

**US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2022 (FY22) PEER REVIEWED MEDICAL RESEARCH PROGRAM
(PRMRP)**

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY22 PRMRP called for applications in response to the Discovery Award program announcement (PA) released in March 2022.

Applications were received for this PA in May 2022 and peer reviewed in July 2022. Programmatic review was conducted in September 2022.

In response to the FY22 Discovery Award PA, 308 compliant applications were received and 64 (20.8%) were recommended for funding for a total of \$19.8 million (M).

Submission and award data for the FY22 PRMRP Discovery Award are summarized in the tables below.

Table 1. Submission/Award Data for the FY22 PRMRP Discovery Award*

Mechanism	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Discovery Award	308	64 (20.8%)	\$19,821,590

*These data reflect funding recommendations only. Pending FY22 award negotiations, final numbers will be available after September 30, 2023.

Table 2. FY22 PRMRP Discovery Award Application Data by Topic Area

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Arthritis	11	2 (18.2%)	\$642,600
Cardiomyopathy	17	3 (17.6%)	\$945,220
Congenital Heart Disease	3	1 (33.3%)	\$317,000
Diabetes	21	3 (14.3%)	\$980,000
Dystonia	4	0 (0.0%)	-
Eating Disorders	3	0 (0.0%)	-
Ehlers-Danlos Syndrome	1	1 (100%)	\$311,000
Endometriosis	7	3 (42.9%)	\$963,576
Epidermolysis Bullosa	1	0 (0.0%)	-
Familial Hypercholesterolemia	0	-	-
Fibrous Dysplasia	0	-	-
Focal Segmental Glomerulosclerosis	2	2 (100%)	\$667,185
Food Allergies	6	1 (16.7%)	\$317,930
Fragile X	3	1 (33.3%)	\$311,000

Topic Area	Compliant Applications Received	Applications Recommended for Funding (%)	Total Funds
Friedreich's Ataxia	4	3 (75.0%)	\$839,000
Frontotemporal Degeneration	4	1 (25.0%)	\$308,000
Guillain-Barré Syndrome	1	0 (0.0%)	-
Hemorrhage Control	5	0 (0.0%)	-
Hepatitis B	4	1 (25.0%)	\$299,993
Hydrocephalus	2	1 (50.0%)	\$311,000
Hypercholesterolemia	4	1 (25.0%)	\$294,000
Hypertension	6	0 (0.0%)	-
Inflammatory Bowel Disease	18	4 (22.2%)	\$1,228,964
Interstitial Cystitis	0	-	-
Malaria	8	1 (12.5%)	\$199,662
Mitochondrial Disease	7	3 (42.9%)	\$926,000
Musculoskeletal Disorders (related to acute and chronic bone conditions and injuries)	12	1 (8.3%)	\$339,000
Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome	3	0 (0.0%)	-
Myotonic Dystrophy	0	-	-
Nephrotic Syndrome	1	0 (0.0%)	-
Non-Opioid Therapy for Pain Management	2	0 (0.0%)	-
Nutrition Optimization	3	2 (66.7%)	\$589,598
Pancreatitis	5	0 (0.0%)	-
Pathogen-Inactivated Blood Products	1	1 (100%)	\$220,000
Peripheral Neuropathy	11	2 (18.2%)	\$635,780
Plant-Based Vaccines	0	-	-
Platelet-Like Cell Production	0	-	-
Polycystic Kidney Disease	7	3 (42.9%)	\$952,426
Pressure Ulcers	6	1 (16.7%)	\$317,000
Pulmonary Fibrosis	13	2 (15.4%)	\$650,616
Respiratory Health	19	4 (21.1%)	\$1,307,359
Rett Syndrome	4	2 (50.0%)	\$663,000
Rheumatoid Arthritis	6	2 (33.3%)	\$644,894
Sleep Disorders and Restriction	6	1 (16.7%)	\$306,510
Suicide Prevention	3	0 (0.0%)	-
Sustained Release Drug Delivery	8	2 (25.0%)	\$633,745
Trauma	21	5 (23.8%)	\$1,513,756
Vascular Malformations	4	2 (50.0%)	\$609,802
Viral Diseases	25	2 (8.0%)	\$575,974
Women's Heart Disease	6	0 (0.0%)	-
Totals	308	64 (20.8%)	\$19,821,590

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

Discovery Award applications were peer reviewed in July 2022 by 30 panels of researchers, clinicians, and consumer advocates based on the evaluation criteria specified in the PA.

Each peer review panel included a Chair, an average of six scientific reviewers, an average of two 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 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 September 2022 by the FY22 Programmatic Panel members and ad hoc reviewers from each branch of the military Services, USAMRDC headquarters, the Defense Health Agency, the Department of Veterans Affairs, the Department of Health and Human Services, and academic institutions. 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 PAs were as follows: ratings and evaluations of the scientific peer review panels; adherence to the intent of the award mechanism, relative innovation, relative impact, relevance to the FY22 PRMRP Topic Areas, relevance to the FY22 PRMRP Strategic Goals, relevance to military health, and program portfolio composition. After programmatic review, the applications recommended for funding were sent to the Commanding General, USAMRDC, for approval.