CTSAs: Informatics Resources for an Age of Translation

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Dr. Anthony Hayward
Director, Division Clinical Research Resources
National Center for Research Resources
National Institutes of Health
CTSAs Create Academic Homes for Clinical and Translational Science
Building a National CTSA Consortium
55 CTSA sites in 28 states; 60 sites when fully implemented
Five Strategic Goals for a National Consortium:

1. Build national clinical and translational research capability
2. Train and foster career development of clinical and translational scientists
3. Enhance consortium-wide collaborations
4. Enhance the health of our communities and the Nation
5. Encourage T1 translational research

www.ctsaweb.org
Translation requires a national clinical and translational research capability

Through the CTSA program, researchers were quickly able to mobilize and implement clinical trials for the 2009 H1N1 influenza vaccine

- In support of the NIAID Vaccine and Treatment Evaluation Units, several CTSA sites rapidly allocated clinical resources for the trials and promptly conducted IRB meetings to approve vaccine trial protocols.

The CTSA program is collecting metrics on the time required to approve clinical research protocols through IRBs and the time taken to put research contracts in place
Translation requires information: creating Resource Directories

- the eagle-i Consortium, was founded with a $15 million American Recovery and Reinvestment Act (ARRA) grant from the National Center for Research Resources (NCRR; part of the NIH) and supports an NCRR goal to establish a national network for research resource discovery.

- "With the eagle-i network, we want to help researchers rapidly find the materials and technologies they need and use their funding for research, not for developing resources that already exist.‘‘ – Lee Nadler
VIVO to identify researchers

- VIVO leverages work done over the past five years by Cornell University, supporting researchers and findings of researchers by representing data about them and their activities including publications, awards, presentations and partners.

- “The goal in the next 18 months is to make VIVO an indispensible tool for scientists,” says Mike Conlon, University of Florida. “And for VIVO to be indispensible, it needs to be creating value for not only the scientists, but the institutions and the funding organizations as well.”
Enhance Consortium-Wide Collaborations

Web Resources for Research Collaborations

CTSpedia
- Wiki structure
- Identifies and shares resources across the national consortium and community researchers world-wide

www.CTSpedia.org

ResearchMatch
- National recruitment Registry
- Centralized, disease-neutral Web portal to connect researchers to research volunteers
- Includes over 37 CTSA

www.ResearchMatch.org

REDCap
- Web-based tools
- Supports data capture and dissemination for clinical and translational research

www.project-redcap.org
Fostering Interdisciplinary Research: Investigators, Scholars and Trainees
(Based on 2010 Annual Progress Reports from 46 CTSAs)

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Translation in less familiar spheres: community research generates data too

Studying Childhood Obesity and Maternal-Child Feeding

- Supported by The Ohio State University CTSA
- A pilot project for community engagement research
- Partnership with OSU Extension and the YMCA
- Will study feeding dynamics between mothers and their children to better understand the prevalence of childhood obesity
- Will help build a sustainable community infrastructure for obesity prevention

Ihuoma Eneli, M.D., M.S.
Ohio State University
Associate Professor of Clinical Pediatrics and Associate Director of the Center for Healthy Weight
Comparative Effectiveness Research will generate complex data

**Device Trial Utilizing Digital Augmentative Alternative Communication Technology on Underserved Elementary-School-Aged Children With Down/Fragile X Syndrome**

- Multi-site CTSA clinical study comparing effectiveness of two Augmentative Alternative Communication Technology Devices on measures of learning in neurodevelopmentally disabled children
  - Colorado University (lead)
  - UC Davis
  - University of Rochester
- The trial will also secondarily compare the impact of these devices on a panel of exploratory neurotrophic biomarkers and cognitive functional tests
Encourage T1 Translational Research

Scripps Translational Science Institute

Pioneers Wireless Health Care Research

- Scripps Translational Science Institute has partnered with wireless telecommunications company Qualcomm to use wireless technology to decrease health care cost
- CTSA program served as the catalyst that connected Scripps to Qualcomm and other technology firms
- Scripps and other CTSAs are conducting a 1,200-patient randomized clinical trial to evaluate a wireless monitor (size of large adhesive bandage) that monitors heart and breathing rates, fluid status, posture and activity data in patients

Dr. Eric Topol (left), director of the Scripps CTSA and Gary West, a philanthropist
Bench to animals to man: translation in Mental Health Treatments

- Indiana University created project development teams to reduce implementation time and improve success rates for protocols
- CTSA pilot project grant funded protocol using rat panic model
- 2nd pilot project grant funded clinical imaging in patients
- Collaboration with U of Lund, Sweden to measure orexin levels in cerebrospinal fluid (CSF) samples of patients with panic disorder
- Holds promise for new generation of anti-anxiety treatments
National CTSA and Related Conferences

- VA-CTSA Opportunities for Collaborative Clinical and Translational Science, September 28, 2010

- CTSA Consortium Steering Committee, October 6-7, 2010

  - Maximizing the use and efficiency of existing NIH-funded research core facilities
  - Developing effective training programs for core facility directors
  - Exploring software options for enhancing administrative management of core facilities
  - Creating a national registry of core resources
  - Standardizing compliance with OMB Circular A21
Common Themes

- An environment that favors collaboration and cooperation
- Funds for Pilot Projects
- Resources for data acquisition, storage and retrieval
- Expensive resources made feasible by sharing
- New emphasis on resources:
  - Animal models
  - Bioengineering
  - High throughput
For More Information: Visit CTSAweb.org