

**US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2019 (FY19) DEFENSE MEDICAL RESEARCH AND
DEVELOPMENT PROGRAM (DMRDP)**

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY19 DMRDP Accelerating Innovation in Military Medicine (AIMM) Initiative called for applications in response to a program announcement (PA) for one award mechanism released in May 2019:

- AIMM Research Award

Pre-applications were received for this PA in July 2019 and screened in September 2019 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 October 2019 and peer reviewed in January 2020. Programmatic review was conducted in March 2020.

In response to the AIMM Research Award PA, 119 pre-applications were received, and the Principal Investigators (PIs) of 41 of these were invited to submit a full application. Thirty-nine compliant applications were received, and eight (20.51%) were recommended for funding for a total of \$3.03 million (M).

Submission and award data for the FY19 DMRDP AIMM Initiative are summarized in the table(s) below.

Table 1. Submission/Award Data for the FY19 DMRDP AIMM Initiative*

Mechanism	Pre-Applications Received	Pre-Applications Invited (%)	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
AIMM Research Award	119	41 (34.45%)	39	8 (20.51%)	\$3.03M

*These data reflect funding recommendations only. Pending FY19 award negotiations, final numbers will be available after September 30, 2020.

Table 2. FY19 DMRDP AIMM Research Award Application Data by Military Focus Area

Focus Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Medical Simulation and Information Sciences	10	1 (10.00%)	\$0.28M
Military Infectious Diseases	5	1 (20.00%)	\$0.35M
Military Operational Medicine	8	2 (25.00%)	\$0.67M
Combat Casualty Care	14	3 (21.43%)	\$1.38M

Focus Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Radiation Health Effects	0	0 (0.00%)	\$0.00M
Clinical and Rehabilitative Medicine	2	1 (50.00%)	\$0.35M
Total	39	8 (20.51%)	\$3.03M

THE TWO-TIER REVIEW SYSTEM

The USAMRDC developed a review model based on recommendations of the 1993 Institute of Medicine (IOM) (now called the National Academy of Medicine) 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 reflects not only the traditional strengths of existing peer review systems, but also 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 to be funded.

THE FIRST TIER—Scientific Peer Review

AIMM Research Award applications were peer reviewed in January 2020 by two panels of researchers, clinicians, technical experts, and consumer reviewers (26 total) via teleconference combined with an online component. 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 using the evaluation criteria published in the PA. Following a panel discussion, the Chair summarized the strengths and weaknesses of each application, and 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 evaluation criteria and overall scores, peer reviewers' written comments, and 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 USAMRDC 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 March 2020 by the FY19 AIMM Programmatic Panel, which is comprised of a diverse group of programmatic, research, and clinical scientists, together contributing diverse expertise in artificial intelligence as well as military health-relevant research and development. 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 weigh applications to allocate the limited funds available to support program goals 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 and relevance to AIMM Initiative FY19 Focus Areas; military relevance; relative impact and innovation; and adherence to the intent of the award mechanism.

After programmatic review, the Commanding General, USAMRDC approved funding for the applications recommended during programmatic review.