

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
THE WALTER REED ARMY INSTITUTE OF RESEARCH  
AND  
THE NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION**

The Walter Reed Biosystematics Unit (WRBU), an off-site component of the Walter Reed Army Institute of Research (WRAIR) and the United States Army Medical Research and Materiel Command (USAMRMC), and their predecessors; and the Department of Entomology (DOE), National Museum of Natural History (NMNH), Smithsonian Institution (SI), have worked together effectively since 1961. During that time, the NMNH Mosquito Collection has developed into the largest in the world, comprising over 1.5 million specimens. The missions of these organizations are separate and distinct, though complementary. Both groups of scientists conduct basic research and provide critical information and scientific services to academic visitors, government agencies and the general public. In addition, WRBU has the further charge of enhancing research tools and information dissemination on medically important arthropods of interest to the Military.

This document outlines the basis for this cooperation, delineating responsibilities and describing the types of contributions expected by both parties. It provides a formal definition governing the exceptionally positive and productive 53-year long relationship between the WRBU and the DOE. These organizations will continue to work together to care for and build the national treasure embodied in the National Entomological Collections, which is of mutual benefit to the WRAIR and NMNH, as well as the U.S. military and the international scientific community as a whole.

**A. SPACE.** It is mutually agreed that:

NMNH will allocate office and laboratory space and associated utilities to WRAIR in return for the WRAIR's performance of collection management activities as defined in this document. Employees/agents of WRAIR shall be free to move into or out of NMNH (as well as relevant spaces at the Museum Support Center) as mission requirements dictate, subject to SI badging, safety and building occupancy policies. Both parties will provide reasonable advance notice of projected changes in personnel and space utilization. Space allocation will be reviewed by the DOE Chair (or their designee) and the WRBU Chief. However, final decisions regarding the allocation of NMNH space for WRAIR personnel will ultimately reside with the NMNH Office of the Director.

**B. PERSONNEL.** It is mutually agreed that:

For the purposes of this collaboration, WRAIR personnel will be provided status as NMNH Research Associates, Adjunct Scientists, and NMNH will provide and maintain to these WRAIR personnel all rights and responsibilities inherent with such status. All employees of WRAIR and affiliated individuals (e.g., postdoctoral fellows, interns, and contractors) shall at all times possess a valid identification badge as provided by the Smithsonian and shall use and display the badge in accordance with Smithsonian procedures. The badge shall provide WRAIR employees and affiliated individuals with access to the buildings and facilities in the manner determined by NMNH. While on the premises of the Smithsonian, WRAIR employees and affiliated individuals will display the badge in accordance with Smithsonian policy. For WRAIR affiliated individuals, badges and access will parallel the SI rules for affiliated personnel.

**C. COLLECTIONS / REPRINTS.** It is mutually agreed that:

1. The primary obligation of the WRAIR to the joint effort pursuant to this agreement is the management and curation of the NMNH Culicidae (mosquito) Collections and other arthropods of medical importance in the National Entomological Collections will be curated as resources and expertise become available including the following families: Psychodidae (sand flies and moth flies), Ceratopogonidae (biting midges), Simuliidae (black flies), Tabanidae (horse flies and deer flies), Dixidae (meniscus midges), Chaoboridae (phantom midges), Correthrelidae (frog-biting midges) and Hippoboscidae (louse flies). In this document, "Management and Curation" is defined as maintenance and protection of specimens, responsibility and execution of all museum transactions including loans and hosting visitors (for all families listed above), and progress toward general improvement of the collection. WRAIR agrees to comply with the goals and standards of curatorial care established by the DOE for the National Entomological Collections and other applicable Smithsonian collections management policies. The WRBU Chief (or their designee) will serve on the SI Entomology Collections Committee to enhance communication and knowledge about DOE operations and goals concerning collection management and policies.
2. The DOE (NMNH) and the WRBU (WRAIR) have jointly built and continue to build the NMNH Mosquito Collection for the mutual use and benefit of the international scientific community, government agencies, and the general public. For specimens accessioned into the NMNH Collection, it is understood that NMNH will provide specimen processing supplies (e.g. pins, labels, slides, cover slips, mounting media) and NMNH shall assume the equipment costs for long-term storage (e.g. trays, insect drawers, slide boxes, cabinets, freezer storage racks, long-term DNA storage boxes). NMNH also agrees to host WRBU's website entitled "Vector Map," which will be hosted by the Smithsonian Office of the Chief Information Officer (OCIO) in accordance with SI technology platform, software licensing and security standards, as more fully set forth in a separate written Memorandum of Agreement between the parties. Additional websites may be hosted by the Smithsonian, under the Memorandum of Agreement, subject to mutual agreement of NMNH, OCIO and WRBU and execution of a written amendment to the Memorandum of Agreement between the parties setting forth the terms and conditions of hosting such additional websites.
3. Both organizations agree to adhere to established policies outlined in the NMNH and Departmental Collections Management documents concerning specimen registration, inventory, insect pest management, digitization, destructive sampling, and broad collection initiatives.
4. The DOE and the WRBU maintain pertinent correspondence, literature, photographs, documents and electronic files within their areas of expertise, and will cooperate in preserving and upgrading these information sources, and adhere to NMNH document archiving policies. The WRBU recognizes that reprint files acquired by its staff and their predecessors for taxonomic research on NMNH Collections, and digitization efforts (including photographs, specimen databases, field books, archives, and other similar information specific to the collections) or DNA/tissue associated with the aforementioned Collections form an integral and inseparable part of the Collection itself. Official WRBU laboratory notebooks remain the property of WRAIR and the Department of the Army.

**D. FACILITIES.** It is mutually agreed that:

1. NMNH will provide WRAIR/WRBU personnel with Smithsonian badges that will enable access to its entomological collections, libraries, molecular laboratories, bio-repository and all other NMNH facilities (e.g. the Museum Support Center) as made available to NMNH Research Associates and Adjunct Scientists. While on the premises, WRAIR employees/agents will comply with all applicable access restrictions that may be imposed by the Smithsonian and all building regulations and policies. NMNH reserves the right to revoke these privileges temporarily or permanently if it is determined by the NMNH Director that a WRAIR/WRBU staff member does not comply with Smithsonian policies, procedures, or ethical policies. Such actions will be taken only after consulting with the WRBU Chief, but the final decision rests with the NMNH Director.

2. For DOE personnel, NMNH academic appointees and visiting scientists, WRAIR will provide assistance in locating and examining specimens in those NMNH Collections under its responsibility (see item C.1). NMNH Collections comprise an international asset. WRAIR personnel must comply with DOE, NMNH and Smithsonian policies regarding access to its collections and, provided such policies are strictly complied with, WRAIR personnel are not permitted to prohibit or restrict any individual or organization from using NMNH space allotted the WRBU to examine specimens in the NMNH Collections.

3. DOE will provide space for a WRAIR molecular entomology laboratory at the MSC for joint use of WRBU and DOE personnel. Staff of the WRBU will have access to the facilities of the Laboratory of Analytical Biology, including genetic software licenses, DNA sequencers and long-term DNA storage, as offered to other NMNH Research Associates and Adjunct Scientists. Decisions regarding space are made at the sole discretion of the Director of NMNH, who reserves the right to modify or cancel such space, as needs of NMNH dictate. Both parties will provide reasonable advance notice of projected changes in personnel and space utilization.

4. Issues affecting the work place and laboratory safety of DOE and WRAIR personnel at NMNH facilities will be referred to the NMNH Safety Office and the DOE Chair.

5. Routine facility operation, building maintenance expenses (e.g. utilities, repairs to facility, refurbishing and trash removal) will be borne by NMNH. NMNH will provide IT support services for WRAIR computers connected to the SI network; WRAIR remains responsible for provision of computer hardware for WRBU personnel.

**E. BUDGET, SUPPLIES AND EQUIPMENT.** It is mutually agreed that:

1. This Memorandum of Understanding defines in general terms the basis on which the parties involved will cooperate. It does not constitute a financial agreement to serve as a basis for expenditures. Each party will handle and expend its own funds in furtherance of its obligations set forth herein. NMNH will provide administration support for grants awarded to WRBU personnel upon prior approval by the WRBU Chief and DOE Chair. All expenditures of Federal funds pursuant to this Memorandum of Understanding must be in accordance with WRAIR and SI rules and regulations within their respective appropriations.

2. Either party shall be free to purchase and use any equipment needed to achieve the goals of this agreement. All equipment located on SI premises will comply with SI safety regulations. Installation of equipment requiring significant NMNH space or alteration of

physical facilities will be discussed by the DOE Chair and the WRBU Chief. Final decisions regarding significant equipment space allocations reside with the NMNH Director. Those requiring physical plant alterations ultimately reside with the NMNH Director and the Management Officer of the Museum Support Center (MSC) where the WRBU is located. Equipment purchased from DOE funds shall remain the property of the SI, and subject to its removal and disposition policies.

3. Within budgetary constraints, the DOE will provide the WRAIR with necessary storage materials for specimens to be accessioned into the NMNH Collection under the care of WRBU staff. DOE will provide necessary specimen processing materials for the proper curation and enhancement of the collection, including generation of specimen-level two-dimensional barcodes. Furthermore, WRAIR will directly or indirectly support or fund one or more individuals to fully integrate and upgrade the various portions of the mosquito and other medically important arthropod collections, with resource commitments subject to the availability of appropriated funds. The goal is to establish a single, functional National mosquito collection and other well-preserved medically important arthropod collections that can be effectively managed and curated through the routine efforts of the WRBU staff.

4. The DOE and the WRAIR will separately provide their own office and research supplies and equipment.

5. The obligations set forth herein and assumed by each of the cooperating parties are contingent upon the availability of funds.

**F. STATUS.** It is mutually agreed that:

1. For purposes of this agreement, WRAIR employees shall not be considered to be agents or employees of the SI, nor shall SI employees be considered to be agents or employees of WRAIR or have any reporting responsibilities to WRAIR. For administrative purposes (e.g. pay, leave, benefits, career management, IRB approvals), WRBU and DOE personnel will obtain support from their parent organizations. WRAIR understands and acknowledges that its employees/agents are not authorized to represent that they are Smithsonian employees, contractors or otherwise affiliated with the Smithsonian except as a Research Associate or Adjunct Scientist. Violation of this provision is grounds for NMNH to remove such person's badge and access privileges.

2. The work environment and behavior of WRAIR personnel on SI premises will be governed by both WRAIR and SI regulations and policies. Misconduct of WRAIR personnel on SI premises will be handled by WRAIR officials with final actions taken in compliance with SI policies, procedures, and ethical standards. Misconduct of SI personnel that affects WRAIR employees on SI premises will be dealt with according to SI rules and regulations in consultation with appropriate WRAIR officials.

**G. COOPERATION & COMMUNICATION.** It is mutually agreed that:

1. Regular meetings will be held between the DOE Chair and the WRBU Chief at least once every three months to review programs and communicate about potential developments that could affect the cooperation described in this document, especially changes in program responsibilities and personnel. A review meeting will be held annually, and will include key personnel from NMNH (DOE Chair and the Associate Director for Science of National Museum of Natural History (ADS/NMNH)) and key personnel from

WRAIR (the WRBU Chief and WRAIR Entomology Branch Chief).

2. Both organizations will cooperate in areas of mutual interest and concern in research, collections care, and information management to expand on the current atmosphere of excellence and leadership in collections-based research.

3. Either party to this agreement shall be free to use any of the results of this cooperation in its official correspondence or publication provided due credit is given to the other party for contributions to the effort. Publications may be joint or independent, always giving due credit to the cooperation and recognizing, within proper limits, the rights of the individuals doing the work.

The Principle Investigator(s) of a project or program hereunder, consistent with prevailing applicable policies of the WRAIR and the SI, shall determine the point in time at which any data generated pursuant to such project or program may be published. In case of failure to agree as to the manner of publication or interpretation of the results, either party may publish after due notice and submission of the proposed manuscripts to the other. In such instances, the party publishing the data will give due credit to the cooperation but will assume full responsibility for any statements on which there is a difference of opinion. All publications must be unclassified and freely available to the international scientific community, and provision for such unrestricted access and use shall be incorporated in any publishing agreement entered into by either party.

4. On publications, the address of WRBU personnel will be listed as The Walter Reed Biosystematics Unit, Museum Support Center MRC-534, c/o Smithsonian Institution (NMNH), 4210 Silver Hill Road, Suitland, MD 20746-2863, USA. A footnote to each publication will be added as follows: "This research was performed under a Memorandum of Understanding between the Walter Reed Army Institute of Research and the Smithsonian Institution, with institutional support provided by both organizations." All publication involving WRAIR staff must also add the following caveat: "The material to be published reflects the views of the authors and should not be construed to represent those of the US Department of the Army or the US Department of Defense".

5. No data will be exchanged under this Agreement. If, at any point, the parties amend this agreement in a manner that would require the exchange of data, that amendment must address how the parties will ensure information security and data management. Any public press release related to this agreement requires review and approval by both signatories of this agreement and by the appropriate Public Affairs and Security Offices before being issued.

**H. PATENTS AND INVENTIONS.** It is mutually agreed that:

1. "Subject Inventions" shall mean any invention conceived or first reduced to practice under this Document, and which is able to be patented or protected under Title 35 of the United States Code, under Section 2321 of Title 7 of the United States Code, et seq., or under the patent laws of a foreign country and/or in accordance with the patent policies of the WRAIR and the SI, a trust instrumentality of the United States.

2. Each party shall promptly make written disclosure to discuss and coordinate with one another the most appropriate timing for the publication or other disclosure of Subject Invention(s) in order to preserve the patent rights of said Parties. Emphasis will be given

in such disclosure or publication coordination to maintaining and protecting the research and publication needs of the principle scientist(s) involved with the Subject Invention(s). It is understood that patent protection shall be promptly and diligently sought, as appropriate.

3. All rights, title, and interest in any Subject Invention(s) made solely by employee(s) of WRAIR shall be owned by WRAIR. Equally all rights, title, and interest in any Subject Invention(s) made solely by employee(s) of the DOE, shall be owned by SI.

4. All rights, title, and interest in any Subject Invention(s) made solely by at least one (1) employee of the WRBU and at least one (1) employee of the DOE shall be jointly owned by WRAIR and SI. At such time as it is decided that a patentable item is jointly owned, both parties shall negotiate in good faith an appropriate sharing of costs and benefits in accordance with applicable rules and regulations.

5. Each party shall provide, when requested by the other, all information in its possession pertaining to a Subject Invention that may be necessary or useful in the preparation, filing, and prosecution of patent applications covering the Subject Invention.

6. Each party shall promptly make written disclosure to each other of Subject Invention(s). This information shall be treated in confidence until such time as a patent application is undertaken.

**I. MEMORANDUM OF UNDERSTANDING OVERSIGHT AND REVIEW.** It is mutually agreed that:

1. This Memorandum of Understanding (MOU) will be reviewed during the annual review meeting in January, but may be reviewed at any time upon request by either party. The following persons, or their designees, will be present for the review: the DOE Chair and the Associate Director of Science (NMNH), the WRBU Chief, and the WRAIR Entomology Branch Chief.

2. The DOE Chair and the WRBU Chief are designated as the official representatives of the respective parties and are mutually charged with carrying out the provisions and intent of this MOU.

3. This MOU may be amended or otherwise modified in writing upon mutual agreement by both parties thereto and such written amendments or modifications shall be incorporated herein by reference.

4. This MOU may be unilaterally terminated by either party, upon 180 days prior written notice to the other. In this event, both parties shall allow adequate times for existing projects or programs to be completed, or otherwise brought to a satisfactory conclusion.

5. Copies of all correspondence concerning renewal or amendments to this MOU shall be sent to the WRBU Chief, WRAIR Entomology Branch Chief, the DOE Chair and the ADS/NMNH.

6. This MOU shall become effective as of 1 September 2015 and remain effective for a period of 9 years until 1 September 2024, unless terminated prior to this date. Agreed future amendments must be signed and dated by both parties and attached to this original MOU. Significant changes to the mutual assignment of tasks and responsibilities will

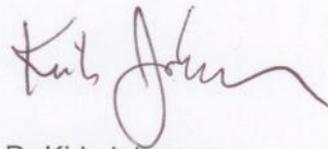
require a new agreement to be drawn.

7. The person signing this MOU for each party warrants and represents that such person has the authority to enter into this MOU on behalf of such party and to bind such party, its employees, agents, contractors, and others who will be accessing and using the Smithsonian's premises to the terms and conditions herein. By signing this MOU, the signatory warrants and represents that its employees, agents and contractors are aware of the terms of this MOU and their obligations to comply with the terms and conditions herein.

Signed by:

Signed by:

Dana K. Renta  
Colonel, US Army, Commanding  
Walter Reed Army Institute of Research  
(WRAIR)



Dr Kirk Johnson  
Sant Director  
National Museum Natural History  
Smithsonian Institution

Date of signature:

Date of signature: January 22, 2016