

Real


Life™

Larry Goldstein, PhD
Chair, CIRM Neuro Task Force
Neuro Task Force Meeting #5
June 20, 2023

CIRM
CALIFORNIA STEM CELL AGENCY

OUR MISSION

Accelerating world class science to deliver transformative regenerative medicine treatments in an equitable manner to a diverse California and world



(2007-2023)

1. Percent of Disc, Tran and Clin awards that are Neuro
2. Percent of Neuro Disc awards that progressed to Tran or Clin
3. Percent of Disc awards that are Neuro relative to disease burden – same for Tran and Clin
4. Percent of Tran and Clin awards relative to disease burden in population
5. Distribution of Neuro awards relative to geography of academic and medical research institutions



Aspects of CIRM's R&D Neuro Portfolio (2007-2023)

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1. Percent of Disc, Tran and Clin awards (NEURO)

Prop 14 only

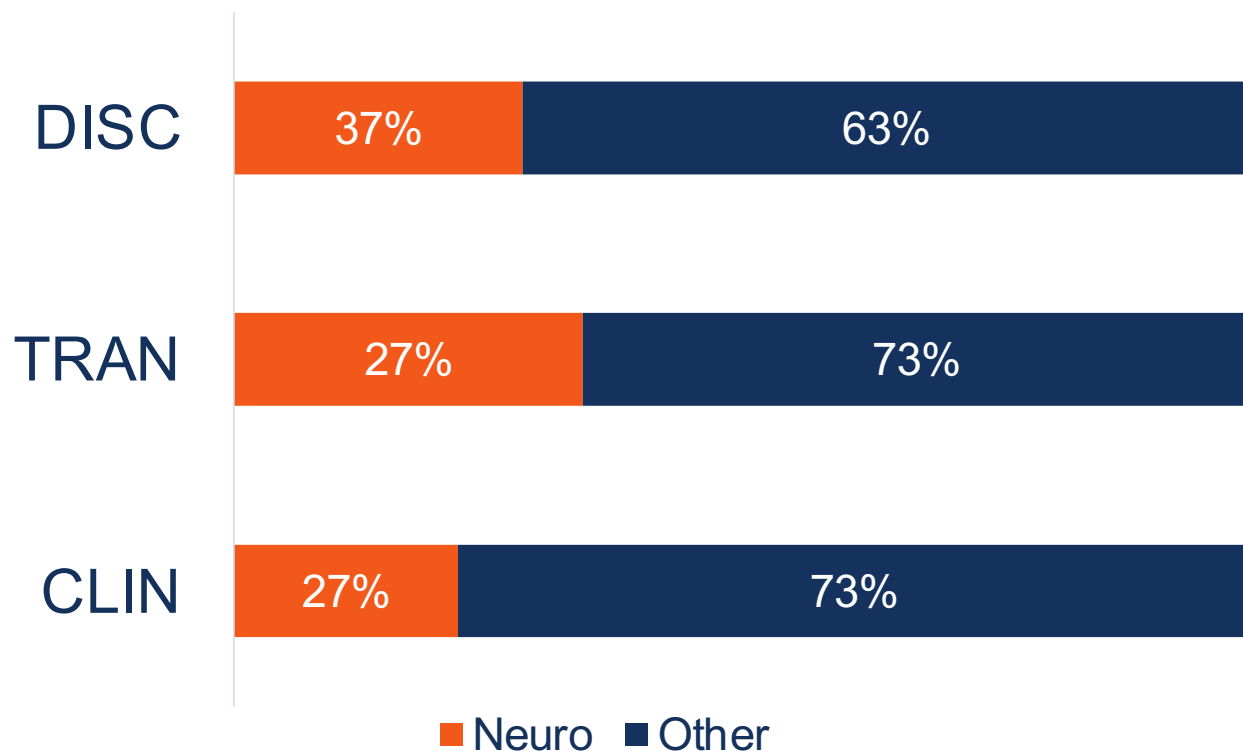
2021-2023



CIRM's R&D Neuro Portfolio

(Prop 14 - 2021-2023)

% of Total Awards



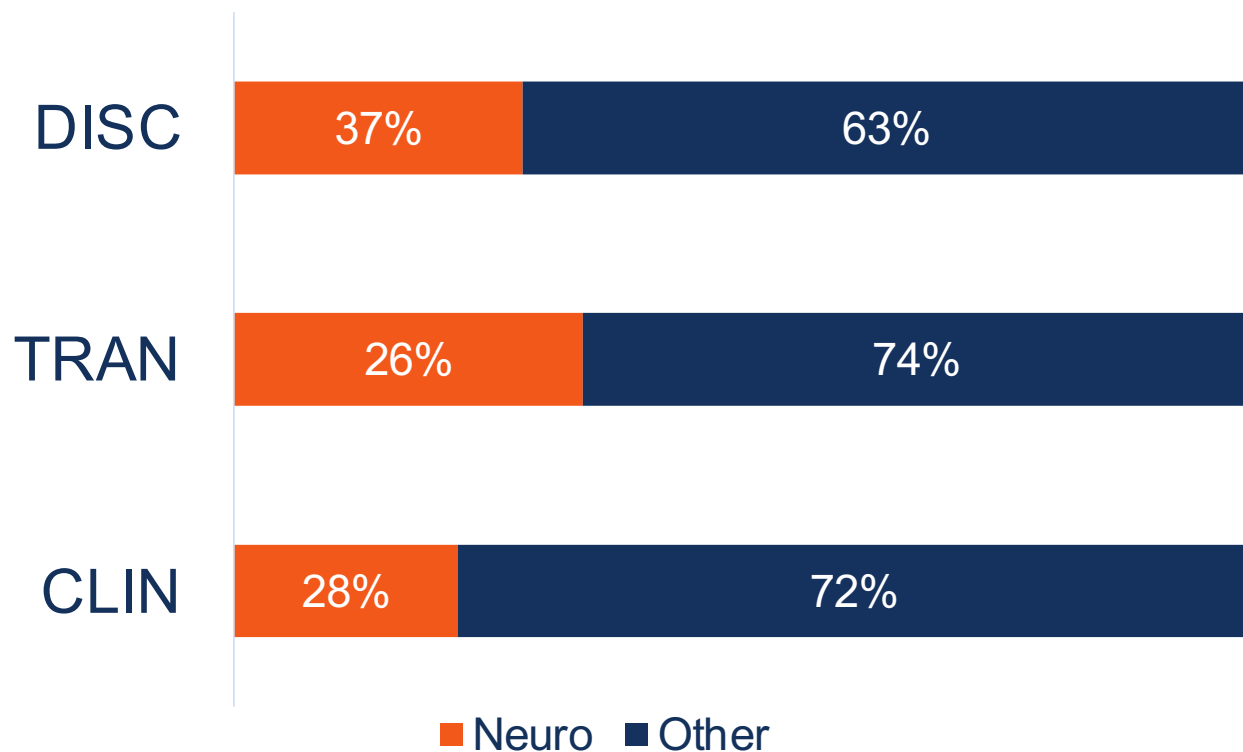
# Awards	
Neuro	Total
34	91
9	33
10	37



CIRM's R&D Neuro Portfolio

(Prop 14 - 2021-2023)

% of Total Awards



\$ Funds (in \$M)	
Neuro	Total
50	133
39	147
86	296



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1. Percent of Disc, Tran and Clin awards (NEURO)

Prop 71 + Prop 14

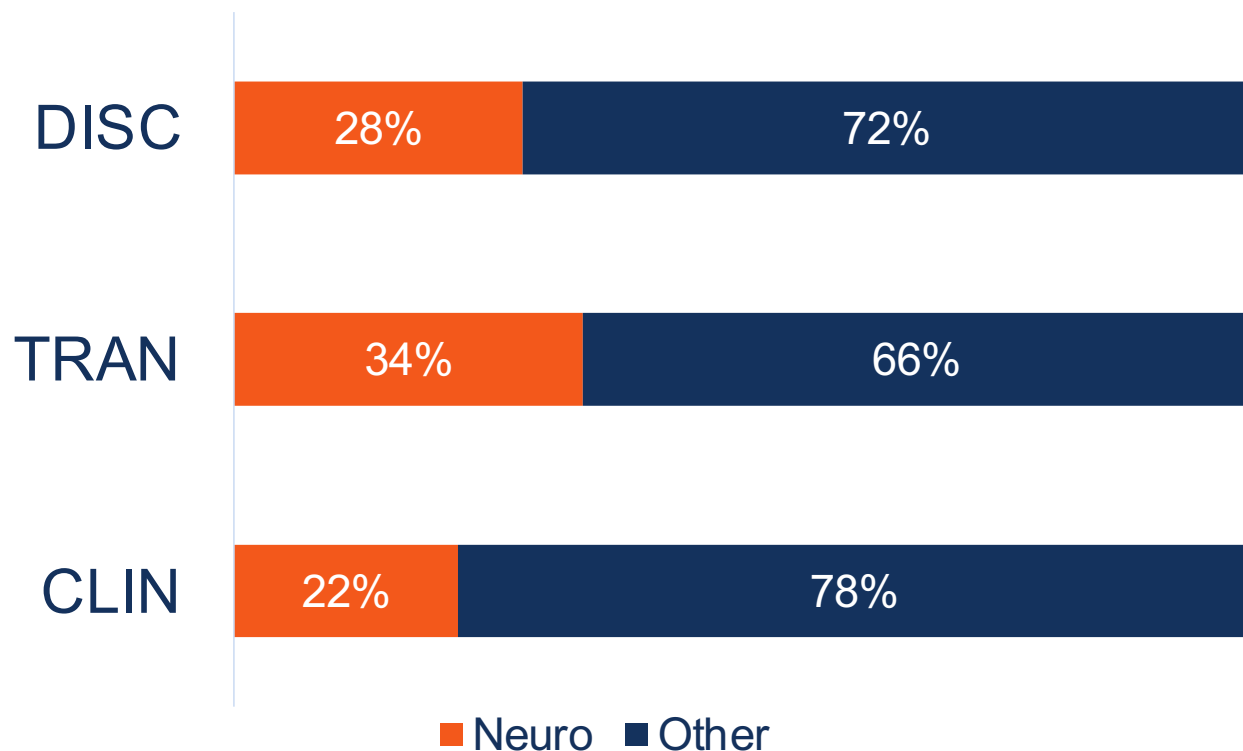
2007-2023



CIRM's R&D Neuro Portfolio

(Prop 71 + Prop 14 - 2007-2023)

% of Total Awards



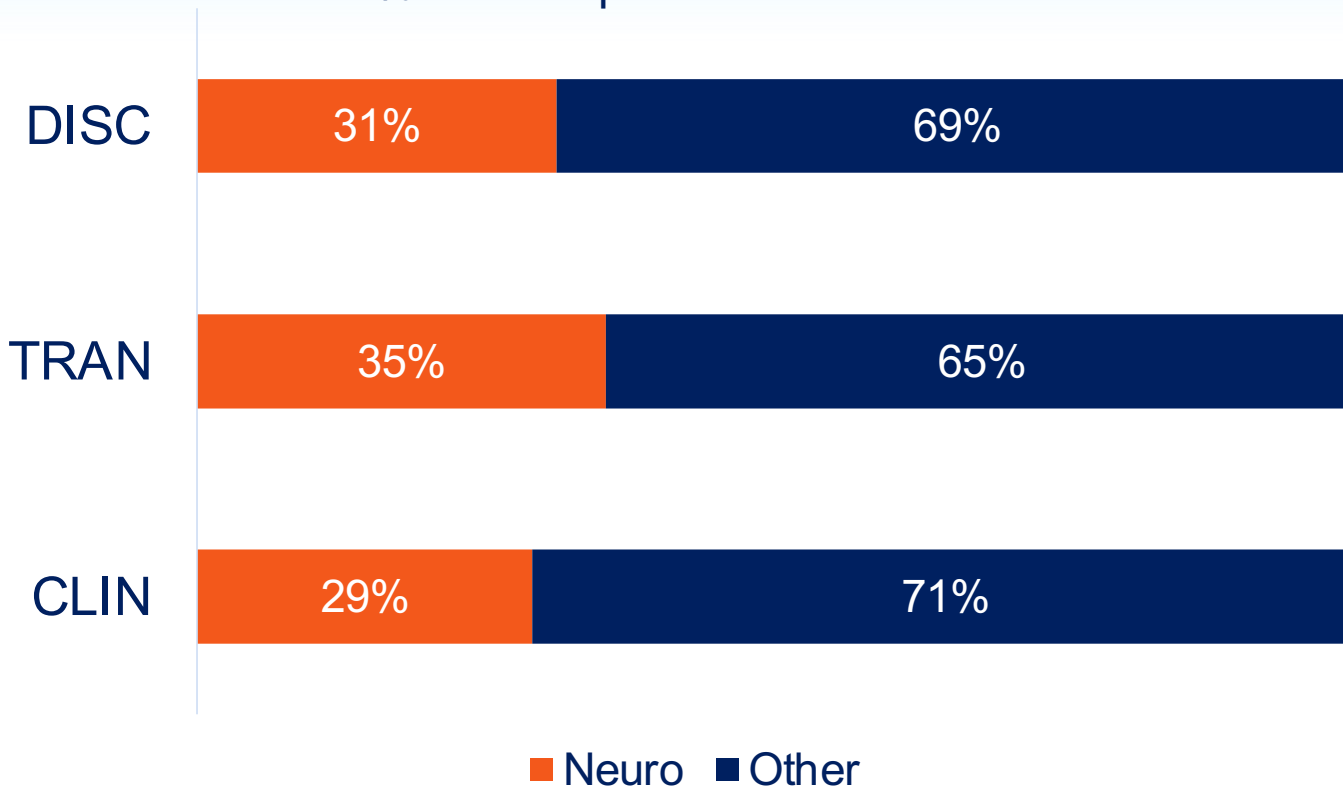
# Awards	
Neuro	Total
196	689
33	96
30	136



CIRM's R&D Neuro Portfolio

(Prop 71 + Prop 14 - 2007-2023)

% Funds spent in Neuro/Pillar



\$ Funds (in \$M)	
Neuro	Total
362	1.17B
204	581M
367	1.27B



Aspects of CIRM's R&D Neuro Portfolio (2007-2023)

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Neuro Progression by Disease Area (2007-present)

PI	Institution	Indication	DISC-Idea	DISC-candidate	TRAN	CLIN1	CLIN2
Langston/Schuele	Parkinson Inst	Parkinson's Disease	Green	Green			
Schaffer	UC Berkeley	Parkinson's Disease	Green	Green			
Loring/Aspen	Scripps	Parkinson's Disease		Green	Orange		
Bankiewicz	UCSF	Parkinson's Disease			Orange	Blue	
Huang	Gladstone	Alzheimer's Disease		Green	Orange		
Schubert	Salk	Alzheimer's Disease		Green	Orange		
Huang	UC San Diego	ALS	Green	Green			
Goldstein	UC San Diego	ALS		Green	Orange		
Svendsen	Cedars Sinai	ALS			Orange		Blue
Thompson	UC Irvine	Huntington's Disease		Green	Orange	Blue	
Klassen/J Cyte	UC Irvine	Retinitis Pigmentosa		Green		Blue	Blue
Seiler	UC Irvine	Retinitis Pigmentosa		Green	Orange		
Svendsen	Cedars Sinai	Retinitis Pigmentosa				Blue	Blue
Humayun	USC	Macular Degeneration			Orange		Blue
Anderson	UC Davis	Spinal Cord Injury		Green	Orange		
Heilshorn	Stanford	Spinal Cord Injury	Green	Green			
Tuszynski	UC San Diego	Spinal Cord Injury	Green	Green	Orange		
Carmichael/Llorente	UC Los Angeles	Spinal Cord Injury	Green	Green	Orange		
Cummings	UC Irvine	Traumatic Brain Injury	Green	Green	Orange		
Steinberg	Stanford	Stroke		Green		Blue	Blue
Baulch/Achayra	UC Irvine	Radiation Brain injury	Green	Green			
Nicholas/Kriegstein	UCSF/Neurona	epilepsy	Green	Green		Blue	Blue
Gleeson	UC San Diego	epilepsy	Green	Green			
Muotri	UC San Diego	Rett Syndrome	Green	Green			
Blurton-Jones	UC Irvine	Leukoencephaly	Green	Green			
Shi	City of Hope	Canavan Disease		Green	Orange		
Grikscheit	CHLA	Enteric Neuropathy		Green	Orange		
Farmer	UC Davis	Spina Bifida			Orange	Blue	Blue

28 projects progressed:

- 15 DISC to TRAN/CLIN
- 2% of total DISC awards (689)

Indication Coding:

- Neurodegenerative
- Eye
- Neurotrauma
- Epilepsy
- Other



Aspects of CIRM's R&D Neuro Portfolio (2007-2023)

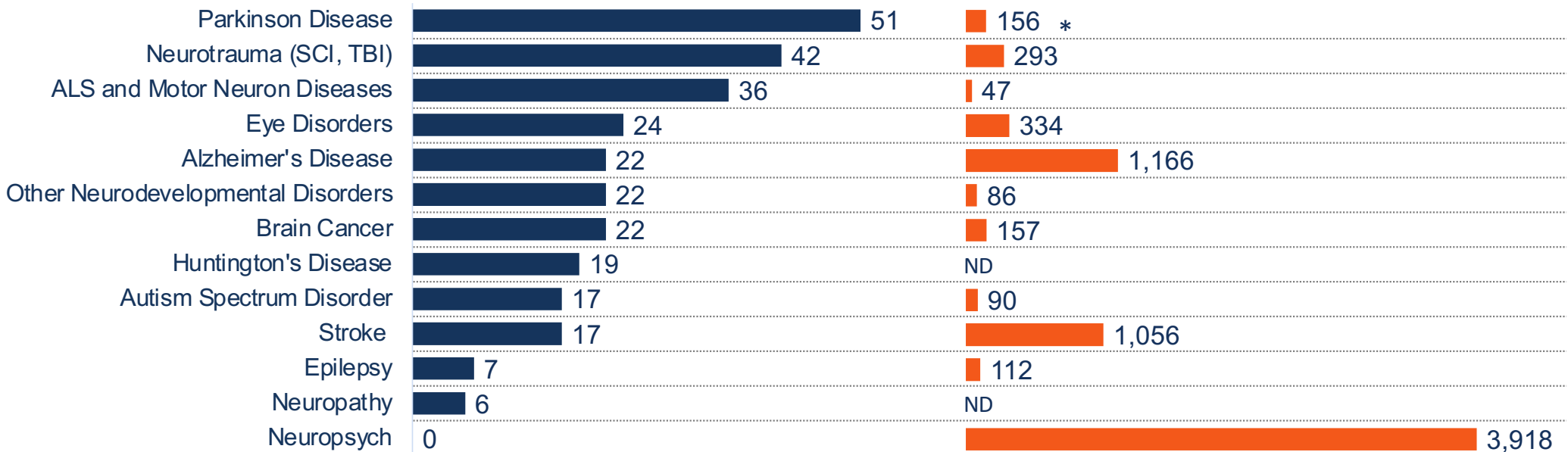
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DISC R&D Neuro Portfolio by US Disease Burden (2007-2023)

CIRM Funding \$M

DALY¹ per 100,000



1. One disability-adjusted life year (DALY) represents the loss of the equivalent of one year of full health.

Sources: (1) CIRM portfolio data as of June 2023. (2) Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Reference Life Table. Seattle, United States of America: Institute for Health Metrics and Evaluation (IHME), 2021. (3) GBD 2016 Traumatic Brain Injury and Spinal Cord Injury Collaborators (2019). Global, regional, and national burden of traumatic brain injury and spinal cord injury, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet. Neurology*, 18(1), 56-87.



Aspects of CIRM's R&D Neuro Portfolio (2007-2023)

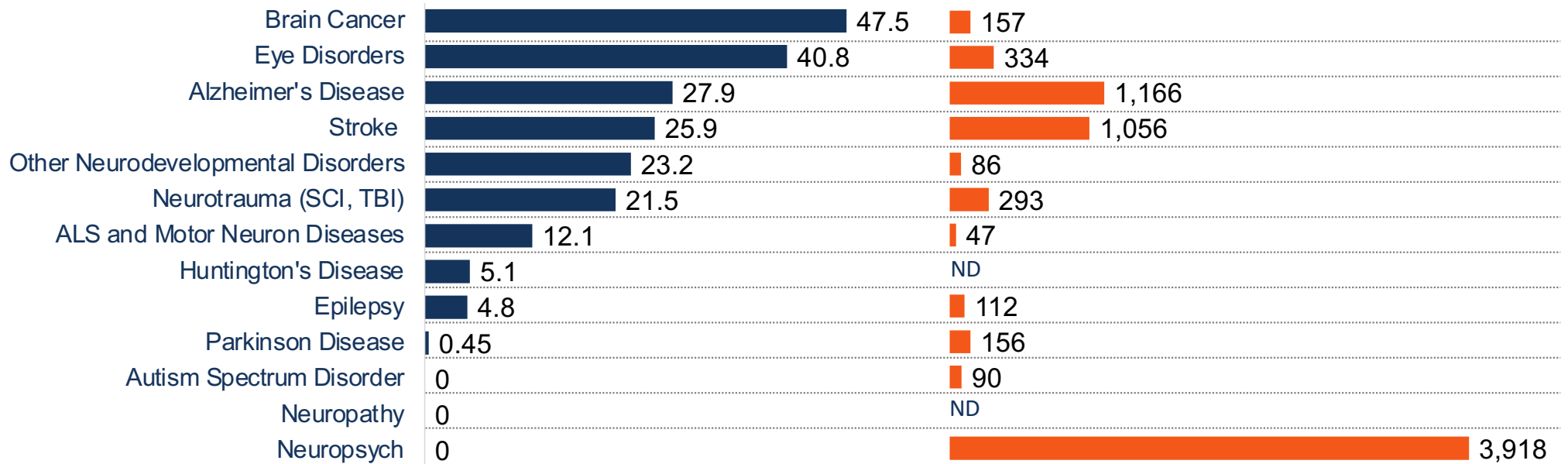
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TRAN R&D Neuro Portfolio by US Disease Burden (2007-2023)

CIRM Funding \$M

DALY¹ per 100,000



1. One disability-adjusted life year (DALY) represents the loss of the equivalent of one year of full health.

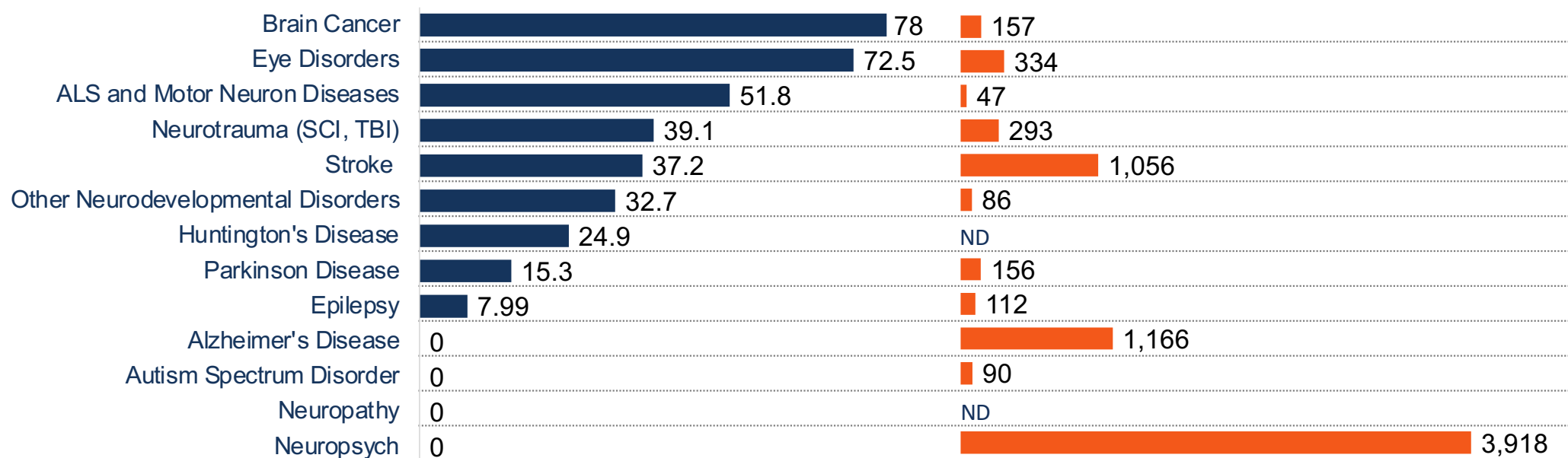
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CLIN R&D Neuro Portfolio by US Disease Burden (2007-2023)

CIRM Funding \$M

DALY¹ per 100,000



1. One disability-adjusted life year (DALY) represents the loss of the equivalent of one year of full health.

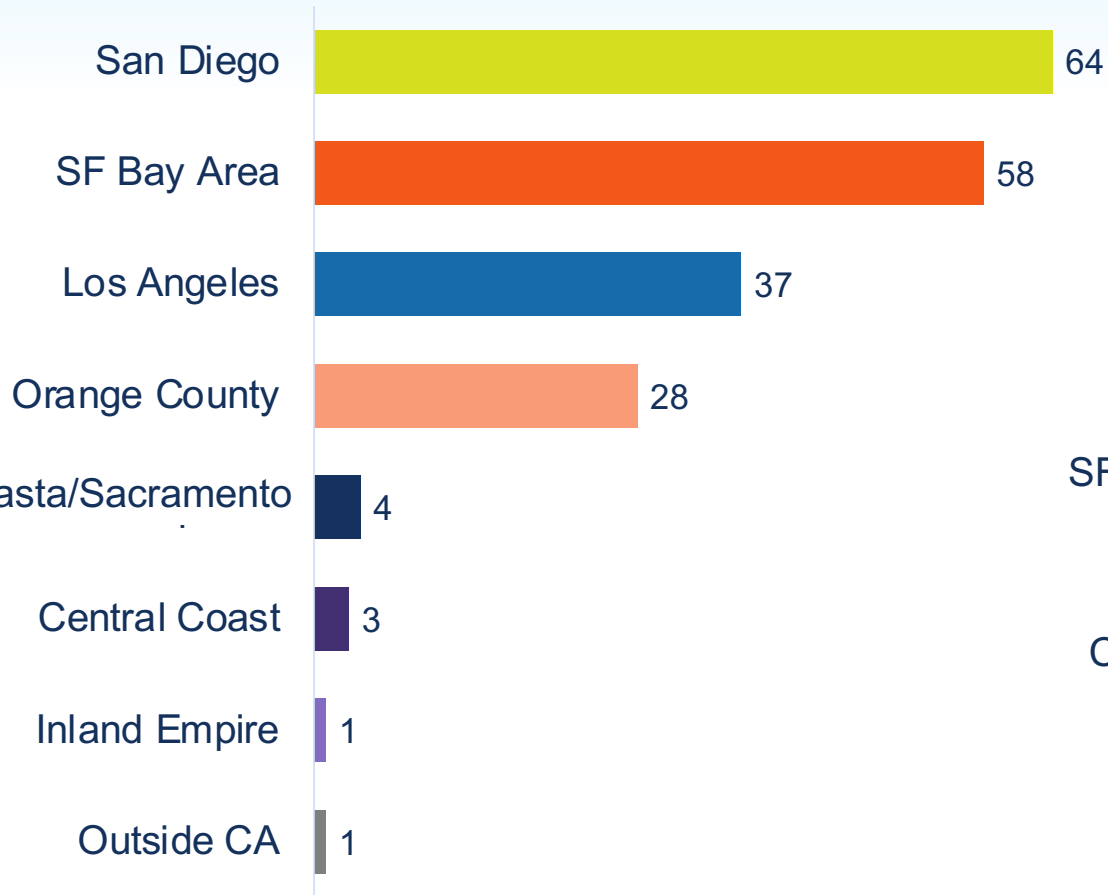
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Aspects of CIRM's R&D Neuro Portfolio (2007-2023)

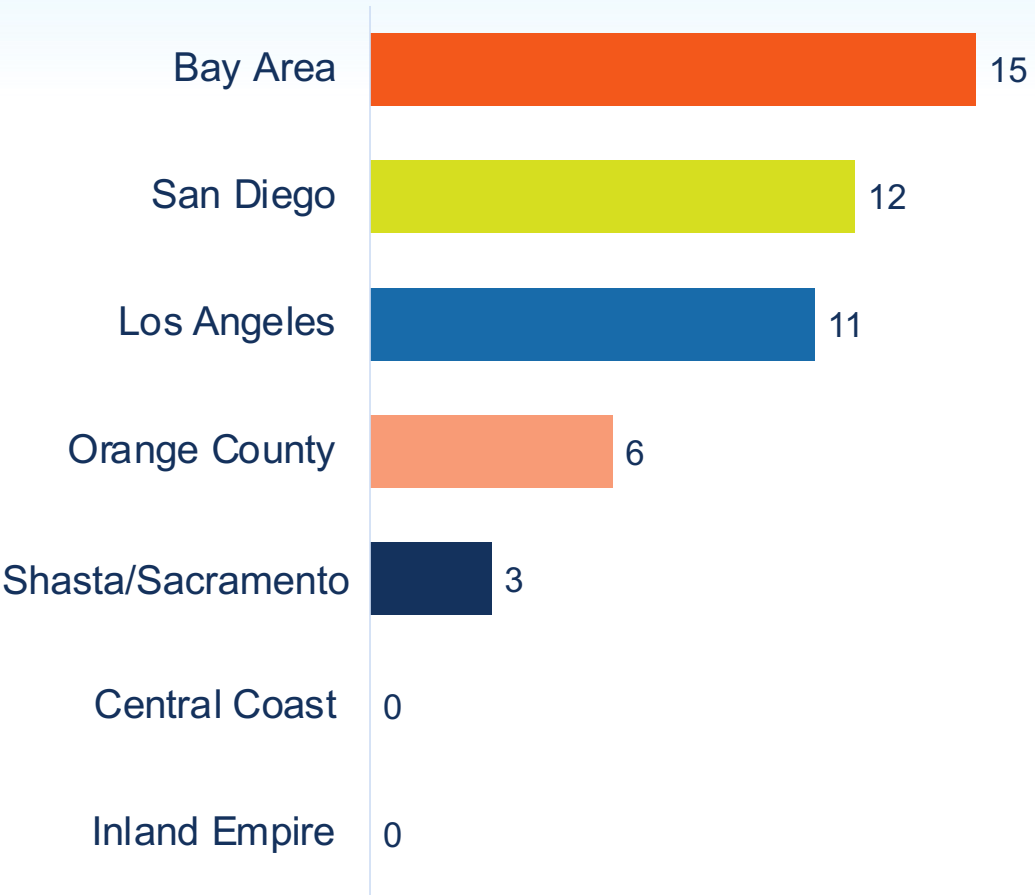
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3. Percent of Disc awards that are Neuro relative to disease burden
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5. **Distribution of Neuro awards relative to geography of academic and medical research institutions**

DISC R&D Neuro Awards by Region (2007-2023)



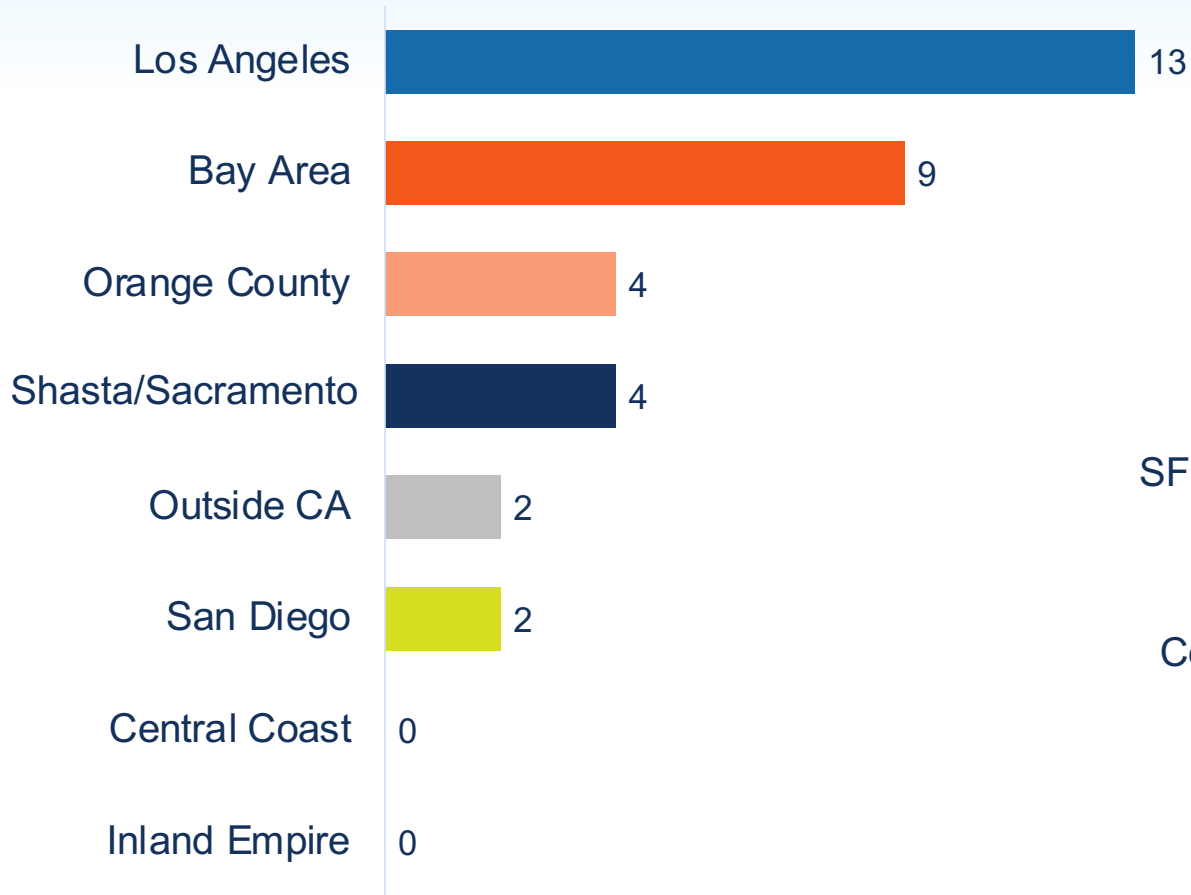
As of June 5, 2023; regions as per [2020 Census](#)

TRAN R&D Neuro Awards by Region (2007-2023)



As of June 5, 2023; regions as per [2020 Census](#)

CLIN R&D Neuro Awards by Region (2007-2023)



As of June 5, 2023; regions as per [2020 Census](#)

1. What percentage of \$1.5B+ does task force want to make recommendations for?
2. What percentage of \$1.5B+ should be allocated based on quality/novelty of ideas and approach as assessed by grants working group as opposed to centralized planning?
3. Are there any important areas of Neuro research that we are missing?