

**US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2021 (FY21) PEER REVIEWED CANCER RESEARCH PROGRAM
(PRCRP)**

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY21 PRCRP called for applications in response to program announcements (PAs) for two award mechanisms released in March 2021:

- Idea Award
- Impact Award

Pre-applications were received for the Idea Award and Impact Award PAs in May 2021 and screened in May-June 2021 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 two PAs in September 2021 and peer reviewed in November 2021. Programmatic review was conducted in February 2022.

In response to the Idea Award, 245 compliant applications were received and 18 (7.4%) were recommended for funding for a total of \$13.7M.

In response to the Impact Award, 132 compliant applications were received and 20 (15.2%) were recommended for funding for a total of \$37.5M.

Submission and award data for the FY21 PRCRP are summarized in the table(s) below.

Table 1. Submission/Award Data for the FY21 PRCRP*

Mechanism	Pre-Applications Received	Pre-Applications Invited (%)	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Idea Award	451	266 (60.0%)	245	18 (7.4%)	\$13.7M
Impact Award	234	154 (65.8%)	132	20 (15.2%)	\$37.5M
Total	685	420 (61.3%)	377	38 (10.1%)	\$51.2M

*These data reflect funding recommendations only. Pending FY21 award negotiations, final numbers will be available after September 30, 2022.

Table 2. FY21 PRCRP Application Data by Topic Area *

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Bladder Cancer	24	1 (4.2%)	\$1.5M
Blood Cancer	47	3 (6.4%)	\$3.0M
Brain Cancer	37	3 (8.1%)	\$4.8M
Cancers Associated with the Use of Beryllium	1	0 (0.0%)	\$0.0M
Colorectal Cancer	40	2 (5.0%)	\$1.5M
Endometrial Cancer	18	4 (22.2%)	\$6.5M
Esophageal Cancer	7	1 (14.3M)	\$2.0M
Germ Cell Cancers	4	1 (25.0%)	\$0.8M
Head and Neck Cancers	17	2 (11.8%)	\$1.8M
Liver Cancer	30	2 (6.7%)	\$1.6M
Lymphoma	22	1 (4.5%)	\$0.8M
Mesothelioma	12	3 (25.0%)	\$3.2M
Metastatic Cancer	13	1 (7.7%)	\$1.8M
Neuroblastoma	17	1 (5.9%)	\$1.5M
Pediatric, Adolescent, and Young Adult Cancers	31	4 (12.9%)	\$7.8M
Pediatric Brain Tumors	24	3 (12.5%)	\$3.5M
Sarcoma	18	2 (11.1%)	\$2.9M
Stomach Cancer	11	3 (27.3%)	\$4.6M
Thyroid Cancer	2	1 (50.0%)	\$1.9M
The Link Between Scleroderma and Cancer	2	0 (0.0%)	\$0.00M
Totals	377	38 (10.1%)	\$51.5M

*Table does not include data for PAs: Behavioral Health Science Award, Career Development Award – Fellow Option, and Translational Team Science Award. These PAs were programmatically reviewed in December 2021. The associated description of review procedures can be found on the CDMRP website:

https://cdmrp.army.mil/prcrp/pdf/W81XWH-20-PRCRP_BHSA_CDA_VCCDA_InformationPaper.pdf

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

Idea Award and Impact Award applications were peer reviewed in November 2021 by 29 panels of researchers, clinicians, and consumer advocates (190 scientists and 49 consumer reviewer) based on the evaluation criteria specified in the PAs.

Each peer review panel included a Chair, an average of seven scientific reviewers, an average of two consumer reviewer, 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 relevant 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 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 evaluation criteria and overall scores, peer reviewers' written comments, and the essence of 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 February 2022 by the FY21 Programmatic Panel that was comprised of a diverse group of basic and clinical scientists and consumer advocates, each contributing special expertise or interest in cancer. 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.

Programmatic review criteria published in the Idea Award PA were as follows: ratings and evaluations of the peer review panels; programmatic relevance to the FY21 PRCRP Overarching Challenges; relative innovation; program portfolio composition; programmatic relevance to the FY21 PRCRP Military Health Focus Areas; and adherence to the intent of the award mechanism.

Programmatic review criteria published in the Impact Award PA were as follows: ratings and evaluations of the peer review panels; programmatic relevance to the FY21 PRCRP Overarching Challenges; relative near-term impact; program portfolio balance and composition; programmatic relevance to the FY21 PRCRP Military Health Focus Areas; and adherence to the intent of the award mechanism. After programmatic review, the applications recommended for funding were sent to the Commanding General, USAMRDC, for approval.