

**US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS
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 three award mechanisms released in March 2021:

- Behavioral Health Science Award
- Career Development Award — Fellow Option
- Translational Team Science Award

None of these award mechanisms called for pre-applications. Applications were received for these three PAs in August 2021 and were peer reviewed in October 2021. Programmatic review was conducted in December 2021. The FY21 PRCRP also released two PAs: Idea Award and Impact Award to be programmatic reviewed in February 2022 for final funding recommendations.

In response to the Behavioral Health Science Award, 14 compliant applications were received and 3 (21.4%) were recommended for funding for a total of \$4.2 million (M).

In response to the Career Development Award – Fellow Option, 46 compliant applications were received and 20 (43.5%) were recommended for funding for a total of \$13.0M.

In response to the Translational Team Science Award, 54 compliant applications, representing 143 potential awards, were received and 9 (16.7%) compliant applications, representing 24 awards, were recommended for funding for a total of \$33.4M.

Submission and award data for the FY21 PRCRP are summarized in the tables below.

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

Mechanism	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Behavioral Health Science Award	14	3 (21.4%)	\$4.2M
Career Development Award – Fellow Option	46	20 (43.5%)	\$13.0M
Translational Team Science Award†	54	9 applications representing 24 awards (16.7%)	\$33.4M
Total	114	32 (28.0%)	\$50.6M

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

†54 applications representing 143 potential awards were received in response to the TTSA mechanism and 9 applications, representing 24 potential awards, were recommended for funding.

Table 2. FY21 PRCRP Submission/Award by Topic Area*

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Bladder Cancer	16	4 applications representing 6 awards (37.5%)	\$5.7M
Blood Cancer	8	3 (37.5%)	\$2.1M
Brain Cancer	5	0 (0.0%)	\$0.0M
Cancers Associated with the Use of Beryllium	0	0 (0.0%)	\$0.0M
Colorectal Cancer	12	3 applications representing 4 awards (25.0%)	\$5.3M
Endometrial Cancer	3	0 (0.0%)	\$0.0M
Esophageal Cancer	4	1 (25.0%)	\$0.6M
Germ Cell Cancers	5	3 (60.0%)	\$2.7M
Head and Neck Cancers	10	4 (40.0%)	\$3.4M
Liver Cancer	5	1 application representing 3 awards (20.0%)	\$4.1M
Lymphoma	4	2 applications representing 5 awards (50.0%)	\$6.3M
Mesothelioma	2	0 (0.0%)	\$0.0M
Metastatic Cancer	1	0 (0.0%)	\$0.0M
Neuroblastoma	2	2 applications representing 4 awards (100%)	\$4.9M
Pediatric, Adolescent, and Young Adult Cancers	20	4 applications representing 6 awards (20.0%)	\$6.4M
Pediatric Brain Tumors	5	1 (20.0%)	\$0.5M
Sarcoma	8	2 applications representing 4 awards (25.0%)	\$4.2M
Stomach Cancer	3	1 (33.3%)	\$0.6M

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Thyroid Cancer	1	1 application representing 2 awards (100%)	\$3.9M
The Link Between Scleroderma and Cancer	0	0 (0.0%)	\$0.0M
Totals	114	32 (28.0%)	\$50.7M

* For the TTSA mechanism 9 applications, representing 24 potential awards, were recommended for funding.

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

Behavioral Health Science Award, Career Development Award – Fellow Option, and Translational Team Science Award applications were peer reviewed in October 2021 by 17 panel(s) of researchers, clinicians, and consumer advocates (90 scientists and 21 consumer reviewers) based on the evaluation criteria specified in the PAs.

Each peer review panel included a Chair, an average of 5 scientific reviewers, an average of 1 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 December 2021 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 Behavioral Health Science Award PA were as follows: ratings and evaluations of the peer review panels; programmatic relevance to the FY21 PRCRP Overarching Challenges; relative 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.

Programmatic review criteria published in the Career Development Award – Fellow Option PA were as follows: ratings and evaluations of the peer review panels; programmatic relevance to the FY21 PRCRP Overarching Challenges; relative impact; program portfolio composition; programmatic relevance to the FY21 PRCRP Military Health Focus Areas; relevant career stage

of the Principal Investigator (including time after terminal degree, other laboratory funding, institutional position); and adherence to the intent of the award mechanism.

Programmatic review criteria published in the Translational Team Science Award PA were as follows: ratings and evaluations of the peer review panels; programmatic relevance to the FY21 PRCRP Overarching Challenges; relative impact; program portfolio composition; programmatic relevance to the FY21 PRCRP Military Health Focus Areas; relative translational potential; 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.