US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC)
CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP)
FISCAL YEAR 2020 (FY20) PEER REVIEW MEDICAL RESEARCH PROGRAM (PRMRP)

DESCRIPTION OF REVIEW PROCEDURES

The programmatic strategy implemented by the FY20 PRMRP called for applications in response to Discovery Award Program Announcement (PA) released in January 2020.

In response to the FY20 Discovery Award PA, 566 compliant applications were received in May 2020 and peer reviewed in July 2020. Programmatic Review was conducted in September 2020.

Submission and award data for the FY20 Discovery Award are summarized in the tables below.

Table 1. Submission/Award Data for the FY20 PRMRP*

Mechanism	Compliant Applications Received	Projects Recommended for Funding (%)	Total Funds
Discovery Award	566	76 (13.4%)	$23,396,370

*These data reflect funding recommendations only. Pending FY20 award negotiations, final numbers will be available after September 30, 2021.

Table 2. FY20 PRMRP Application Data by Primary Topic Area

Primary Topic Area	Compliant Projects Received	Projects Recommended for Funding (%)	Total Funds
Arthritis	23	3 (13.0%)	$956,988
Burn Pit Exposure	4	0 (0.0%)	$0
Chronic Migraine and Post-Traumatic Headache	8	2 (25.0%)	$566,400
Congenital Heart Disease	25	3 (12.0%)	$1,092,000
Constrictive Bronchiolitis	0	0 (0.0%)	$0
Diabetes	68	8 (11.8%)	$2,594,767
Dystonia	9	1 (11.1%)	$305,000
Eating Disorders	3	1 (33.3%)	$255,500
Emerging Viral Diseases	58	8 (13.8%)	$2,198,711
Endometriosis	7	0 (0.0%)	$0
Epidermolysis Bullosa	6	0 (0.0%)	$0
Familial Hypercholesterolemia	0	0 (0.0%)	$0
Fibrous Dysplasia	1	0 (0.0%)	$0
Focal Segmental Glomerulosclerosis	2	0 (0.0%)	$0
Food Allergies	5	1 (20.0%)	$452,517
Fragile X	1	1 (100.0%)	$295,924

Primary Topic Area	Compliant Projects Received	Projects Recommended for Funding (%)	Total Funds
Frontotemporal Degeneration	21	5 (23.8%)	$1,578,620
Guillain-Barré Syndrome	3	0 (0.0%)	$0
Hemorrhage Control	14	2 (14.3%)	$441,191
Hepatitis B	6	2 (33.3%)	$631,316
Hydrocephalus	7	1 (14.3%)	$324,000
Immunomonitoring of Intestinal Transplants	2	0 (0.0%)	$0
Inflammatory Bowel Diseases	20	2 (10.0%)	$670,303
Interstitial Cystitis	2	0 (0.0%)	$0
Metals Toxicology	5	0 (0.0%)	$0
Mitochondrial Disease	17	3 (17.6%)	$933,978
Musculoskeletal Health	60	5 (8.3%)	$1,534,118
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome	7	2 (28.6%)	$547,201
Myotonic Dystrophy	1	0 (0.0%)	$0
Nutrition Optimization	5	0 (0.0%)	$0
Pancreatitis	12	2 (16.7%)	$617,000
Pathogen-Inactivated Blood Products	2	1 (50%)	$304,894
Plant-Based Vaccines	3	0 (0.0%)	$0
Polycystic Kidney Disease	12	4 (33.3%)	$1,309,661
Pressure Ulcers	7	0 (0.0%)	$0
Pulmonary Fibrosis	23	4 (17.4%)	$1,184,140
Resilience Training	8	0 (0.0%)	$0
Respiratory Health	38	5 (13.2%)	$1,524,826
Rheumatoid Arthritis	7	0 (0.0%)	$0
Sleep Disorders and Restriction	19	1 (5.3%)	$327,500
Spinal Muscular Atrophy	0	0 (0.0%)	$0
Sustained-Release Drug Delivery	28	4 (14.3%)	$1,193,348
Vascular Malformations	7	3 (42.9%)	$953,000
Women's Heart Disease	10	2 (20.0%)	$603,467
Totals	**566**	**76 (13.4%)**	**$23,396,370**

Table 3. FY20 PRMRP Application Data by Secondary Topic Area

Secondary Topic Area	Compliant Projects Received	Projects Recommended for Funding (%)	Total Funds
Arthritis	13	1 (7.7%)	$295,000
Burn Pit Exposure	6	1 (16.7%)	$329,998
Chronic Migraine and Post-Traumatic Headache	2	0 (0.0%)	$0
Congenital Heart Disease	3	1 (33.3%)	$312,000
Constrictive Bronchiolitis	0	0 (0.0%)	$0
Diabetes	14	0 (0.0%)	$0

Secondary Topic Area	Compliant Projects Received	Projects Recommended for Funding (%)	Total Funds
Dystonia	1	1 (100.0%)	$303,870
Eating Disorders	1	0 (0.0%)	$0
Emerging Viral Diseases	18	2 (11.1%)	$585,230
Endometriosis	0	0 (0.0%)	$0
Epidermolysis Bullosa	0	0 (0.0%)	$0
Familial Hypercholesterolemia	1	0 (0.0%)	$0
Fibrous Dysplasia	0	0 (0.0%)	$0
Focal Segmental Glomerulosclerosis	1	1 (100.0%)	$350,000
Food Allergies	1	0 (0.0%)	$0
Fragile X	0	0 (0.0%)	$0
Frontotemporal Degeneration	1	0 (0.0%)	$0
Guillain-Barré Syndrome	1	0 (0.0%)	$0
Hemorrhage Control	5	0 (0.0%)	$0
Hepatitis B	2	0 (0.0%)	$0
Hydrocephalus	0	0 (0.0%)	$0
Immunomonitoring of Intestinal Transplants	0	0 (0.0%)	$0
Inflammatory Bowel Diseases	2	0 (0.0%)	$0
Interstitial Cystitis	0	0 (0.0%)	$0
Metals Toxicology	0	0 (0.0%)	$0
Mitochondrial Disease	6	0 (0.0%)	$0
Musculoskeletal Health	27	4 (14.8%)	$1,094,921
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome	1	0 (0.0%)	$0
Myotonic Dystrophy	2	0 (0.0%)	$0
Nutrition Optimization	2	0 (0.0%)	$0
Pancreatitis	1	0 (0.0%)	$0
Pathogen-Inactivated Blood Products	4	1 (25.0%)	$241,652
Plant-Based Vaccines	0	0 (0.0%)	$0
Polycystic Kidney Disease	1	0 (0.0%)	$0
Pressure Ulcers	8	1 (12.5%)	$296,140
Pulmonary Fibrosis	6	1 (16.7%)	$352,000
Resilience Training	7	0 (0.0%)	$0
Respiratory Health	37	10 (27.0%)	$2,960,507
Rheumatoid Arthritis	2	0 (0.0%)	$0
Sleep Disorders and Restriction	3	1 (33.3%)	$249,964
Spinal Muscular Atrophy	2	0 (0.0%)	$0
Sustained-Release Drug Delivery	11	2 (18.2%)	$616,728
Vascular Malformations	3	0 (0.0%)	$0
Women’s Heart Disease	9	1 (11.1%)	$255,500
None	362	48 (13.3%)	$15,152,860
Totals	**566**	**76 (13.4%)**	**$23,396,370**

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 2020 by 32 panels of researchers, clinicians, and consumer advocates based on the evaluation criteria specified in the PA. Reviewers were blinded to the identity of the Principal Investigator (PI), collaborators, and their organizations.

Online Review Panels

The Discovery Award scientific peer review panel was conducted online, with each application reviewed by two scientists and one consumer. Moderated online discussions took place following individual reviewer score input when there were disparate scores between reviewers of more than two adjectival scores [e.g., Outstanding score (1.0-1.5) and Fair (2.6-3.5)].

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 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 2020 by FY20 Programmatic Panel members and ad hoc reviewers from each branch of the military Services, USAMRDC headquarters, the Department of Veterans Affairs, the Defense Health Agency, the Department of Health and Human Services, the Office of the Principal Assistant for Acquisition, the Telehealth and Advanced Technology Research Center, and academia. 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; program portfolio composition; relevance to military health; and relative impact. After programmatic review, the Commanding General, USAMRDC approved funding for the applications recommended during programmatic review.