U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND (USAMRMC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2016 (FY16) PEER REVIEWED CANCER RESEARCH PROGRAM (PRCRP)

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY16 PRCRP called for applications in response to Program Announcements (PAs) for three award mechanisms released in April 2016:

- Career Development Award (CDA)
- Idea Award with Special Focus (IASF)
- Translational Team Science Award (TTSA)

Pre-applications were received for the CDA, IASF, and TTSA PAs in June 2016 and screened in July 2016 to determine which investigators would be invited to submit a full application. Pre-applications were screened based on the evaluation criteria specified in the PAs.

Applications were received for these three PAs in September 2016 and peer-reviewed in November 2016. Programmatic review was conducted in February 2017.

In response to the CDA PA, 117 pre-applications were received, and the Principal Investigators (PIs) of 107 of these were invited to submit a full application. Ninety-six compliant applications were received, and 22 (23%) were recommended for funding, for a total of $12.46 million (M).

In response to the IASF PA, 560 pre-applications were received, and the PIs of 232 of these were invited to submit a full application. From that number, 211 compliant applications were received, and 27 (13%) were recommended for funding, for a total of $15.68M.

In response to the TTSA PA, 72 pre-applications were received, and the PIs of 40 of these were invited to submit a full application. Thirty-seven compliant applications were received, and nine (24%) were recommended for funding, for a total of $13.78M.

Submission and award data for the FY16 PRCRP are summarized in the table(s) below.

Table 1. Submission/Award Data for the FY16 PRCRP*

Mechanism	Pre-Applications Received	Pre-Applications Invited (%)	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
CDA	117	107 (91%)	96	22 (23%)	$12,462,167
IASF	560	232 (41%)	211	27 (13%)	$16,349,794
TTSA	72	40 (55%)	37	9 (24%)	$13,776,740
Total	**749**	**379 (51%)**	**344**	**58 (18%)**	**$42,588,701**

*These data reflect funding recommendations only. Pending FY16 award negotiations, final numbers will be available after September 30, 2017.

Table 2. FY16 PRCRP Application Data by Topic Area

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Bladder Cancer	42	7 (17%)	$5,287,887
Colorectal Cancer	39	2 (5%)	$1,845,533
Immunotherapy	32	10 (31%)	$7,694,514
Kidney Cancer	23	3 (13%)	$2,729,627
Listeria Vaccine for Cancer	2	1 (50%)	$580,704
Liver Cancer	39	5 (13%)	$4,039,279
Lymphoma	19	2 (11%)	$977,840
Melanoma and Other Skin Cancers	45	8 (18%)	$4,899,855
Mesothelioma	9	2 (22%)	$2,113,517
Neuroblastoma	10	1 (10%)	$556,500
Pancreatic Cancer	37	4 (11%)	$2,460,488
Pediatric Brain Tumors	30	5 (17%)	$3,734,862
Stomach Cancer	17	8 (47%)	$5,668,095
Totals	**344**	**58 (17%)**	**$42,588,701**

THE TWO-TIER REVIEW SYSTEM

The USAMRMC developed a review model based on 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 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

The CDA, IASF, and TTSA applications were peer-reviewed in November 2016 by 15 panels of researchers, clinicians, and consumer advocates, based on the evaluation criteria specified in the PAs.

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 appropriate 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 appropriate 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, 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 February 2017 by the FY16 Programmatic Panel, which is comprised of a diverse group of basic and clinical scientists and consumer advocates, each contributing special expertise or interest in cancer research, as well as ad hoc reviewers. 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 are 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 PAs were as follows: ratings and evaluations of the scientific peer review panels; military relevance; relative impact; relative innovation; program portfolio composition; and adherence to the intent of the award mechanism. After programmatic review, the Commanding General, USAMRMC, and the Director of the Defense Health Agency Research and Development Directorate approved funding for the applications recommended during the programmatic review.