

Translating Research from Basic Discovery to Improved Patient Care

N C R R F A C T S H E E T

Clinical and Translational Science Awards

www.ncrr.nih.gov/crctsa

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A national consortium of medical research institutions, funded through the Clinical and Translational Science Awards (CTSAs), is transforming clinical and translational research across the nation. This unique network of organizations is working together to accelerate laboratory discoveries into treatments for patients, to engage communities in clinical research and to train clinical and translational researchers.

The CTSA program — led by the National Center for Research Resources — creates a definable academic home for the discipline of clinical and translational science at institutions across the country. To accomplish this, the program allows for local flexibility so that each institution can determine whether to establish a center, department or institute in clinical and translational science. It is here that the next generation of clinical and translational researchers are being trained.

Currently, the consortium comprises 39 medical research institutions in 23 states. When fully implemented by 2012, 60 institutions will be linked together to energize the discipline of clinical and translational science. The consortium is designed to:

- Provide enriched resources to educate and develop the next generation of researchers trained in the complexities of translating research discoveries into clinical trials and ultimately into practice;
- Design new and improved clinical research informatics tools for analyzing research data and managing clinical trials;
- Support outreach to underserved populations, local community and advocacy organizations and health care providers;
- Assemble interdisciplinary teams that include biologists, clinical researchers, dentists, nurses, pharmacists, biomedical engineers and veterinarians; and
- Forge new partnerships with private and public health care organizations, including pharmaceutical companies, the

Veterans Administration hospitals and health maintenance organizations as well as state health agencies.

More information can be found on the NCRR Web site at www.ncrr.nih.gov/ctsa. For more about the consortium, visit www.CTSAweb.org.

Key Elements of CTSAs

Development of Novel Clinical and Translational

Methodologies: To sustain intellectual exploration, faculty members may pursue their funded research in areas such as new phenotyping methods that are more objective and quantifiable, the development of biomarkers for research purposes, clinical trial design research, clinical informatics for longitudinal studies, development of research devices and methods that could be used in patients' homes, predictive toxicology in human populations and ethics research specific to populations rather than specific trials.

Pilot and Collaborative Translational and Clinical

Studies: CTSA support may fund pilot and collaborative clinical research projects that allow clinical and translational trainees or researchers to generate preliminary data for submission of a research grant application; seek to improve clinical design, biostatistics, clinical research ethics, informatics or regulatory pathways; develop new technologies; or activities defined by the applicant.

Research, Education, Training and Career Development:

A key component of a CTSA is one or more graduate degree-granting and postgraduate programs in clinical and

translational science. Centers, departments or institutes will train investigators from diverse disciplines, such as medicine, pediatrics, surgery, dentistry, nursing and pharmacology, as well as study coordinators, project managers and other key clinical research personnel relevant to clinical and translational sciences. Topics include clinical research design, epidemiology, biostatistics, pharmacology, biomedical informatics, ethics, behavioral science, engineering and law.

Biomedical Informatics: The effective implementation of this program depends largely on communication within centers, departments or institutes and with all collaborating organizations. Internal, intra-institution and external interoperability is imperative to allow for communication among these centers, departments or institutes and the necessary research partners, such as government, clinical research networks, pharmaceutical companies and research laboratories.

Design, Biostatistics and Clinical Research Ethics: Research in these three areas is quite limited, so applicants are encouraged to develop innovative and creative research programs that bridge these functions with other CTSA activities. Topics for research include limiting risk to participants, preventing bias, improving enrollment, capturing appropriate data, developing design and analysis plans for studies of unique populations or very small numbers of subjects, informed consent and issues related to diseases with limited treatment options.

Regulatory Knowledge and Support: Support for research teams promotes the protection of human subjects and facilitates regulatory compliance. Innovation at all levels of clinical research regulation is imperative, including the provision of integrated training, services or tools for protocol and informed consent authoring and translation, adverse event reporting, safety and regulatory management and compliance and related activities. Institutions are developing best practices that reduce or remove institutional barriers to clinical and translational research and, through dissemination and sharing, enhance interinstitutional collaborations.

Participant and Clinical Interactions Resources: These resources provide an environment to promote participation in clinical and translational research and help determine

the most efficient and effective ways to interact with participants in clinical trials. Examples of resources include the recruitment of research participants; the provision of inpatient, outpatient or community-based exam rooms; medical vans; temporary research participant recruitment/enrollment sites; research nurses; research coordinators; phlebotomists; scheduling services; and services for research specimen collection and shipping. CTSA institutions recruit investigators, especially those early in their professional careers, and make the availability of participant and clinical interactions resources known throughout the institution and medical region.

Community Engagement: The intent of this component is to foster collaborative partnerships and enhance public trust in clinical and translational research to facilitate the recruitment of research participants from the community. Approaches include engaging both the public and community providers, and establishing long-term relationships with community-based groups such as voluntary and professional organizations, schools, women's health groups, faith-based groups and housing organizations. Resources might include community outreach and cultural sensitivity training for institutional clinical and translational researchers, community and provider education and outreach, development of software to facilitate the collaboration of community practitioners and communication outlets, such as newsletters and Internet sites.

Translational Technologies and Resources: Depending on the needs of the centers, departments or institutes, resources such as mass spectrometry, imaging, ultrasound, positron emission tomography, gene expression, proteomics and translational cell and gene therapies are supported.

Contact for more information:

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