

**US ARMY MEDICAL RESEARCH AND MATERIEL COMMAND (USAMRMC)  
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)  
FISCAL YEAR 2017 (FY17) DEFENSE MEDICAL RESEARCH AND DEVELOPMENT  
PROGRAM (DMRDP), JOINT PROGRAM COMMITTEE-8/CLINICAL AND  
REHABILITATIVE MEDICINE RESEARCH PROGRAM (JPC-8/CRM RP) HEARING  
AND BALANCE RESEARCH AWARD (HBRA)**

**DESCRIPTION OF REVIEW PROCEDURES**

The programmatic strategy implemented by the FY17 HBRA called for applications in response to a Program Announcement (PA) for two award mechanisms released in October 2016:

- HBRA – Research Level 1
- HBRA – Research Level 2

Pre-applications for this PA were received in December 2016 and screened in January 2017 to determine which investigators would be invited to submit a full application. Pre-applications were screened based on the evaluation criteria specified in the PA.

Applications were received for this PA in March 2017 and peer reviewed in May and June 2017. Programmatic review was conducted in August 2017.

In response to the HBRA PA, 119 pre-applications were received, and the Principal Investigators (PIs) of 62 of these were invited to submit a full application. Fifty-four compliant applications were received, and six (11.1 %) were recommended for funding, for a total of \$12.3 million (M).

Submission and award data for the FY17 HBRA are summarized in the tables below.

**Table 1. Submission/Award Data for the FY17 HBRA\***

<b>Mechanism</b>	<b>Pre-Applications Received</b>	<b>Pre-Applications Invited (%)</b>	<b>Compliant Applications Received</b>	<b>Applications Recommended for Funding (%)</b>	<b>Total Funds*</b>
HBRA – Research Level 1	68	30 (44.1 %)	27	3 (11.1 %)	\$5.5 M
HBRA – Research Level 2	51	32 (62.7 %)	27	3 (11.1 %)	\$6.8 M
<b>Total</b>	<b>119</b>	<b>62 (52.1 %)</b>	<b>54</b>	<b>6 (11.1 %)</b>	<b>\$12.3 M</b>

\*These data reflect funding recommendations only. Pending FY17 award negotiations, final numbers will be available after September 30, 2018.

**Table 2. FY17 HBRA Application Data by Capability Gap**

<b>Capability Gap</b>	<b>Compliant Applications Received</b>	<b>Applications Recommended for Funding (%)</b>	<b>Total Funds</b>
Lack of knowledge and effective strategies and products for hearing and/or vestibular restoration	21	3 (14.3 %)	\$5.5 M
Lack of knowledge of the prevalence, incidence, natural history, and occupational and gender-related differences of tinnitus and its possible relation to individual blast/noise exposure	4	1 (25.0 %)	\$3.2 M
Lack of standardized metrics for hearing and/or vestibular assessment and monitoring in clinical and operational environments	15	1 (6.7 %)	\$1.6 M
Lack of understanding of the primary/secondary (e.g., mechanical/injury progression) effects of blast exposure leading to the neuronal dysfunction of auditory and/or vestibular systems	14	1 (7.1 %)	\$2.0 M
<b>Totals</b>	<b>54</b>	<b>6 (11.1 %)</b>	<b>\$12.3 M</b>

### **THE TWO-TIER REVIEW SYSTEM**

The USAMRMC developed a review model based on the recommendations of the 1993 Institute of Medicine (IOM) of the National Academy of Sciences report, “Strategies for Managing the Breast Cancer Research Program: A Report to the Army Medical Research and Development Command.” The IOM report recommended a two-tier review process and concluded that the best course would be to establish a peer review system that both reflects the traditional strengths of existing peer review systems and is tailored to accommodate program goals. The Command has adhered to this proven approach for evaluating competitive applications. An application must be favorably reviewed by both levels of the two-tier review system in order to be funded.

#### **THE FIRST TIER—Scientific Peer Review**

HBRA applications were peer reviewed in May and June 2017 by three on-site panels of researchers, clinicians, and consumer advocates based on the evaluation criteria specified in the PA. Across these three panels were 39 scientists and 5 consumer reviewers.

Each peer review panel included a Chair, scientific reviewers, consumer reviewers, and a nonvoting Scientific Review Officer. The primary responsibility of the panelists was to review the technical merit of each application based upon the evaluation criteria specified in the PA.

## **Individual Peer Review Panels**

The Chair for each panel presided over the deliberations. Applications were discussed individually. The Chair called upon the assigned reviewers for an assessment of the merits of each application based on the evaluation criteria published in the PA. Following a panel discussion, the Chair summarized the strengths and weaknesses of each application, and the panel members then rated the applications confidentially.

## **Application Scoring**

*Evaluation Criteria Scores:* Panel members were asked to rate each peer review evaluation criterion as published in the PA. A scale of 1 to 10 was used, with 1 representing the lowest merit and 10 the highest merit, using whole numbers only. The main reasons for obtaining the criteria ratings were to (1) place emphasis on the published evaluation criteria and provide guidance to reviewers in determining an appropriate overall score, and (2) provide the applicant, the Programmatic Panel, and the Command with an informed measure of the quality regarding the strengths and weaknesses of each application. The evaluation criteria scores were not averaged or mathematically manipulated in any manner to connect them to the global or percentile scores.

*Overall Score:* To obtain an overall score, a range of 1.0 to 5.0 was used (1.0 representing the highest merit and 5.0 the lowest merit). Reviewer scoring was permitted in 0.1 increments. Panel member scores were averaged and rounded to arrive at a two-digit number (1.2, 1.9, 2.7, etc.). The following adjectival equivalents were used to guide reviewers: Outstanding (1.0–1.5), Excellent (1.6–2.0), Good (2.1–2.5), Fair (2.6–3.5), and Deficient (3.6–5.0).

*Summary Statements:* The Scientific Review Officer on each panel was responsible for preparing a Summary Statement reporting the results of the peer review for each application. The Summary Statements included the applicants' abstracts, the evaluation criteria and overall scores, the peer reviewers' written comments, and the essence of the panel discussions. This document was used to report the peer review results to the Programmatic Panel. It is the policy of the USAMRMC to make Summary Statements available to each applicant when the review process has been completed.

## **THE SECOND TIER—Programmatic Review**

Programmatic review was conducted in August 2017 by the FY17 Programmatic Panel, which is comprised of a diverse group of basic and clinical scientists and consumer advocates, each contributing special expertise or interest in hearing and vestibular research. Programmatic review is a comparison-based process that considers scientific evaluations across all disciplines and specialty areas. Programmatic Panel members do not automatically recommend funding applications that were highly rated in the technical merit review process; rather, they carefully scrutinize applications to allocate the limited funds available to support each of the award mechanisms as wisely as possible. The programmatic review criteria published in the PA were as follows: ratings and evaluations of the scientific peer review panels; programmatic relevance; military relevance and impact; program portfolio composition; and alignment/integration with Department of Defense and/or Department of Veterans Affairs research laboratories and programs. After programmatic review, the Commanding General, USAMRMC, and the Director

of the Defense Health Agency J9, Research and Development Directorate, approved funding for the applications recommended during the programmatic review.