GWG Recommendations

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CIRM
CALIFORNIA'S STEM CELL AGENCY

Sickle Cell Disease Program

CLINICAL STAGE

CLIN 1 **CLIN 2** **CLIN 3**

Scoring System for Clinical Applications

- **Score of "1"**

  Exceptional merit and warrants funding.

- **Score of "2"**

  Needs improvement and does not warrant funding at this time but could be resubmitted to address areas for improvement.

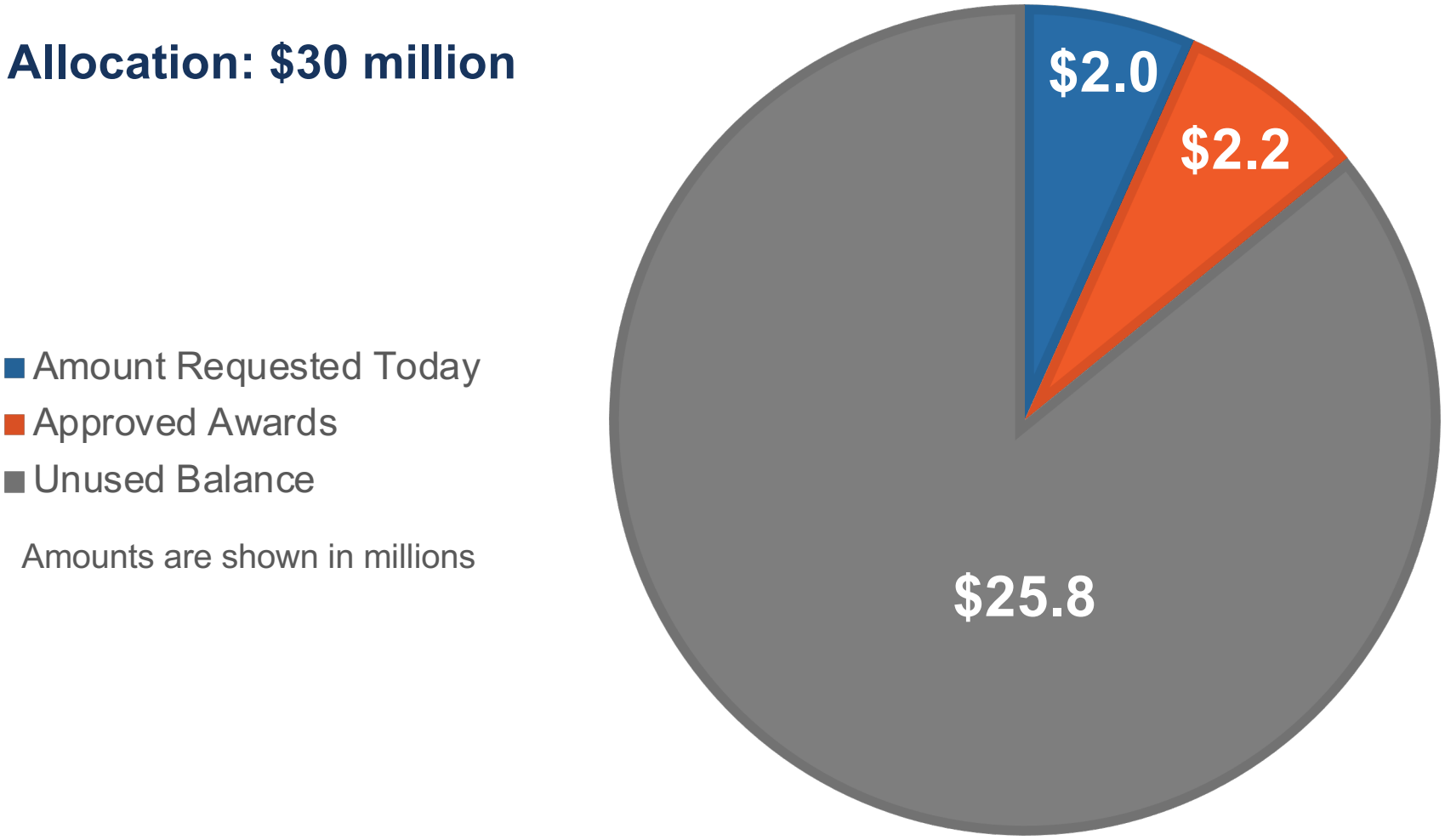
- **Score of "3"**

  Sufficiently flawed that it does not warrant funding and the same project should not be resubmitted ***for at least 6 months****.*

Applications are scored by all scientific members of the GWG with no conflict.

Sickle Cell Disease Clinical Budget Status

Allocation: $30 million



Note: Of the $30M allocation, $4.2M was borrowed for the COVID-19 program and is not reflected in the chart.

CLIN1-11674: Project Summary

Therapy	Expanded cord blood hematopoietic stem cells
Indication	Severe sickle cell disease (SCD)
Goal	Completion of a phase 1 clinical trial
Funds Requested	$2,000,000 ($857,143 Co-funding)

Maximum funds allowable for this category: $8,000,000

CLIN2-11674: Background Information

Clinical Background: SCD affects approximately 100,000 Americans. SCD is particularly common in those with sub-Saharan African ancestry affecting 1 in 365 African-American births. Globally, over 300,000 babies are born with SCD every year.

Value Proposition of Proposed Therapy: The only current cure is allogeneic HSC transplantation, but donor availability is very limited. The proposed therapy would broaden donor availability for patients seeking HSC transplantation.

Why a stem cell project: The therapy includes cord blood-derived hematopoietic stem cells.

CLIN2-11674: Related CIRM Portfolio Projects

Application/ Award	Project Stage	Project End Date	Indication	Candidate	Mechanism of Action
Current Application	IND	N/A	Sickle Cell Disease	Allogeneic cord blood hematopoietic stem cells	Hematopoietic stem cell transplantation to replace patient sickle red blood cells
CLIN1	IND	11/30/2020	Sickle Cell Disease	Autologous CRISPR-edited hematopoietic stem cells	Virus-free CRISPR editing to correct the pathogenic hemoglobin S allele mutation in HSC
CLIN1	IND	07/31/2020	Sickle Cell Disease	Autologous CRISPR-edited hematopoietic stem cells	CRISPR editing to correct the pathogenic hemoglobin S allele mutation in HSC
CLIN2	Phase 1	12/31/21	Sickle Cell Disease	Autologous lentiviral gene-modified hematopoietic stem cells	Expression of lentiviral transferred anti-sickling hemoglobin gene
CLIN2	Phase 1	04/30/22	Sickle Cell Disease	CD4 T Cell depleted haploidentical HSC transplant	Achieving immune tolerance by inducing mixed chimerism

CLIN2-11674: Previous CIRM Funding

Applicant has not received previous funding from CIRM.

CLIN2-11674: GWG Review

GWG Recommendation: Exceptional merit and warrants funding

Score	GWG Votes
1	15
2	0
3	0

CIRM Team Recommendation: Fund (concur with GWG recommendation)

Award Amount: $2,000,000*

*Final award shall not exceed this amount and may be reduced contingent on CIRM's final assessment of allowable costs and activities.

COVID-19 Program

- Given the urgent need to develop treatments for COVID-19, CIRM launched a solicitation in support of promising discovery, translational, preclinical and clinical trial stage projects that could quickly advance treatments to patients in need.
- CIRM is utilizing its established partnering opportunities in Discovery (DISC2), Translational (TRAN1), and Clinical (CLIN1,CLIN2) stages to facilitate the application, review and funding process.
- The CIRM Governing Board approved a total allocation of $5 million to support this new program.

COVID-19 Program

Support under the DISC2, TRAN1, CLIN1, and CLIN2 program announcements is provided with the following award limitations:

Project Stage	Specific Program	Award Amount*	Award Duration
Clinical trial	CLIN2	$750,000	24 months
Late stage preclinical	CLIN1	$400,000	12 months
Translational	TRAN1	$350,000	12 months
Discovery	DISC2	$150,000	12 months

*Award limits are for Total Funds Requested (i.e., limit includes direct facilities costs and indirect costs)

COVID-19 Program

All projects must propose to achieve a clear deliverable within six months of project initiation to demonstrate progress toward the goal.

Program	Ready to Start	Six-Month Goal
CLIN2	IND filed/approval to treat patients	Initiate enrollment and data collection
CLIN1	Pre-IND with FDA completed	File IND with FDA
TRAN1	Therapeutic candidate w/ disease-modifying activity identified	Conduct pre-IND or equivalent interaction w/ FDA
DISC2	Proposal to identify a candidate for development	Have data for a viable candidate that could progress quickly to the clinic

GWG Recommendations

	Number of Apps	Total Applicant Request	Funds Available
Recommended for funding Score 85-100	2	$300,000	$3,973,311
Not recommended for funding Score 1-84	10		

For each award, the final award amount shall not exceed the amount approved by the ICOC Application Review Subcommittee and may be reduced contingent on CIRM's assessment of allowable costs and activities.

Recommended Applications

Application	Score (Median)	Project Type	Therapeutic Product	Applicant Request
DISC2COVID19-11811	90	Discovery	Small molecule drug	$150,000
DISC2COVID19-11901	85	Discovery	Small molecule drug	$150,000