Infantile Spasms Initiative: Directed Team Science

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January 2012 – Key opinion leader (KOL) summit in San Francisco to identify one or more research “opportunity areas”

Outcomes of that meeting
- Infantile spasms identified as focus area which could deliver a breakthrough in the “short term”
- Take a different approach – create a “team” of investigators working toward a common goal, utilizing their different areas of expertise
- KOLs agreed to become the advisory panel for the initiative
• **Why infantile spasms?**
  – Seizures are stereotypical, thus making diagnosis more clear compared to other seizure types
  – Prognosis is particularly poor and frequently results in life-long developmental disability (need for better therapies)
  – Atypical EEG serves as a predictive biomarker that can be used to track success of therapy
  – Animal models are available that can be used for the early identification of new therapies; e.g. anti-inflammatory drugs
  – Success can be measured in the short term; years vs. decades
FIGURE 1: Number of New Consortia Launched, by Year

- 1995: 1
- 1996: 1
- 1997: 3
- 1998: 2
- 1999: 3
- 2000: 4
- 2001: 7
- 2002: 5
- 2003: 9
- 2004: 3
- 2005: 9
- 2006: 17
- 2007: 21
- 2008: 19
- 2009: 29
- 2010: 30
- 2011: 43
- 2012: 51

www.fastercures.org/consortiapedia
• “agreement on a mission that addresses a shared need with a strategic and milestone-driven plan to achieve output that, in turn, can be broadly used by each stakeholder”

• “an integrated research plan that leverages the research resources and knowledge from each stakeholder”
April 2012 - Request for proposals (RFP) circulated

- Key differences from CURE’s traditional programs: milestone-driven, no budget limits (each project’s budget would be evaluated individually, on a milestone-by-milestone basis)

Program goal: To support collaborative, milestone-driven efforts that advance the understanding of the underlying pathology of infantile spasms and lead to the development of a disease-modifying therapy or cure for infantile spasms.
• June 2012 - Received 27 letters of intent (LOIs)

• August 2012 - Invited 12 full proposals

• October 2012 – Received 11 full proposals for review

• November 2012 - Selected 8 proposals to support
The Team

• Chris Dulla, PhD – Tufts University
• Aristeia Galanopoulou, MD, PhD – Albert Einstein College of Medicine
• Jeff Noebels, MD, PhD – Baylor College of Medicine
• John Swann, PhD – Baylor College of Medicine
• Libor Velisek, MD, PhD – New York Medical College
• Manisha Patel, PhD – University of Colorado Denver
• Doug Nordli, MD – Lurie Children’s Hospital
• Elliott Sherr, MD, PhD – University of California, San Francisco

Animal models, mechanisms
Tool development
Human, clinical studies
January 2013 – brought 8 lead PIs and advisory panel together in Washington, DC

- Each PI presented his/her proposal to the team for feedback
- The group decided which aim should be the first milestone
- Advisory panel met with CURE representatives on second day to discuss budget for each year 1 milestone
Quarterly GoToMeeting teleconferences – each PI presents progress to the group for feedback

Face-to-face meetings to continue at least once per year
  - 3 to date: January 2013, December 2013, July 2014
• 15 months since funding began
  • $2.1 million committed, to date

• 2 promising compounds
  • Currently testing in all models across 5 laboratories

• July 2014 – workshop to discuss results, think through steps to get to clinical trial, if applicable
Lessons Learned

• It’s hard to truly work as a team!

• Composition of the team is crucial

• Stay tuned....