



SOMETHING
BETTER
THAN HOPE

Right now.

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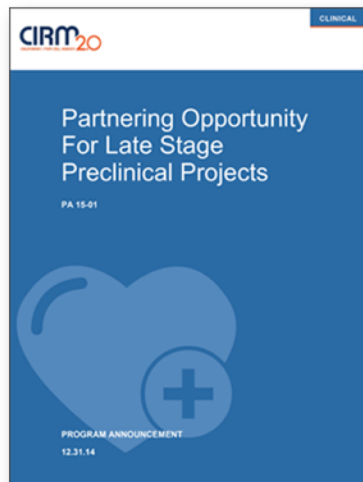
Vice President, Portfolio Development
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Medicine

February 21, 2019

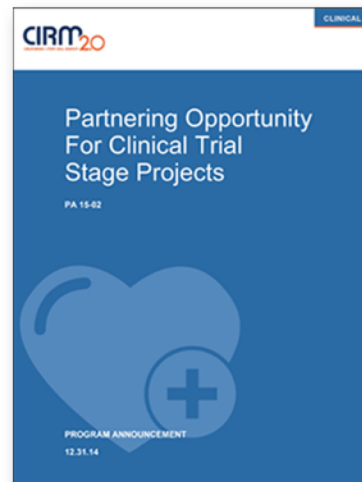


Every Moment Counts. **Don't Stop Now.**

Clinical Stage Programs



CLIN 1



CLIN 2



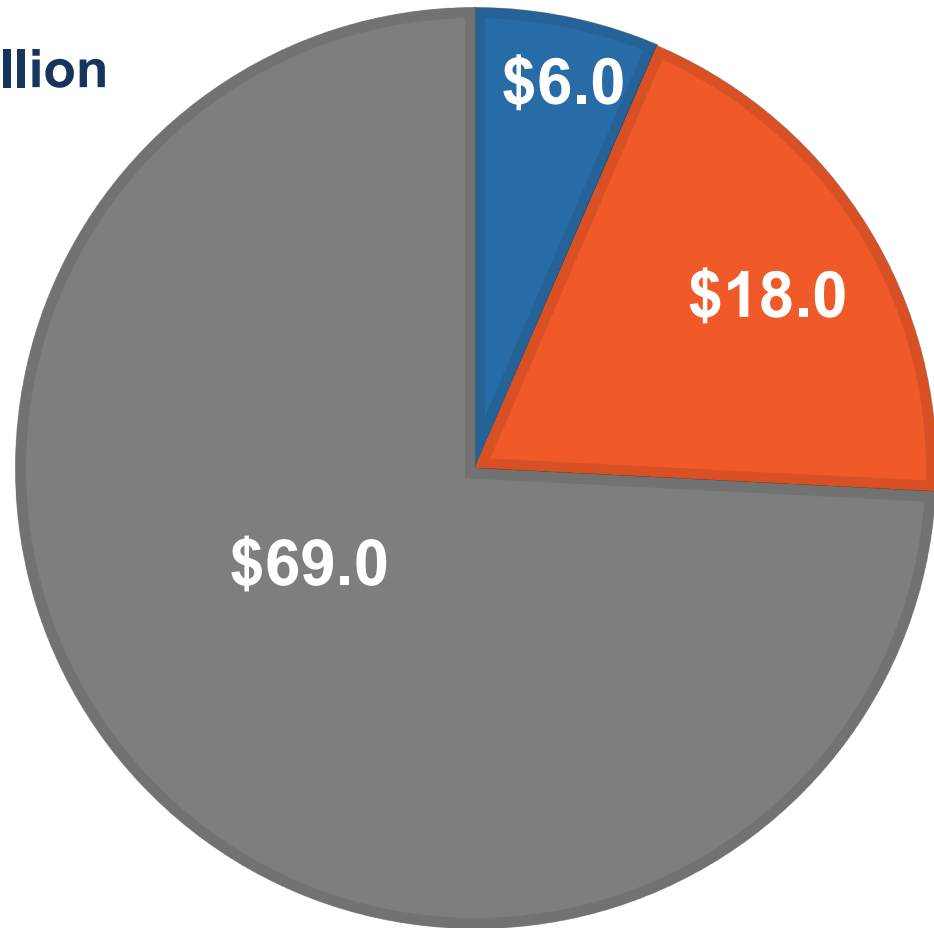
CLIN 3

2019 Clinical Budget Status

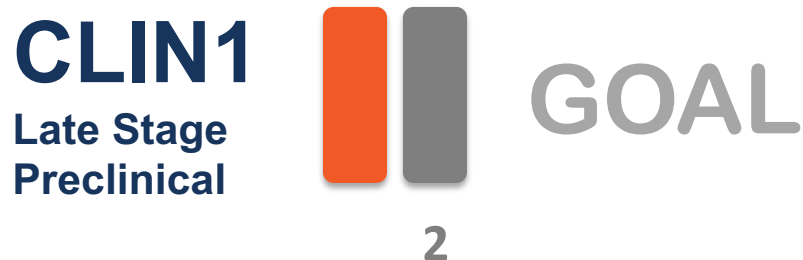
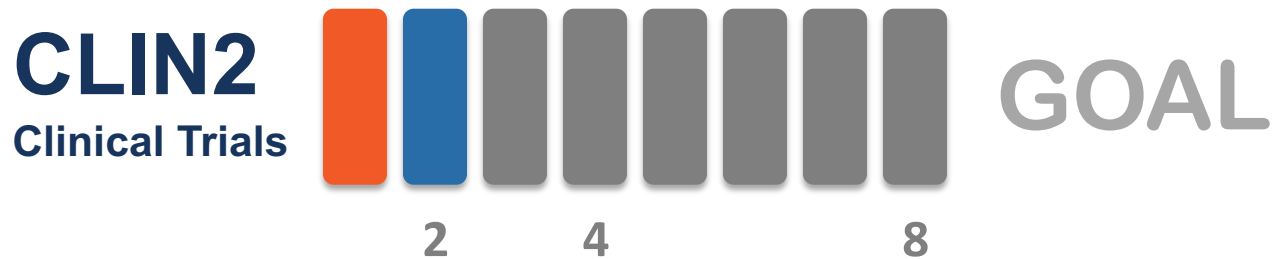
Annual Allocation: \$93 million

- Amount Requested Today
- Approved Awards
- Unused Balance

Amounts are shown in millions



2019 Clinical Award Targets



 Approved Award  Awaiting Today's Approval

CLIN2-11431: Clinical Study of Therapy for Severe Combined Immunodeficiency

Project Summary

Therapy	Anti-CD117 antibody followed by allogeneic CD34 ⁺ CD90 ⁺ cell transplantation
Indication	Severe Combined Immunodeficiency (SCID)
Goal	Complete phase 1 trial – 18 patients proposed <ul style="list-style-type: none">• Clinical operations and management• Patient enrollment, treatment, & follow-up• Antibody stability testing & storage• Regulatory activities
Funds Requested	\$5,999,984 (\$0 Co-funding)

Maximum funds allowable for this category: \$12,000,000

CLIN2-11431: Clinical Study of Therapy for Severe Combined Immunodeficiency

GWG Recommendation: Exceptional merit and warrants funding

Score	GWG Votes
1	9
2	6
3	0

CIRM Team Recommendation: Fund (concur with GWG recommendation)

Award Amount: \$5,999,984*

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

Related Award: DR2A-05365

Award Summary

Title	A monoclonal antibody that depletes blood stem cells and enables chemotherapy free transplants
ICOC Approval	\$20,000,000 in July 2012
Award Amount	\$19,068,382
Award Start	August 2013 (4 year award)
Goal in Application	Conduct preclinical studies File IND Initiate a phase 1/2 clinical trial w/ 26 patients
Goal in Contract	Conduct preclinical studies File IND Complete phase 1 clinical trial w/ 40 patients

TRAN & CLIN versus Disease Team 2



TRANSLATION

Single
Candidate



Pre-IND
Meeting



IND
Approved



Ph1
Complete

Average
Non-
Profit
Award

\$5M

\$5M

\$10M

DISEASE TEAM 2 RESEARCH AWARDS

Disease Team Award Timeline

Key Activities Completed	Date Achieved (Months Behind Original Target)	CIRM Disbursed to Date (% of Award)	Cumulative Funds Spent + Obligations
IND Approved Activities: <ul style="list-style-type: none"> • GMP mfg of anti-CD34; anti-CD90 • Tech transfer/stability of anti-CD117 • PK/PD study • GLP Tox study • Pre-IND meeting • Assay validation 	April 2016 (9 months behind)	\$14.1M (74%)	\$10.7M + \$3.8M
Enroll & dose 1st patient	May 2017 (9 months behind)	\$15.8M (83%)	\$15.6M + \$2.6M



Award Converted to Operational Milestones & Disbursements:

CIRM Funds Left = \$3.3M

Total Co-Funding Needed = \$2.3M

Operational Milestones & Disbursements

Operational Milestone	Est Date of Achievement	Date Achieved	CIRM Disbursement	Co-Funding Required
First 2 patients enrolled and transplanted	July 2017	July 2017	\$1,500,000	\$0
Complete first Group A (3 patients)	April 2018	May 2018	\$1,300,000	\$550,000
Complete second Group A & first Group B (~6 patients)	April 2019	TBD	\$300,000	\$1,625,000
Complete final Group A (~9 patients)	April 2020	TBD	\$200,000	\$159,953
Last patient completes 4-week safety eval and interim CSR submitted to CIRM	October 2020	TBD	N/A	N/A
Total number of patients to be treated 24		Total	\$3,300,000	\$2,334,953

Estimated Per Patient Costs

■ Disease Team Award

- Reserved \$5.5M for clinical trial activities
- Actual cost of treating 6 patients was \$5.5M
- Per patient costs was about \$917,000

■ New CLIN2 Proposal

- Requested award amount is \$6M
- Activities are primarily clinical trial activities
- Per patient cost for 18 patients is about \$333,333

Proposed Contingency Plan

Risk #1	Risk	Mitigation Strategy
	Delayed enrollment	Open additional trial sites, advertising, outreach
	Associated Costs	Funding Source
	\$12,000 per site \$15,000 per patient	PI, unrestricted funds

Risk #2	Risk	Mitigation Strategy
	Product loss of stability	Work with manufacture company to produce new lot
	Associated Costs	Funding Source
	\$2.9 M	Institutional investors, venture capital

Applicant has provided a response to the following questions:

- Describe how remaining funds from the Disease Team Award and required co-funding will be utilized. Describe whether co-funds have been secured and source of co-funds.
- Describe how the already expended funds for the Disease Team Award were utilized and how they align with the budget and activities that were originally proposed, particularly for the phase 1 trial. Describe any delays, including the cause and impact on the progress of the project to achieve completion of the trial.
- Provide a high-level, activity-based justification for the additional funds requested in the CLIN2-11431 application to complete the phase 1 clinical trial.
- Justify the intended total number of patients to be enrolled for the phase 1 trial, including how many are covered by the Disease Team Award versus the new proposal.
- Provide a plan for advancing the therapeutic candidate through the phase 1 clinical trial and steps anticipated to ultimately commercialize the product.