

DEFENSE

Cooperative Research Projects

**Agreement Between the
UNITED STATES OF AMERICA
and SINGAPORE**

Signed at Singapore and Washington
July 20 and August 14, 2009



NOTE BY THE DEPARTMENT OF STATE

Pursuant to Public Law 89—497, approved July 8, 1966
(80 Stat. 271; 1 U.S.C. 113)—

“ . . .the Treaties and Other International Acts Series issued under the authority of the Secretary of State shall be competent evidence . . . of the treaties, international agreements other than treaties, and proclamations by the President of such treaties and international agreements other than treaties, as the case may be, therein contained, in all the courts of law and equity and of maritime jurisdiction, and in all the tribunals and public offices of the United States, and of the several States, without any further proof or authentication thereof.”

SINGAPORE

**Defense: Cooperative Research
Projects**

*Agreement signed at Singapore and Washington
July 20 and August 14, 2009;
Entered into force August 14, 2009.*

**AGREEMENT BETWEEN THE
DEPARTMENT OF DEFENSE OF THE UNITED STATES OF AMERICA
AND THE
MINISTRY OF DEFENSE OF THE REPUBLIC OF SINGAPORE
RELATING TO COOPERATIVE RESEARCH PROJECTS FOR SURVEILLANCE OF
MALARIA DRUG RESISTANCE**

**ARTICLE I
INTRODUCTION**

The Department of Defense of the United States of America (U.S. DoD) and the Ministry of Defense of the Republic of Singapore (MINDEF), pursuant to the Strategic Framework Agreement Between the United States of America and the Republic of Singapore for a Closer Cooperation Partnership in Defense and Security, signed in Washington DC, on 12 July 2005, agree to establish Surveillance for Malaria Drug Resistance as a cooperative medical research project. The terms of the Strategic Framework Agreement between the United States of America and the Republic of Singapore for a Closer Cooperation Partnership in Defense and Security Agreement shall govern the execution of this Agreement.

**ARTICLE II
DEFINITION OF ABBREVIATIONS**

| | |
|---------|--|
| DMERI | Defence Medical and Environmental Research Institute, a research entity of DSO |
| DSO | DSO National Laboratories, Singapore |
| DSTA | Defence Science and Technology Agency, a statutory board of MINDEF, Singapore |
| MINDEF | Ministry of Defence, Singapore |
| HQMC | Headquarters Medical Corps, Singapore Armed Forces |
| SAF | Singapore Armed Forces |
| DoD | Department of Defense, USA |
| NAMRU-2 | Naval Medical Research Unit Two, a research entity of DoD |
| NMRC | Navy Medical Research Center, a research entity of DoD |
| GEIS | Global Emerging Infectious Disease Surveillance and Responses, DoD |
| USN | United States Navy |
| RDT&E | Research, Development, Testing, and Evaluation Project |

ARTICLE III OBJECTIVES

The objective of this Agreement is to facilitate cooperation between the U. S. DoD and the MINDEF of the Republic of Singapore to conduct collaborative biomedical RDT&E projects on malaria drug resistance. The specific objectives of this Agreement are:

1. To establish a joint surveillance network to determine the species of malaria parasite and the drug resistance profile of imported infections in Singapore.
2. To conduct molecular marker testing on malaria parasites imported from different geographical regions to monitor the polymorphisms associated with antimalarial drug resistance.
3. To conduct in vitro drug susceptibility testing on malaria parasites imported from different geographical regions to monitor intrinsic parasite drug sensitivity (ED50).

ARTICLE IV SCOPE OF WORK

The following work shall be performed under this Agreement:

1. Phase 1 will be to identify and establish collaboration with hospitals and physicians in Singapore to participate in the malaria surveillance project and to establish laboratory capability, standard operating procedures (SOPs) and protocols, and monthly reporting formats.
2. Phase 2 will be to conduct training of laboratory personnel to perform laboratory assays according to laboratory SOP and to establish a laboratory proficiency programme with participating US DoD laboratories.
3. Phase 3 will be daily operations of the joint surveillance network and providing annual reports on the activities, performance and achievements of the joint surveillance network. **The collection of specimens for this project will be governed by Institutional Review Board (IRB) protocol approved by Singapore and reviewed by the U.S.**

**ARTICLE V.
SHARING OF TASKS**

The sharing of tasks shall be as follows:

The MINDEF agrees to provide the following:

- 1. Review, submit and obtain IRB approval. Provide approval documentation to the U.S. for review.**
2. Collect clinical and epidemiological and specimen from patients with confirmed malaria diagnosis.
3. Provide laboratory personnel for training and performance of laboratory assays and procedures.
4. Participate in the laboratory proficiency program with participating US DoD laboratories.

The U.S. DoD agrees to provide the following:

- 1. Review the IRB protocol in accordance with SECNAVINST 3900.39D.**
2. Provide standardized laboratory assays and protocols used by DoD laboratories for identification, molecular genotyping and in vitro drug susceptibility testing for characterization of malaria parasites.
3. Provide laboratory personnel with hands-on training on the conduct and performance of designated laboratory assays and protocols.
4. Provide standardized antimalarial drugs and detection capability for performance of in vitro drug resistance testing using established fluorescent detection methods.

The MINDEF and the DoD agree to jointly provide the following:

1. Identify laboratory assays and protocols to support implementation of the objectives of this project and identify job functions for DMERI, DSTA, and NAMRU-2 personnel.
2. Assist in establishing laboratory capability at DMERI.
3. Preparation of reporting procedures and generation of annual reports on the activities, performance and achievements of the joint surveillance network.

ARTICLE VI
BREAKDOWN AND SCHEDULE OF TASKS

1. The project shall proceed according to the following concurrent phases and schedule:

2. Phase I Duration
a. Establish project management responsibilities and timelines 3 months

(1) Complete study proposal and establish collaboration with hospitals and clinics.

(2) Update and verify job functions for DMERI, NAMRU-2, and hospital investigators and staff.

(3) Develop IRB Protocol.

3. Phase II. 3 months
a. Establish laboratory support capabilities

(1) Obtain IRB Approval and recruit subjects.

(2) Procure reagents and equipment.

(3) Establish laboratory protocols for blood collection, shipping and delivery to the laboratory, microscopy, molecular marker testing, and in vitro drug sensitivity tests.

(4) Conduct laboratory hands-on training of laboratory assays and analysis.

(5) Establish reporting procedures and laboratory proficiency programme.

3. Phase III 30 months

a. Initiate **the study in accordance with the approved IRB** protocol and maintain laboratory operations and reporting procedures.

(1) Coordinate and execute collection of samples, laboratory activities and reporting, and participation in proficiency programme.

(2) Provide annual review reports.

4. The project is expected to be completed 31 months from the date of commencement 1.

ARTICLE VII
MANAGEMENT

1. This Agreement shall be directed and administered on behalf of the Parties by one Project Officer (PO) from each Party. The POs are:

US PO: Dr. Gary T. Brice, LCDR, MSC, USN
Title/Position: Head, Department of Immunology
Organization: Naval Medical Research Unit No. 2
Singapore Detachment, Office of Defense Cooperation
Address: Unit 4281 Box 21
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Phone: (+65) 6476-9250
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Singapore PO: Dr Eng Eong Ooi
Title/Position: Programme Director
Biological Defense Programme
Organization: Defence Medical Environmental Research Institute
DSO National Laboratories, Kent Ridge
Address: 27 Medical Drive
Singapore 117510
Tel: (+65) 6485-7238
Fax: (+65) 6485-7262
Email: oengeong@dso.org.sg

ARTICLE VIII
FINANCIAL PROVISIONS

Each Party will pay for its own expenses resulting from efforts undertaken pursuant to this Agreement.

ARTICLE IX
CLASSIFICATION

The existence of this Agreement and its contents is UNCLASSIFIED. No Classified Information shall be exchanged under this Agreement

ARTICLE X
PRINCIPAL ORGANIZATIONS INVOLVED

1. The United States of America: Naval Medical Research Unit No. 2, Singapore Detachment United States Navy
2. Republic of Singapore:
 - a. Defence Medical and Environmental Research Institute, DSO National Laboratories

ARTICLE XI

**ENTRY INTO FORCE, DURATION
AND TERMINATION**

1. This Agreement shall enter into force upon signature by the Agreement Management Agents, and shall remain in force for three years unless terminated by either Party. It may be extended by written agreement of the Parties.

2. IN WITNESS WHEREOF the undersigned, duly authorized by their respective Governments, have signed this Agreement.

Done in duplicate, this 14th day of August 2009.

For the U. S. MA

For Singapore MA

A. M. Robinson, Jr.

TAN PENG YAM

Signature

Signature

A. M. ROBINSON, JR, VADM, MC, USN

TAN PENG YAM

Name

Name

Surgeon General of the Navy

Deputy Chief Executive (Operations)
Defence Science & Technology Agency

Title

Title

14 August 2009

20 July 2009

Date

Date

United States of America

Republic of Singapore

Location

Location