



OFFICE OF THE UNDER SECRETARY OF DEFENSE  
4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000

PERSONNEL AND  
READINESS

The Honorable Richard C. Shelby  
Chairman  
Committee on Appropriations  
United States Senate  
Washington, DC 20510

JUL 29 2019

Dear Mr. Chairman:

The enclosed final report is in response to House Report 115-769, page 298, accompanying H.R. 6157, the Department of Defense (DoD) Appropriations Bill, 2019. The House Report directs the Assistant Secretary of Defense for Health Affairs to provide a report on the Department's efforts to collaborate with Historically Black Colleges and Universities, Hispanic Serving Institutions, and other Minority Serving Institutions (MSIs) in the health research field.

This report details the Department's numerous collaborations with MSIs spanning various health research topics. The DoD remains committed to fostering and sustaining collaborations with MSIs that enhance its health research programs; augmenting capabilities aligned with DoD health research priorities and interests; and continuing to develop new partnerships that increase opportunities for MSIs to participate in DoD health research programs.

Thank you for your interest in the health and well-being of our Service members, veterans, and their families. A similar letter is being sent to the Chairwoman of the House Committee on Appropriations.

Sincerely,

A handwritten signature in black ink, reading "James N. Stewart", is written over a large, stylized, light-colored scribble that appears to be a watermark or a large, faint signature.

James N. Stewart  
Assistant Secretary of Defense for Manpower  
and Reserve Affairs, Performing the Duties  
of the Under Secretary of Defense for  
Personnel and Readiness

Enclosure:  
As stated

cc:  
The Honorable Patrick J. Leahy  
Vice Chairman



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4000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-4000

PERSONNEL AND  
READINESS

The Honorable Nita M. Lowey  
Chairwoman  
Committee on Appropriations  
U.S. House of Representatives  
Washington, DC 20515

JUL 29 2019

Dear Madam Chairwoman:

The enclosed final report is in response to House Report 115-769, page 298, accompanying H.R. 6157, the Department of Defense (DoD) Appropriations Bill, 2019. The House Report directs the Assistant Secretary of Defense for Health Affairs to provide a report on the Department's efforts to collaborate with Historically Black Colleges and Universities, Hispanic Serving Institutions, and other Minority Serving Institutions (MSIs) in the health research field.

This report details the Department's numerous collaborations with MSIs spanning various health research topics. The DoD remains committed to fostering and sustaining collaborations with MSIs that enhance its health research programs; augmenting capabilities aligned with DoD health research priorities and interests; and continuing to develop new partnerships that increase opportunities for MSIs to participate in DoD health research programs.

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James N. Stewart  
Assistant Secretary of Defense for Manpower  
and Reserve Affairs, Performing the Duties  
of the Under Secretary of Defense for  
Personnel and Readiness

Enclosure:  
As stated

cc:  
The Honorable Kay Granger  
Ranking Member

# Report to Congressional Appropriations Committees



## Collaboration with Minority Serving Institutions on Health Research

July 2019

**In Response To:** House Report 115–769, Page 298, Accompanying H.R. 6157,  
the Department of Defense Appropriations Bill, 2019

The estimated cost of this report for the Department of Defense (DoD) is approximately \$9,600.00 for the 2019 Fiscal Year. This includes \$1,000.00 in expenses and \$8,600.00 in DoD labor.

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## EXECUTIVE SUMMARY

This report is in response to House Report 115–769, page 298, accompanying H.R. 6157, the Department of Defense (DoD) Appropriations Bill, 2019. The House Report requests information on DoD efforts to collaborate with Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs), and other Minority Serving Institutions (MSIs) (collectively herein MSIs) in health research. Specifically, the Assistant Secretary of Defense for Health Affairs (ASD(HA)) is directed to provide a report on the Department’s efforts to collaborate with these MSIs in the health research field.

This report provides information received from the Military Services, the Uniformed Services University of the Health Sciences (USUHS), and the Defense Health Agency (DHA) through its Research and Development Directorate (J-9). There are currently 6 ongoing health research collaborations with at least 17 MSIs. In addition, 2 future health research-related collaborations are planned with at least 13 MSIs. The DoD has also engaged in outreach to educational institutions, including recently establishing two Education Partnership Agreements (EPAs) with MSIs. Furthermore, several existing programs aim to enhance HBCU/MSI research capabilities and strengthen their education curricula, as well as facilitate research with HBCU/MSI faculty and students to diversify and increase the pool of scientists, engineers, and researchers trained to work on military-relevant health concerns. Ten recent partnership and outreach accomplishments include collaborative research and funding opportunities; educational outreach and enrichment; and progress towards formalizing EPAs with four more MSIs. This report also addresses several recommendations for enhancing outreach to augment the Department’s collaborative efforts with accredited federally recognized MSIs including, but not limited to, HBCUs, HSIs, and American Indian Tribal Colleges and Universities (TCUs).

## BACKGROUND AND PURPOSE

House Report 115–769 encourages the ASD(HA) to work collaboratively in the health research field with HBCUs, HSIs, and other MSIs. The purpose of this report is to provide an overview of the DoD efforts to collaborate with HBCUs, HSIs, and other MSIs in health research. The information below reflects input compiled from the Military Services, USUHS and DHA on their key partnership and outreach accomplishments; current and future efforts to collaborate with MSI institutions in health research; and educational and outreach initiatives intended to enhance and expand collaboration with MSIs.

## RESULTS

### Partnership and Outreach Accomplishments

Table 1 summarizes 10 recent funding, partnership and outreach accomplishments. These achievements involve at least 17 institutions and include various initiatives in collaborative research and funding opportunities; educational outreach and enrichment; and efforts toward formalizing and implementing EPAs with four MSIs.

**Table 1: Partnership and Outreach Accomplishments**

No.	Partner(s)	DoD Office	Summary Description
1.	<ul style="list-style-type: none"> <li>• University of California (UC), Irvine</li> <li>• Clark Atlanta University</li> <li>• Howard University</li> <li>• University of Illinois, Chicago</li> <li>• University of Incarnate Word</li> <li>• North Carolina University</li> <li>• Savannah State University</li> <li>• University of Texas (UT), El Paso</li> <li>• UT Health Science Center, San Antonio</li> <li>• UT at San Antonio</li> </ul>	DHA J-9	<p>The DHA J-9 collaborates with MSIs through funding research projects. Defense Health Program (DHP)-funded MSI research projects are awarded through a competitive selection process. In Fiscal Year (FY) 2017, DHA J-9 provided DHP funding for 43 research, development, test, and evaluation projects at 10 MSIs, totaling approximately \$64 million in awards. These projects address emerging health care issues for improved readiness.</p>
2.	<ul style="list-style-type: none"> <li>• Bowie State University</li> <li>• Lincoln University</li> <li>• Cheney University</li> </ul>	U.S. Army Medical Command (USAMEDCOM) Office of Small Business Programs (OSBP)	<p>The SMART (Strengthening the Mid-Atlantic Region for Tomorrow) Procurement Conference included a HBCU Panel Discussion, “Teaming with HBCU for Federal Opportunities: A Guide to Partnerships.” This was the second consecutive year with a 90-minute panel discussion including representatives from Bowie</p>

No.	Partner(s)	DoD Office	Summary Description
	<ul style="list-style-type: none"> <li>Morgan State University</li> </ul>		State University, Lincoln University, and Cheney University. A Morgan State University representative also attended this panel discussion.
3.	Hampton University	USAMEDCOM OSBP	The USAMEDCOM OSBP has a longstanding relationship with Hampton University. The OSBP received an invitation from Hampton University to speak at the University Researchers' Informational Forum (RIF) in early 2019. RIFs provide a platform for faculty members to learn more about funding opportunities within a specific agency.
4.	Meharry Medical College	USAMEDCOM OSBP	Since May 2017, the USAMEDCOM OSBP conducted several outreach efforts with Meharry Medical College President and Chief Executive Officer (CEO), including extending an invitation to participate at a Military Health System Research Symposium (MHSRS). As a result, the Meharry Medical College President and CEO attended the August 2018 MHSRS and presented the Meharry Military Health Research Center (MMHRC). Following, the Meharry Medical College President and CEO and Deputy Principal Assistant for Research and Technology met to discuss the MMHRC.
5.	10 HBCUs	U.S. Army Medical Research and Materiel Command (USAMRMC) Congressionally Directed Medical Research Programs (CDMRP)	CDMRP representatives participated in the 2018 Partnerships to Advance Cancer Health Equity Program Meeting, organized and sponsored by the National Cancer Institute Center to Reduce Cancer Health Disparities. This 2-day meeting held in July focused on advancing cancer and cancer health disparities research. A large number of investigators attended and represented a variety of institutions, including 10 HBCUs.
6.	Cancer Research Institute, Hampton University	USAMRMC CDMRP	CDMRP representatives held discussions in September and December 2018 regarding research interests and CDMRP funding opportunities.
7.	Bowie State University	USAMRMC Strategic Partnerships Office G-3/5/7	Discussion with the Bowie State University Vice President for Research, Office of Research and Sponsored Programs, included the Science, Technology, Engineering, and Mathematics (STEM) program opportunities, with the intent to

No.	Partner(s)	DoD Office	Summary Description
			secure an EPA. Other topics discussed included the College Qualified Leaders (CQL) internship; Gains in the Education of Mathematics and Science (GEMS) program; HBCU/MSI Research and Education Program; and the Oak Ridge Institute for Science and Education (ORISE) fellowship. Future meetings will occur to initiate a partnership with USAMRMC.
8.	Cheyney University	USAMRMC Strategic Partnerships Office G-3/5/7	Discussion with Cheyney University Project Coordinator of the Title III and Grants Management Office included STEM program opportunities, with the intent to secure an EPA. Other topics discussed included the CQL internship; GEMS program; HBCU/MSI Research and Education Program; and the ORISE fellowship. Future meetings will occur to initiate a partnership with USAMRMC.
9.	Meharry Medical College	USAMRMC Strategic Partnerships Office G-3/5/7	Communications between October 2018 and January 2019 included a meeting between the G-3/5 Director and Agreements Officer and Meharry Medical College representatives to discuss partnership opportunities via agreements, and the provision of information on USAMRMC STEM programs. Meharry Medical College confirmed interest in developing an EPA in January 2019; the G-3/5 office will draft the EPA to formalize this partnership.
10.	University of Maryland (UMD) Eastern Shore	USAMRMC Strategic Partnerships Office G-3/5/7	Discussion with the UMD Eastern Shore Director of the Office of Sponsored Research and Programs included STEM program opportunities, with the intent to secure an EPA. Other topics discussed included the CQL internship; GEMS program; HBCU/MSI Research and Education Program; and the ORISE fellowship. Future meetings will occur to initiate a partnership with USAMRMC.

#### Current/Ongoing and Future Collaborative Efforts

There are currently six ongoing collaborative efforts across the Services involving at least 17 MSIs. These initiatives include research partnerships spanning a diverse scope of health research topics and participation in CDMRP review panels. Table 2 provides summary descriptions of these collaborations, including website information where available.

There are 2 forthcoming collaborations with at least 13 MSIs. These efforts include, but are not limited to, increasing awareness among MSIs of research funding opportunities and implementing a childhood obesity prevention program in partnership with MSIs. Table 3 provides summary descriptions of these efforts.

**Table 2: Current/Ongoing Collaborative Efforts with Minority-Serving Institutions In the Field of Health Research**

No.	Partner(s)	DoD Office	Summary Description
1.	<ul style="list-style-type: none"> <li>• Dillard University</li> <li>• Florida A&amp;M University</li> <li>• Florida International University</li> <li>• New Mexico State University – Main Campus</li> <li>• Prairie View A&amp;M University</li> <li>• Rutgers University</li> <li>• UT at Arlington</li> <li>• UC Santa Cruz</li> <li>• Union Pacific</li> <li>• University of Arizona</li> <li>• UC, Merced</li> <li>• University of Hawaii</li> <li>• University of Hawaii at Manoa</li> <li>• University of Houston</li> <li>• University of Illinois at Chicago</li> </ul>	Air Force Research Laboratory (AFRL)	In September 2017, the Secretary of the Air Force launched the “S&T Strategy 2030 Study,” an initiative to update the Air Force’s science and technology strategy. Over the course of a year, the Air Force worked with 15 MSIs through a series of conversations and outreach events in support of this study.
2.	UT Health Science Center at San Antonio	AFRL	The AFRL Aerospace and Operational Medicine (AOM) team, composed of Human Performance, En Route Care, and Force Health Protection investigators, is engaged in a research collaboration with the UT Health Science Center at San Antonio, a MSI, to support the “Rapid-Ascent Time To Loss of Effectiveness and Respiration (RATTLER)” study. The study, supported with FY 2018 Studies & Analysis funding, is helping the AOM



No.	Partner(s)	DoD Office	Summary Description
			team execute advanced mission effectiveness in Airman health and performance.
3.	Howard University	DHA J-9 Directorate-Laboratory	DHA J-9 Directorate-Laboratory entered into an EPA with Howard University on January 30, 2018.
4.	UT System	DHA J-9 Directorate-Laboratory	DHA J-9 Directorate-Laboratory entered into an EPA with the UT System on January 9, 2018.
5.	Department of Biology, Spelman College	Naval Submarine Medical Research Laboratory, Office of Naval Research (ONR)	The Naval Submarine Medical Research Laboratory participates each year in the ONR Summer Faculty Research Program. This program provides an opportunity for science and engineering faculty members from institutions of higher education to participate in research of mutual interest at U.S. Navy laboratories for a 10-week period. The program strongly encourages faculty members from HBCUs/MIs/TCUs/HSIs, as designated by the U.S. Department of Education, to apply. Currently, this program is collaborating with an Associate Professor from the Department of Biology at Spelman College to study genome-wide expression profiling of human peripheral blood before and after clinically relevant hyperbaric oxygen exposures, entitled: "Genome-wide expression changes in divers following hyperbaric oxygen exposures." (Link: <a href="https://www.onr.navy.mil/en/Education-Outreach/faculty/summer-faculty-research-program">https://www.onr.navy.mil/en/Education-Outreach/faculty/summer-faculty-research-program</a> )
6.	Multiple HBCUs/MSIs	USAMRMC CDMRP	Investigators from HBCUs/MSIs participate on CDMRP review panels. For FY2017, 23 scientist peer reviewers from accredited postsecondary MSIs participated in the review panel, including 18 reviewers from HBCUs. CDMRP will continue to involve these institutions in future reviews.

**Table 3: Future Collaborative Efforts with Minority-Serving Institutions  
In the Field of Health Research**

No.	Partner(s)	DoD Office	Summary Description
1.	13 HBCUs	USAMRMC CDMRP	The Prostate Cancer Research Program plans to invest \$13.7 million in health disparity research in FY 2018 through two funding mechanisms: the Health Disparity Research Award and the Health Disparity Fellowship Award. To increase awareness of these funding opportunities, the program will send email communications to 13 HBCUs with recently published peer-reviewed scientific research articles on prostate cancer health disparity.
2.	Well Prepared Program (WPP) HBCU/MSI Participants	USUHS	The WPP is a childhood obesity prevention initiative that will address the diminishing future military recruiting pool. WPP implementation will occur in partnership with military installations, military treatment facilities, HBCUs/MSIs, school systems, and local community partners. These partnerships will help identify military families for educational outreach, as well as opportunities for engagement by identifying ambassadors and facilitators to help promote and administer the modules.

Future Collaboration

To create a diverse pool of candidates with a background and expertise that aligns with the Navy laboratory needs, the ONR Summer Faculty Research Program will encourage HBCU/TCU/HSI or other MSI faculty interested in health or medical research to apply for the ONR Summer Fellowship.

Additionally, Military Health System leadership is planning to add the following language in all DHA Broad Agency Announcements to encourage MSI participation:

DHA partners with MSIs pursuant to 10 USC 2194. Proposals from MSIs should clearly state the offeror's status as an MSI on the proposal title page. DHA reserves the right, within its discretion, to decide whether to accord value to the fact that a proposal is submitted by an MSI, and the amount of such value, if any. If value is assigned, the amount of such value may increase as DHA deems proposals between MSIs and non-MSIs to be roughly equivalent scientifically and programmatically.

The DHA and Office of the ASD(HA) are seeking to increase MSI awareness of existing DHP medical research programs and the annual MHSRS by emailing these institutions with information on the DHP and MHSRS, including attachments or relevant website links.

### Educational Partnerships

#### ***DHA***

DHA laboratories pursue educational partnerships and provide assistance consistent with the requirements set forth in the “Education Partnerships” statute (10 U.S.C. § 2194):

- Collaborate with HBCUs and other MSIs; and
- Provide assistance for educational institutions serving women, members of minority groups, and other groups of individuals traditionally involved in the engineering and science professions in disproportionately low numbers.

The DHA Director conducts outreach to local HBCUs to invite them to enter into an EPA with DHA’s J-9 Directorate-Laboratory. The DHA Director has contacted Howard University, University of the District of Columbia, UMD Eastern Shore, Morgan State University, Coppin State University, and Bowie State University, and will contact the UMD System, to include UMD Eastern Shore, Coppin State University, and Bowie State University.

DHA’s J-9 Directorate-Laboratory has EPAs with HBCUs and other MSIs. Agreements encourage participation by students who belong to groups that are traditionally involved in STEM in disproportionately low numbers.

DHA’s J-9 Directorate-Laboratory entered into an EPA with the UT System on January 9, 2018. The UT System has a large minority student population; examples of MSIs under the UT System include the UT Rio Grande Valley; UT Health Science Center at San Antonio; UT at Arlington; UT at San Antonio; and the UT at El Paso. DHA’s J-9 Directorate/Laboratory also entered into an EPA with Howard University, a HBCU, on January 30, 2018.

#### ***U.S. Army***

The U.S. Army helps effectuate a DoD HBCU/MSI Research and Education Program to enhance the research capabilities of HBCUs and MSIs and strengthen their STEM education programs. This program awards grants, through the U.S. Army Contracting Command-Aberdeen Proving Ground Research Triangle Park (ACCAPG-RTP) Division on behalf of the U.S. Army Research Laboratory's Army Research Office, as an agent of the Under Secretary of Defense For Research and Engineering. Scientists and engineers of participating Agencies base award decisions on merit reviews. The following link accesses the website and program information: <https://tmtgroupinc.com/summerprograms/>

## **USUHS**

The USUHS Diversity in Research Training Program (DRTP) facilitates DoD STEM training and research exchange opportunities for HBCU and other MSI faculty and students to develop a candidate pool of scientists, engineers, and researchers with experience working on military relevant health concerns. This program provides opportunities for faculty and students from underrepresented and underserved communities in STEM to work in a military-focused research environment. Current DRTP Partnerships include:

*Consortia for Improving Medicine with Innovation and Technology (CIMIT), Boston, MA*  
*Emerging Technology Consortium (ETC), Washington D.C.*

USUHS has established a partnership with CIMIT and ETC. CIMIT is a network of world-class academic and medical institutions partnering with industry and government. Its mission is to foster collaboration among clinicians, technologists, and entrepreneurs to accelerate innovation and catalyze the discovery, development, and implementation of innovative healthcare technologies. ETC is a non-profit organization dedicated to advancing science and technology to improve health and wellness. ETC's goal is to create opportunities in urban communities, focusing on faculty and students at HBCUs and their corporate partners, in partnership with the National Institutes of Health (NIH).

The USUHS, CIMIT, and ETC partnership will provide opportunities for faculty and students at USUHS and MSIs to collaborate in CIMIT's Commercialization, Readiness Assessment and Accelerator for Solutions in Healthcare program. The program includes symposia, a technology transfer curriculum, as well as classes in computer science, informatics, bio-medical engineering, ethics, intellectual property issues and marketing. There are also opportunities for mentoring, sabbaticals, faculty exchanges and visiting scientist fellowships. To date medical schools at Howard University, Drew, the University of the Virgin Islands, and Hampton University have been identified as participants. Participation by the University of Texas Health Sciences Center in San Antonio and at San Diego State University (HSIs) is planned for the future. Course locations vary and will include sessions at USUHS, HBCUs and other MSIs. It is anticipated that USUHS and HBCU/MSI faculty will continue to collaborate based on research interests, leading to submissions of proposals, to conduct research in high priority areas for the DoD.

*MMHRC, Meharry Medical College, Nashville, TN*

The MMHRC at Meharry Medical College, a HBCU, is a coalition of highly qualified professionals in research and data science who work to accelerate solutions for serious medical challenges faced by our military and their families, deployed and at home. MMHRC is composed of 30-40 research partners who use data science to analyze and solve issues that harm readiness and effectiveness. MMHRC has four critical focus areas: psychological health and resilience, infectious diseases, toxic chemicals, and performance enhancement.

Potential future USUHS DRTP partnerships under consideration include the Military

Health Institute at UT Health Science Center, San Antonio, and San Diego University (both HSIs).

## **CONCLUSION**

The DoD has numerous collaborations with MSIs spanning the field of health research. Furthermore, the DoD has engaged continuously in efforts to seek additional educational partnerships with MSIs, particularly with HBCUs. The DoD remains committed to fostering and sustaining collaborations that enhance its health research programs; align with the DoD health research priorities and interests; and increase opportunities for MSIs to participate in the DoD health research programs.

Acronyms	
ACCAPG-RTP	U.S. Army Contracting Command-Aberdeen Proving Ground Research Triangle Park (Division)
AFRL	Air Force Research Laboratory
AOM	Aerospace and Operational Medicine
ASD(HA)	Assistant Secretary of Defense for Health Affairs
CDMRP	Congressionally Directed Medical Research Programs
CEO	Chief Executive Officer
CIMIT	Consortia for Improving Medicine with Innovation and Technology
CQL	College Qualified Leaders
DHA	Defense Health Agency
DHP	Defense Health Program
DoD	Department of Defense
DRTP	Diversity in Research Training Program
EPA	Education Partnership Agreement
ETC	Emerging Technology Consortium
FY	Fiscal Year
GEMS	Gains in the Education of Mathematics and Science
HBCU	Historically Black College and University
HSI	Hispanic-Serving Institution
MHSRS	Military Health System Research Symposium
MMHRC	Meharry Military Health Research Center
MSI	Minority Serving Institution
ONR	Office of Naval Research
ORISE	Oak Ridge Institute for Science and Education
OSBP	Office of Small Business Programs
RATTLER	Rapid-Ascent Time To Loss of Effectiveness and Respiration (Study)
RIF	Researchers' Informational Forum (Hampton University)
S&T	Science and Technology
SMART	Strengthening the Mid-Atlantic Region for Tomorrow
STEM	Science, Technology, Engineering, and Mathematics
TCU	American Indian Tribal College and University
UC	University of California
UMD	University of Maryland
USAMEDCOM	U.S. Army Medical Command
USAMRMC	U.S. Army Medical Research and Materiel Command
USUHS	Uniformed Services University of the Health Sciences
UT	University of Texas
WPP	Well Prepared Program