

# Real Life™

**Shyam Patel, Ph.D.**

Director of Business Development

June CIRM ICOC Meeting

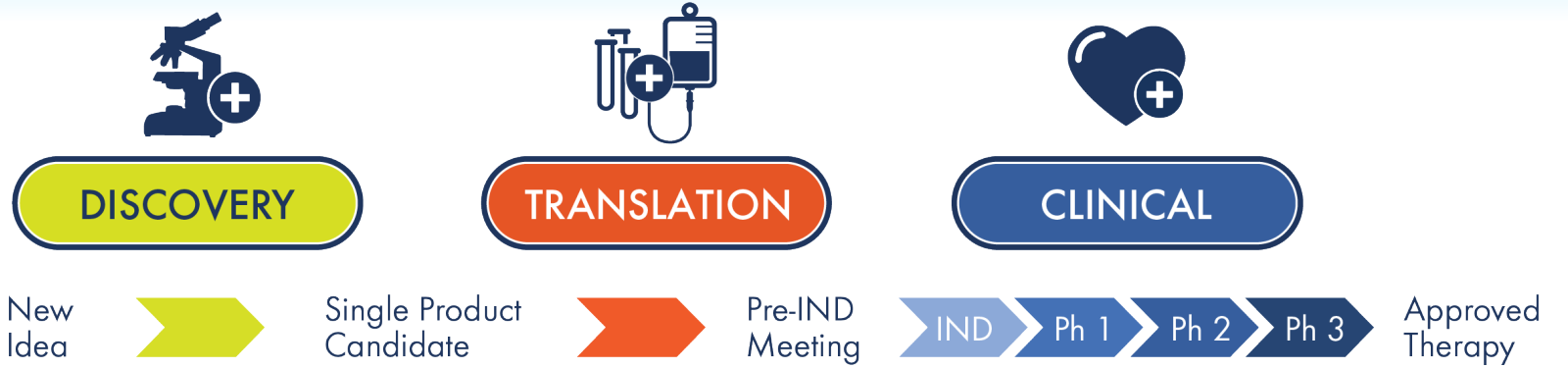
June 27, 2022

**CIRM**  
CALIFORNIA'S STEM CELL AGENCY

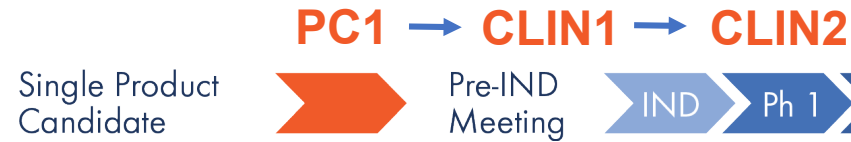
CIRM | 5-YEAR STRATEGIC PLAN

## CIRM as the accelerator for therapy development<sup>1</sup>:

- Supported the **progression of 81 programs into therapy development** via successive CIRM awards, including 20 candidates that progressed from discovery or early preclinical development into clinical trials.



### UC Davis: In Utero Stem Cell Therapy for Spina Bifida



### UC Irvine/jCyte: Cell Therapy for Retinitis Pigmentosa



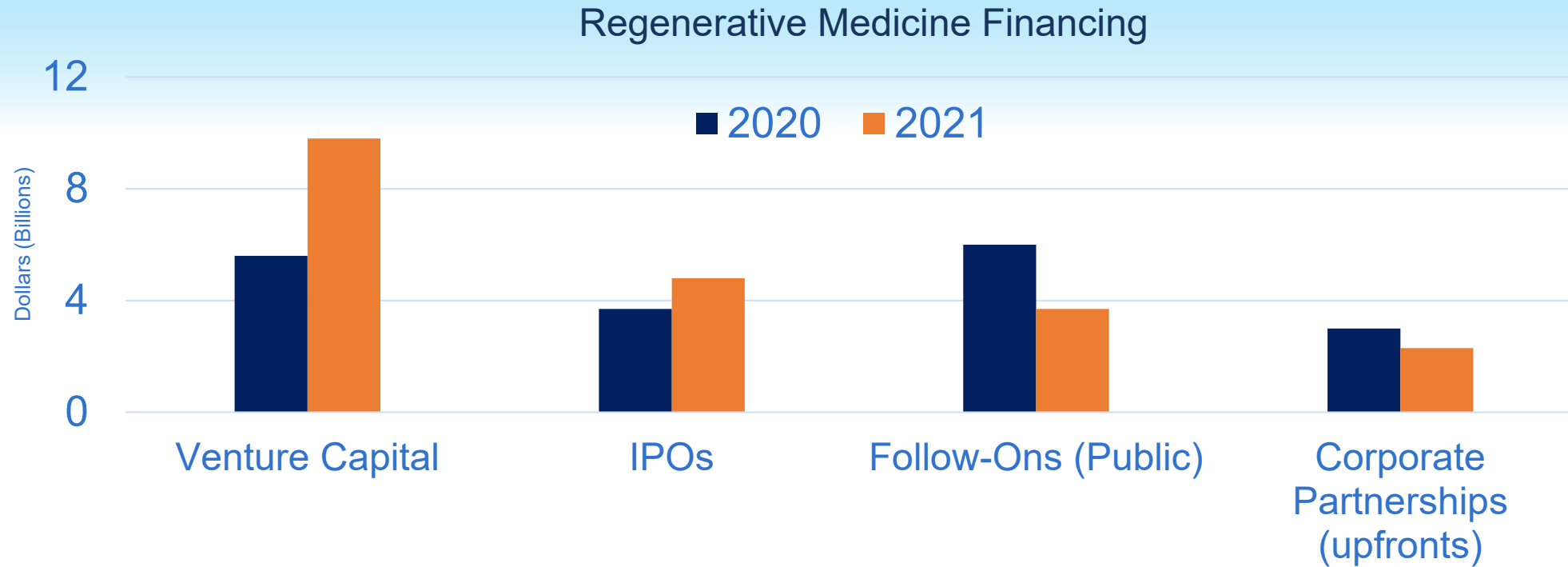
# CIRM De-Risks Programs for Industry Investment

**CIRM-funded projects have attracted at least \$23.4 Billion in industry investments.**

**CIRM funding of academic projects has enabled the spinout of at least 50 companies.**

## Examples of Recent Partnering Events

- **Stanford:** CIRM funding enabled IND allowance of CRISPR gene therapy for sickle cell disease
  - Spinout Graphite Bio raised \$195.7M in venture funding and \$273.7 in a 2021 IPO and launched clinical trial
- **Scripps Institute:** CIRM funding led to discovery of autologous iPSC-derived cell therapy for Parkinson's Disease
  - Spinout Aspen Neuroscience raised \$220M in venture funding to advance candidate toward clinical trial



- Record year for venture and initial public investments in regenerative Medicine
- Public market support was already declining in 2021

## Biotech Indices vs S&P 500



Public biotech companies were underperforming the market in 2021, this trend has accelerated throughout 2022

IPOs	2021	2022 (YTD)
Total Biotech	104	14
Cell/Gene Therapy	19	2

Biotech public market performance has severely impacted the rate of new Biotech IPOs.

## Biotech Venture Capital Financing

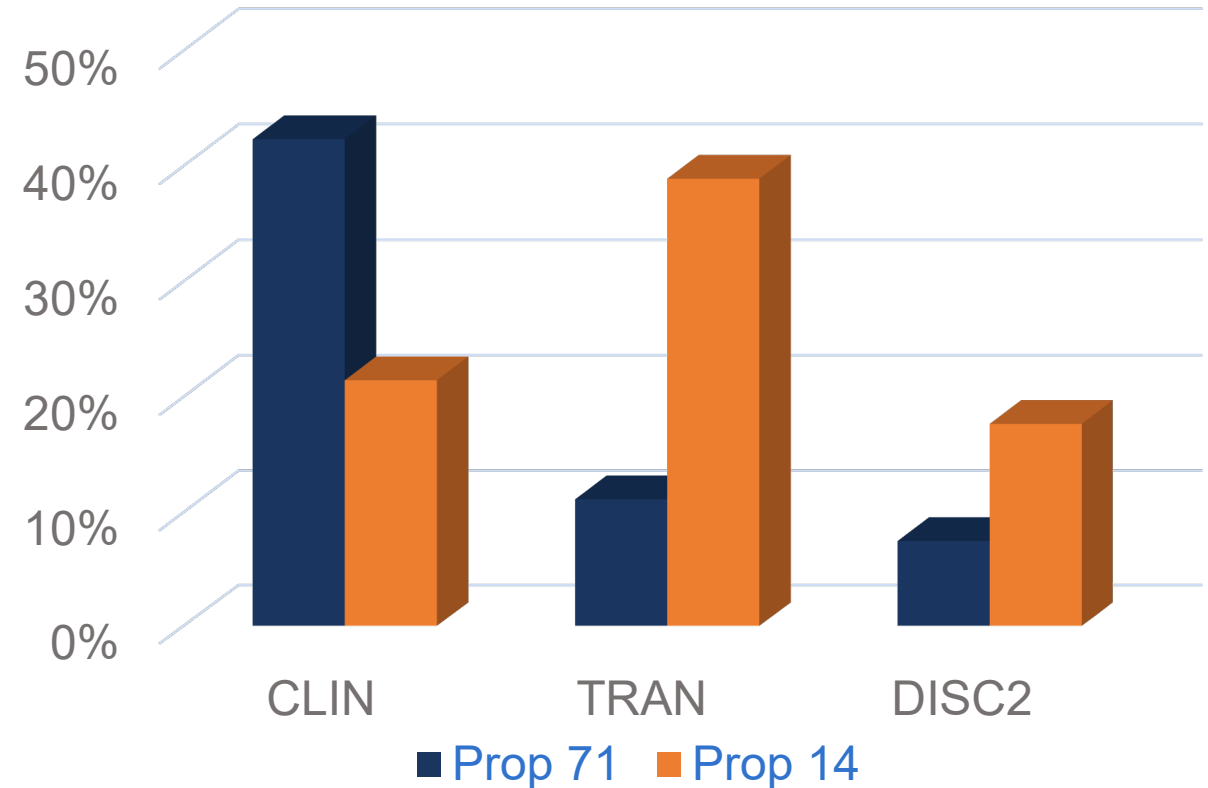
Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022
\$9.1B	\$8.9B	\$8.3B	\$8.5B	\$7.6B

Biotech venture capital funding is trending downward after early 2021 peak

# Companies utilize CIRM's pipeline funding opportunities

- CIRM for-profit awardees range from virtual seed-stage startups through pre-revenue small-cap public companies.
- Prop 71 (prior to 2021): CLIN Program had almost 1:1 parity between non-profit and for-profit awardees.
- Prop 14: DISC2 and TRAN for-profit awardees are already trending higher, expecting CLIN for-profit awardees to increase.

Percentage of For-Profit Awardees





INDUSTRY  
**ALLIANCE**  
PROGRAM

*CIRM's Industry Alliance Program (IAP): A unique opportunity for the industry to partner with CIRM in accelerating clinical and preclinical stem cell, gene and regenerative medicine therapy programs to market.*



PANACEA VENTURE  
HEALTHCARE



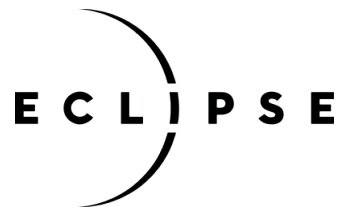
BlueRock  
Therapeutics



novo nordisk



8VC



SYNTHEGO



khosla ventures



INDUSTRY  
**ALLIANCE**  
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## **Accelerate Development and Pathway to Commercialization of CIRM-funded programs by:**

- Facilitating Partnering Opportunities between industry and CIRM awardees.
- Building knowledge sharing between IAP members and CIRM awardees.
- Providing access to unique world-class industry resources and technologies.
- Incorporating industry partners in CIRM's California Manufacturing Network (Pending concept plan approval).



## PSC-DERIVED REGENERATIVE MEDICINE THERAPIES:

### SELECTING THE OPTIMAL CELL LINE

Join us as we highlight the relevant considerations for selecting PSC lines for PSC-derived regenerative medicine therapies

FREE WEBINAR  
PRESENTED BY



**Jeffrey  
Millman, PhD**

Washington University  
School of Medicine



**Mark  
Tomishima, PhD**

BlueRock  
Therapeutics



**Steve  
Kattman, PhD**

Sana  
Biotechnology



*Q&A moderated by*  
**Irene Llorente, PhD**

David Geffen School of  
Medicine at UCLA

REGISTER

[bit.ly/3PxzIj3](https://bit.ly/3PxzIj3)

**FRIDAY, JUNE 10, 2022  
9 AM - 10:30 AM PDT**

ONLINE ZOOM WEBINAR

## Future Anticipated Quarterly Events

- Investor Days
- Webinars on scientific, manufacturing, regulatory, business and other topics
- Co-hosted partnering events with other CA Biotech Industry Stakeholders

**Work with biopharma industry to enable access for CIRM awardees to unique industry resources that will accelerate development of regenerative medicine treatments.**

- Examples of industry resources and technologies for cell and gene therapy development:
  - Starting materials and technology platforms
  - Manufacturing
  - Expert consultation
  - CRO services
- Industry partner agrees to make its unique resources available to CIRM awardees that account for development stage, level of funding and relevant CIRM award requirements.
- Initial launch of program with IAP Partners

## Program Launch Collaborators



**DISC2** – Research access to Novo Nordisk’s proprietary ESC line and future access to GMP stock.



**DISC2**- Research access to Elevate’s iPSC lines and future access to GMP stock & GMP manufacturing services.



**TRAN1** – Partnering with projects to support Process Development and initial GMP manufacturing at Bayer Berkeley Facility.



**TRAN1/CLIN1/CLIN2** – Access to project consultation, GMP manufacturing services, and partnerships across Resilience’s Cell Therapy Franchise