Dec. 17, 2015

Maria T. Millan, M.D.
Presentation to CIRM’s ICOC

Accelerating Center and Translating Center Concept Proposals
Maria T. Millan, M.D.
Presentation to CIRM’s ICOC
Background:

• **The Need:** CIRM’s pipeline is maturing, with growing numbers of late translational and clinical stage projects, but many investigators don’t have extensive experience initiating FDA regulated clinical trials.

• **The Opportunity:** To significantly decrease the time it takes to bring stem cell therapy development projects from the translational to the clinical stage.

• **The Solution:** CIRM’s Infrastructure Programs to strategically address the unique challenges associated with the translational- and early clinical stages of stem cell research.
CIRM’s Infrastructure Programs: Address Challenges & Create Opportunity

**Challenges:**
- Process development of cGMP compliant manufacturing processes
- Efficient assembly of preclinical datasets
- Regulatory path uncertainty
- Efficiencies in clinical trials with stem cell products

**Opportunities with Infrastructure Programs:**
- Focused expertise to address the above challenges
- Aggregated experience will allow continual improvements and efficiencies
- “One stop shop” for stakeholders—patients, regulators, researchers and trial sponsors
CIRM Infrastructure Programs: To Accelerate Translational and Clinical Research
The Alpha Clinic Network: CIRM’s clinical trial infrastructure program

Goal: To accelerate the development and delivery of stem cell therapies to patients by leveraging existing assets to form an efficient, scalable and sustainable clinical network well positioned to attract and conduct high quality stem cell trials.
Alpha Clinics Network: Year 1 Update

- Approved for $24M of CIRM funds in October 2014
- Launched February-April 2015
- Steering committee & working groups formed
- Currently supports 14 active clinical trials - cancer, diabetes, heart disease, HIV, pediatric disease, CNS, eye disease
  
  https://www.cirm.ca.gov/patients/alpha-clinics-network/alpha-clinics-trials

- Building a robust pipeline of new trials
- Developing Accelerating and Value Add Resources (AVARs)
Accelerating and Value Add Resources (AVARs)

- Accelerate IRB process (IRB Reliance)
- Improve patient informed consent process and trial recruitment and enrollment (UCRex)
- Capture and analyze data and cost/performance metrics across the Network (RedCaP)
- Share operational knowledge to improve clinical trial operations and to enhance patient experience (nursing competencies and best practices)
- Optimize the utilization and value of AVARs across the Network and throughout California (via the Accelerating Center)
CIRM Accelerating Center Concept Proposal

Accelerating Center Goal:

• To speed the progression of therapeutic candidates from the translational stage, through pre-clinical development and to clinical trials

• To accelerate the efficient conduct of clinical trials while maintaining the highest degree of rigor and quality
Accelerating Center Major Activities

- Customized support for stem cell clinical trials:
  - Regulatory affairs
  - Clinical trial management
  - Data management
- Actively work with the FDA to efficiently move stem cell products through the regulatory path to the clinics
- Coordinate with the Alpha Clinics Network to scale up/scale out AVARs to support stem cell clinical trials throughout the state and beyond
- Create a sustainable resource for the growing pipeline of stem cell translational and clinical programs
Play a central role for FDA interactions and ongoing sponsor and site regulatory support:

- Planning and consultative services for regulatory strategy
- Compilation and submission of regulatory applications (IND)
- Management of regulatory requirements for clinical trials
Clinical trial planning, operations and management for the efficient conduct of high quality clinical trials:

- Site selection, training and qualification
- Support site patient recruitment and enrollment
- Management and logistical support across multiple clinical sites, in coordination with vendors and third party organizations
Data management systems, biostatistics and analytics:

- Provide efficient and robust systems to support clinical trial data capture and analysis
- Enable researchers and the stem cell community to apply aggregated knowledge to inform regulatory and cost considerations for delivering cell therapeutics to patients
### Accelerating Center Timeline & Budget

**Proposed budget $15 million**

<table>
<thead>
<tr>
<th>Event</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications Due</td>
<td>1H2016</td>
</tr>
<tr>
<td>Grants Working Group (GWG)</td>
<td>1H2016</td>
</tr>
<tr>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>ICOC Review and Approval</td>
<td>2H2016</td>
</tr>
<tr>
<td>Award Start</td>
<td>Must start within 45 days of award approval</td>
</tr>
</tbody>
</table>
ICOC Motion

CIRM requests that the ICOC approve the concept plan for the CIRM Accelerating Center, with a budget authorization of up to $15 million to fund a single award over 5 years.
CIRM Translating Center Concept

Translating Center Goal:

• To speed the progression of therapeutic candidates from the translational stage, through pre-clinical development and to clinical trials

• To efficiently conduct and manage preclinical activities that support regulatory filings
The Translating Center will provide core services to enable the issuance of an FDA Investigational New Drug (IND) application by supporting:

- Cell Process- and Manufacturing Plan Development
- IND-enabling safety/toxicity studies
- IND preparation and submission (in coordination with the Accelerating Center)
Translating Center-Process Development and Manufacturing

- Optimize and develop cGMP compliant manufacturing processes
- Assist the Sponsor in addressing the Chemistry, Manufacturing and Controls (CMC) IND requirements
- Quality systems and Assay Development
- Technology transfer and scale-up/scale out plans
Translating Center – Preclinical Studies and IND Support

• Assemble preclinical datasets for IND submission, in coordination with:
  o Sponsor/investigator for preclinical datasets
  o External contract research organizations for safety/toxicity, bio-distribution and other outsourced animal studies
  o Internal team for process development and product characterization datasets

• Coordinate with the Accelerating Center to support IND compilation and submission
### Translating Center Timeline & Budget

**Proposed budget of up to $15 million**

<table>
<thead>
<tr>
<th>Event</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications Due</td>
<td>2016</td>
</tr>
<tr>
<td>ICOC Review and Approval</td>
<td>2016</td>
</tr>
<tr>
<td>Award Start</td>
<td>Must start within 45 days of award approval</td>
</tr>
</tbody>
</table>
CIRM requests that the ICOC approve the concept plan for the CIRM Translating Center, with budget authorization of up to $15 million to fund a single award over 5 years.