**US ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND (USAMRDC) CONGRESSIONALLY DIRECTED MEDICAL RESEARCH PROGRAMS (CDMRP) FISCAL YEAR 2023 (FY23) RECONSTRUCTIVE TRANSPLANT RESEARCH PROGRAM (RTRP)**

**DESCRIPTION OF REVIEW PROCEDURES**

The programmatic strategy implemented by the FY23 RTRP called for applications in response to program announcements (PAs) for three award mechanisms released in June 2023:

- Advanced Technology Development Award (ATDA)
- Idea Discovery Award (IDA)
- Investigator-Initiated Research Award (IIRA)

Pre-applications were received for these three PAs in July 2023 and screened in August 2023 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 October 2023 and peer reviewed in December 2023. Programmatic review was conducted in February 2024.

In response to the ATDA PA, 10 pre-applications representing 16 potential awards were received, and the Principal Investigators (PIs) of 10 of these were invited to submit a full application. Ten compliant applications representing 16 potential awards were received, and one application (representing two awards, 10.0%) were recommended for funding for a total of $1.50M.

In response to the IDA PA, 15 pre-applications were received, and the PIs of 13 of these were invited to submit a full application. Twelve compliant applications were received, and three (25.0%) were recommended for funding for a total of $1.50M.

In response to the IIRA PA, 25 pre-applications representing 47 potential awards were received, and the PIs of 25 of these were invited to submit a full application. Twenty-four compliant applications representing 45 potential awards were received, and five applications (representing 12 awards, 20.8%) were recommended for funding for a total of $6.94 million (M).

Submission and award data for the FY23 RTRP are summarized in the table(s) below.

**Table 1. Submission/Award Data for the FY23 RTRP[*]**

| Mechanism | Pre-Applications Received | Pre-Applications Invited (%) | Compliant Applications Received | Applications Recommended for Funding (%) | Total Funds |
|---|---|---|---|---|---|
| ATDA[±] | 10 | 10 (100%) | 10 | 1 (10%) | $1.50 |
| IDA | 15 | 13 (86.7%) | 12 | 3 (25%) | $1.50 |
| IIRA[≠] | 25 | 25 (100%) | 24 | 5 (20.8%) | $6.94 |
| **Total** | **50** | **48 (96%)** | **46** | **9 (19.6%)** | **$9.94** |

[*] These data reflect funding recommendations only. Pending FY23 award negotiations, final numbers will be available after September 30, 2024.

[±] One project recommended for funding representing two potential awards.

[≠] Five projects recommended for funding representing 12 potential awards.

## 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

ATDA, IDA, and IIRA applications were peer reviewed in December 2023 by two panel(s) of researchers, biostatisticians, technology specialists, clinicians, and consumer advocates based on the evaluation criteria specified in the PAs.

Each peer review panel included a Chair, an average of eight scientific reviewers, two biostatisticians, at least one technology transfer specialist, 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 the 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 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 2024 by the FY23 Programmatic Panel, which was comprised of a diverse group of basic and clinical scientists and consumer advocates, each contributing special expertise or interest in reconstructive transplant. 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. The programmatic review criteria published in the PAs were as follows: ratings and evaluations of the scientific peer review panels; relevance to the mission of the Defense Health Program and FY23 RTRP, as evidenced by adherence to the intent of the award mechanism, program portfolio composition, programmatic relevance to the FY23 RTRP focus areas, relative impact, and military relevance. For the Idea Discovery Award, relative innovation was also a programmatic review criterion. After programmatic review, the applications recommended for funding were sent to the Commanding General, USAMRDC, for approval.