May 2008, earthquake in Yushu, China on 17 April 2010, and Chikungunya fever outbreak in Guangdong Province, China in 2010. In addition, they undertook the disease control in the area along the Qinghai-Tibet Railway and the model site for malaria elimination in Henan Province, China. The collaborating centre fulfilled all the disease control tasks and received deserved awards.

ADDRESS: 155 Changbai Road, Changping District, Beijing, P.R. China 102206
TEL: 86-10-58900741 FAX: 86-10-58900739
E-MAIL: whoccvsm@icdc.cn, whoccvsm@chinacdc.cn
WEBSITE: http://www.chinavbc.cn



WHO Collaborating Centre
for Vector Surveillance and Management