Real Life™

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CNS Consortium Workshop
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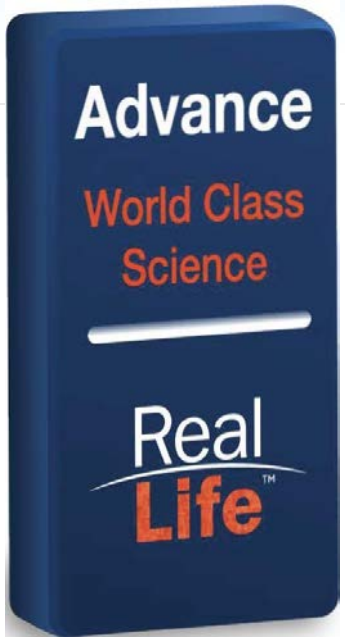
CIRM
CALIFORNIA'S STEM CELL AGENCY

Day 1 – What are the opportunities to **share resources** and **promote collaborative research**?



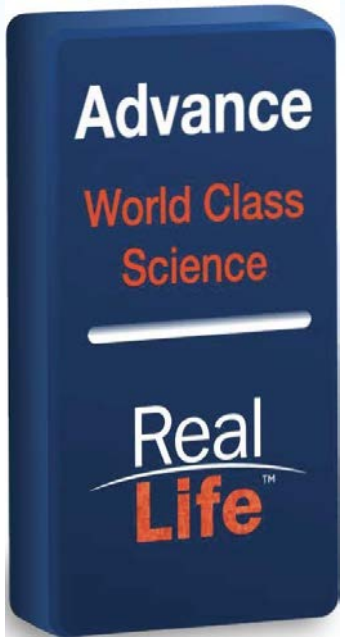
Approach

To build infrastructure that organizes and democratizes data through:

- **Competency hubs**
- Knowledge networks

Session II: gather feedback that will inform CIRM about potential opportunities to share resources and promote collaborative research.

Day 1 – What are the opportunities to **share resources** and **promote collaborative research**?



Competency hubs

An entity (hub) that

- shares a specialized skill or resource (competency)
- at any stage of the drug development pipeline
- with other investigators in a collaborative manner

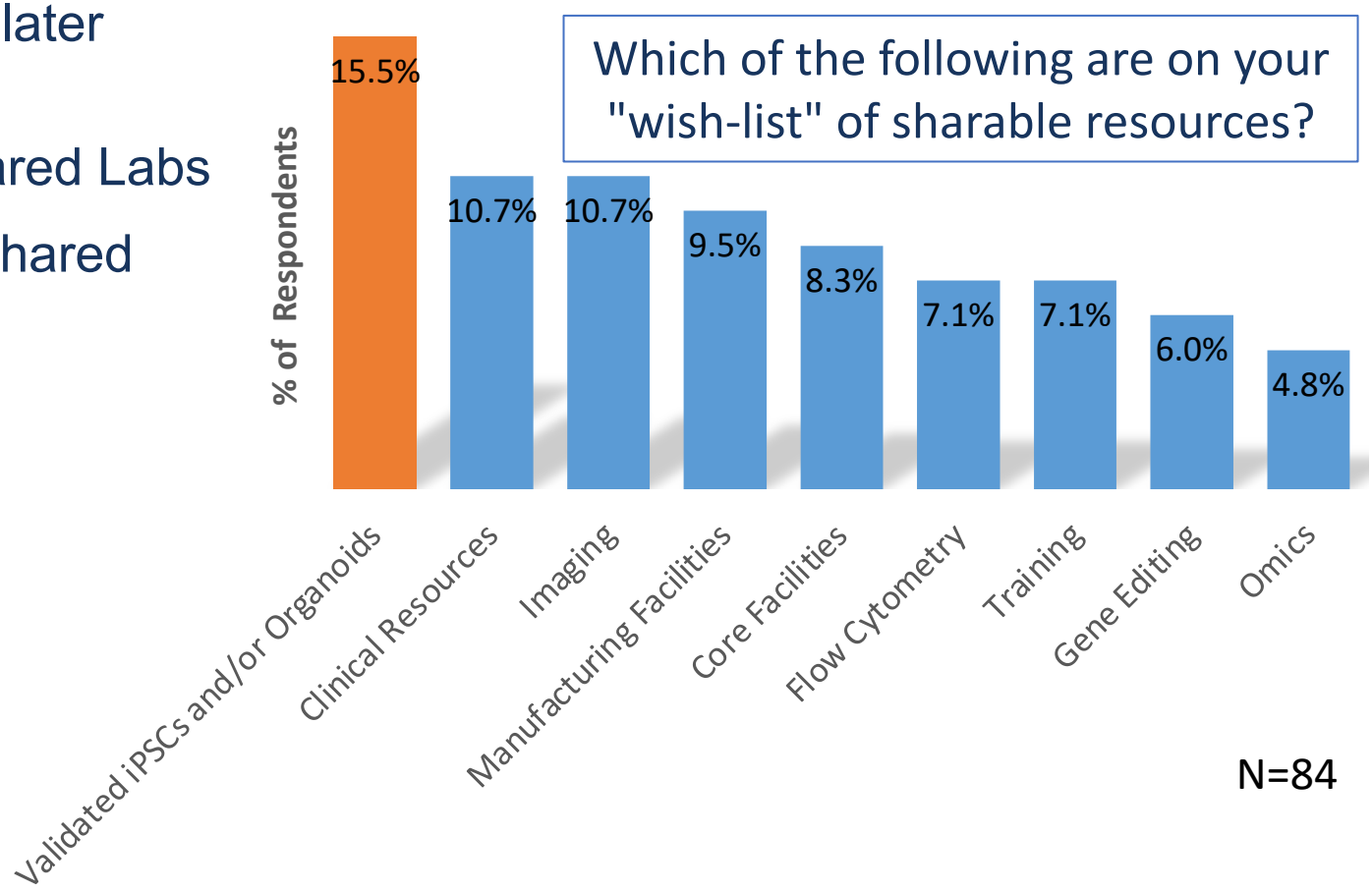
Why focus discussion on Cell Models as Shared Resources?

Methods

- These data were collected in two ways and later combined:
  - Outreach to Directors of past CIRM Shared Labs
  - Town hall (incl. providers and users of shared resources)

Results

- Highlighted the critical need for validated / standardized stem cell-based models



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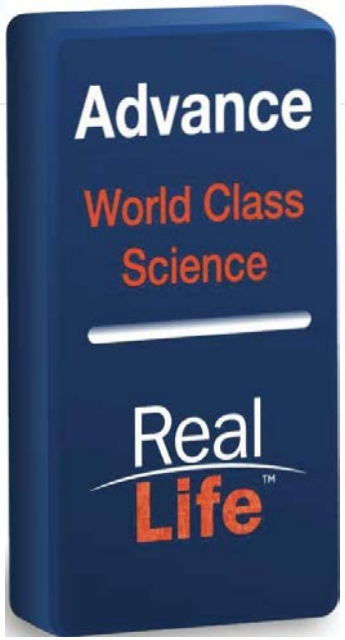
Day 1 – What are the opportunities to **share resources** and **promote collaborative research**?



Approach

To build infrastructure that organizes and democratizes data through:

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Focus of today's discussion

Feedback on opportunities and feasibility of shared resources labs for stem cell-based modeling

Use Case

Applications to CNS research, including neuropsychiatric and neurodevelopmental disorders

Pre-Workshop Survey Results

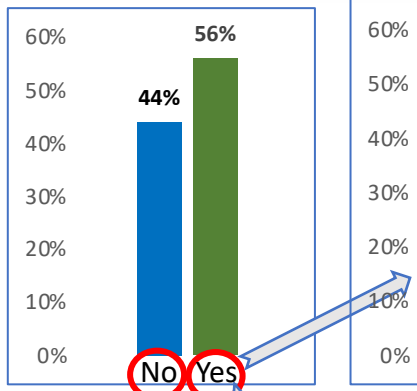
- Method:
  - Survey sent to attendees and participants of CIRM CNS Workshop
- Goal of survey:
  - Understand current stem cell-based model use
  - Understand current need for access to stem cell-based models
- CNS focus

Note: For the purposes of this workshop, model means
human pluripotent stem cells that are differentiated to resemble a human cell type / tissue / organ.

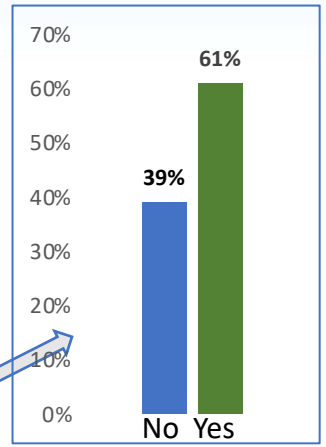
Stem Cell-Based Models – Use and Access

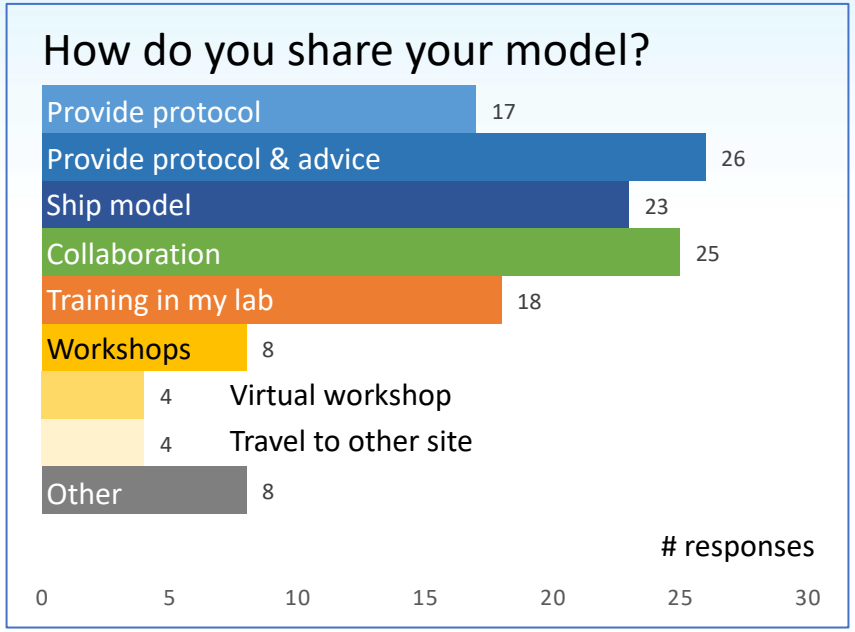
Do you use a model in your lab?

75 respondents

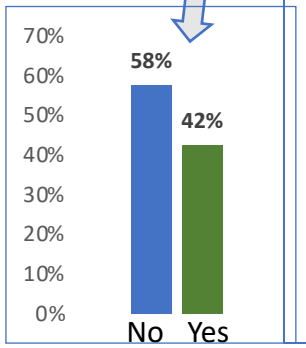


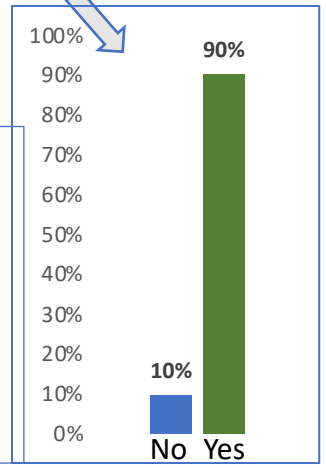
Do you get requests to share your model?

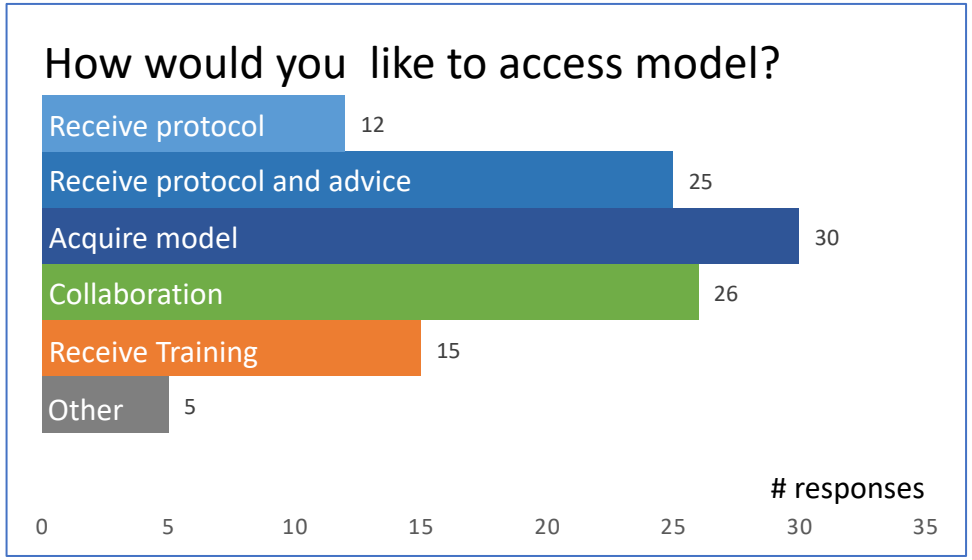




Do you want access to models?



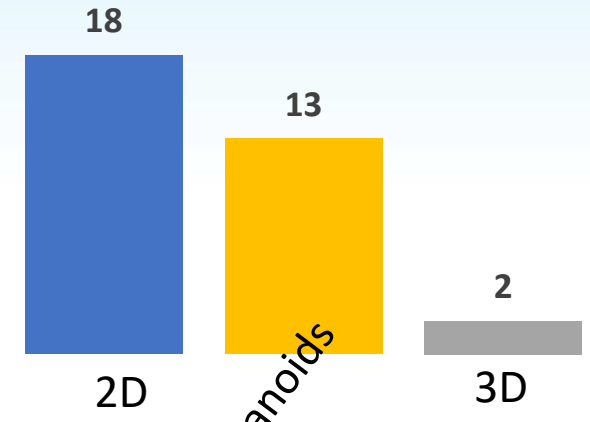




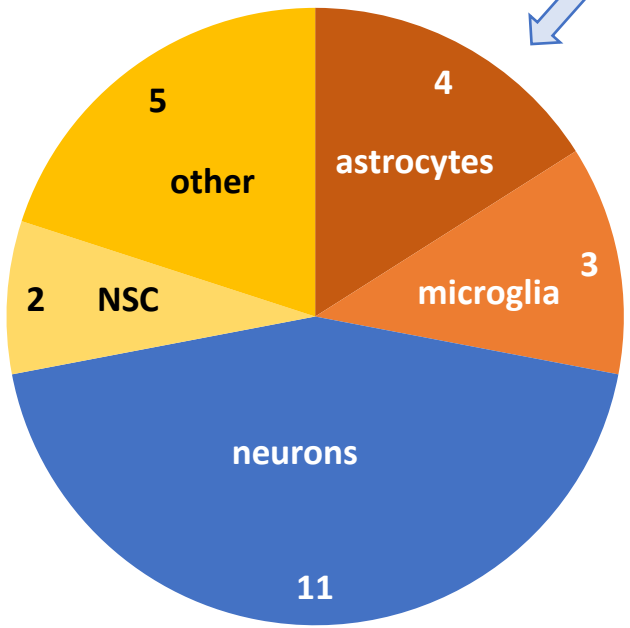
Stem Cell-Based Models – Types

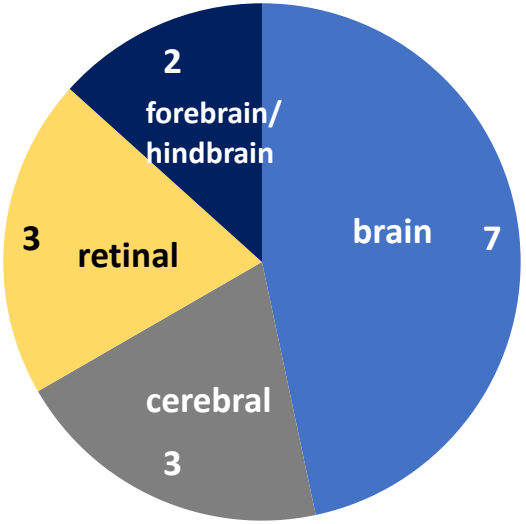
What type of human stem cell-based model do you use in your lab?

23 respondents



Other:
Forebrain
Retinal
Motor neurons
Dopamine neurons
Glioblastoma

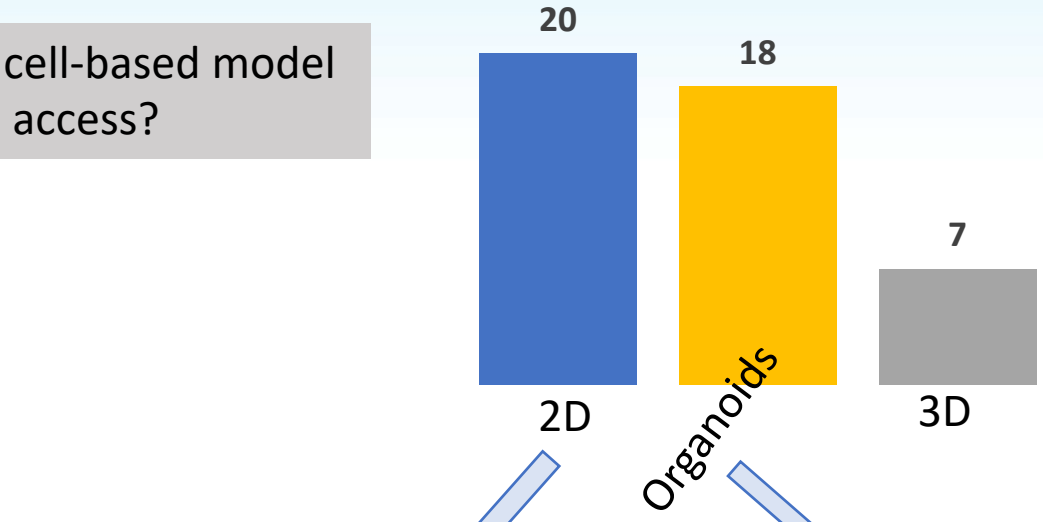


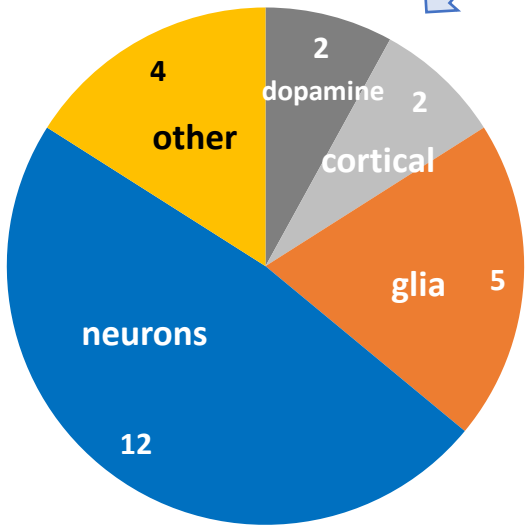


Stem Cell-Based Models – Types

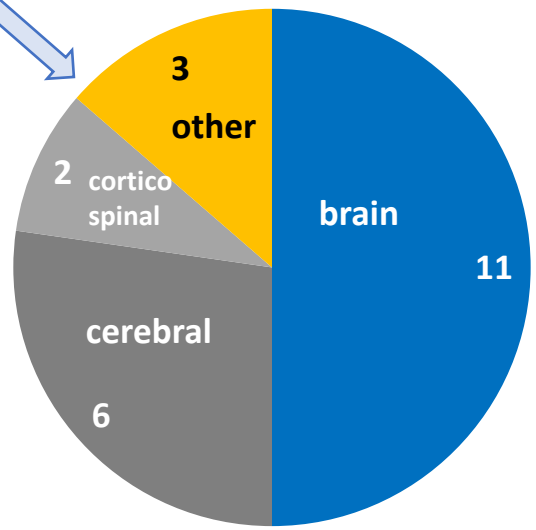
What type of human stem cell-based model would you like to access?

27 respondents





Other:
Cholinergic
Corticospinal
Excitatory
GABAergic



Other:
Cortical
Region-specific
Retinal

Day 1 – What are the opportunities to **Share Resources** and **Promote Collaborative Research**?

Goal of discussion is to understand:

If CIRM were to support the creation of Shared Resources Labs for Stem Cell-Based Modeling…

- What is the feasibility?
- What are the best approaches?
- How should a ***network*** of Shared Resources Labs be designed?

Guiding questions

I. What are the biggest hurdles to effective human stem cell-based modeling?

And how can a ***network*** of Shared Resources Labs address them?

II. Building and using Shared Resources Labs for Stem Cell-Based Modeling

III. Based on what we heard – is this a feasible and worthwhile path?

IV. Input on collaborative data infrastructure needs from CA researchers