Taking Advantage of CTSA Key Resources

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Coordination Core

Provide a single point of contact for multidisciplinary translational teams and other investigators desiring to participate in translational research

- Facilitate clinical and translational research
  - Identify project needs
  - Allocate resources
  - Monitor progress
- Facilitate communication among MTTs and CTSA Key Resources
- Maintain a pool of study coordinators
- Increase throughput and efficiency of translational research
  - Identify barriers for CTSA core activities
  - Eliminate possible duplications of effort.
- Consultations about how your work might align with CTSA programs
- Advice on beginning a new MTT
Biomedical Informatics (BioIT)

Provide expertise, training, access to high-end hardware and software, and analytical support in BMI to researchers.

- Create and maintain databases and web sites for UTMB researchers
  - RedCap Research Online Database
  - Dreamweaver Online Databases
  - Custom Study Web Databases
- Tools and Software
  - Biological Pathways
  - Microarrays
  - Proteomics
  - Sequence Analysis
- Next Generation Sequencing
- BioSQL
  - Array Comparison Tool
  - Genechip database
  - Probe set identification

Biostatistics, Epidemiology, & Research Design (BERD)

Enhance the efficiency and quality of research by providing investigators access to biostatisticians and epidemiologists for research design and analysis

- Facilitate web-based collection of data to capture costs and outcomes to assure estimation of efficiency (T3)
- Provide a link to the Medical Bioinformatics system and EMR
- Improve the design and implementation of evaluation
- Provide integrated study statistical analysis and sample size planning
- Ensure variance minimization
- Increase understanding of the impact of common cause variation.
Clinical Research Center (CRC)

Provide a research infrastructure for clinical studies involving human subjects.

- Equipped to handle many types of studies involving research with human subjects.
- Provides an optimal setting for controlled studies by both basic and clinical investigators.
- Offers bi-directional and multidisciplinary interactions among those involved in basic and clinical research on both children and adults.
- Environment and resources for developing future physician-scientists in the clinical research arena.
- Technological and therapeutic approaches to ensure rapid translation of new, basic scientific knowledge into effective patient care.

Community Engagement and Research

Provide the infrastructure to promote community-based participatory research (CBPR), represent community interests among prospective researcher partners, support researchers’ alliances with community partners, and coordinate the use of community assets.

- Education in the principles of CBPR
- Maintain and coordinate a multidisciplinary practice-based research network
- Facilitate relationships with community partners interested in participating in research opportunities
- Familiarize research teams with the work of other researchers or clinicians working with community groups
- Identify opportunities for collaboration
- Assist with preparation of NIH proposals that require community engagement components
Comparative Effectiveness Research

Foster the growth of a productive, well-funded community of comparative effectiveness research (CER) investigators.

- Support development of applications for external funding from CER investigators
- Provide analytic support for generating preliminary data
- Provide mentoring support from senior CER investigators to faculty from UTMB clinical departments

Education, Training and Career Development

Increase the number of rigorously trained, extramurally competitive, and highly competent translational scientists who will lead clinical research teams and eventually mentor the next generation of translational and clinical scientists.

- Facilitate the acquisition of basic knowledge and skills that are essential for clinical and translational research
- Provide educational resources to multidisciplinary translational teams and their members.
  - Each Team includes at least one junior faculty who is a potential candidate for KL2 support, as well as graduate (PhD) and/or professional students (medicine, nursing or health professions) who participate in translational research.
  - Senior faculty on the Teams serve as mentors for KL2 trainees, advisors for PhD students, supervisors for postdoctoral fellows and professional students, and participants or instructors in research training.
Ethics Support

Provide confidential services to biomedical scientists, their trainees and support staff, clinicians engaging in scientific research, and other members of the university and community to enhance the quality and integrity of research and promote healthy relationships between and among those who participate in the research enterprise.

- Consultations and education for investigators, research teams, and trainees in research ethics and research integrity
  - Clinical research ethics
  - Research subject advocacy
  - Responsible conduct of research
- Guidance to translational teams and community partners on ethical best practices
- On-site assistance in developing ethically sound protocols and practices that enhance subject safety and rights

Novel Methodologies

Stimulate development of novel research approaches and enable use of tools and technologies for solving human health problems.

- Facilitate integration of advanced imaging techniques for diagnosing disease and for monitoring the safety and efficacy of new therapeutic interventions.
- Build and deploy infrastructure for image acquisition, image analysis, visualization and data management software tools.
- Award pilot funding for new methodologies that accelerate translational research and product development.
Pilots and Collaborative Studies

Support innovative clinical and translational research projects, promote collaboration with existing UTMB Centers or Institutes, help investigators identify and use resources within and outside our CTSA, and promote the development of larger translational studies and trials.

- Provide financial support for multidisciplinary teams, individual investigators, and trainees engaged in translational research
- Support the creation of new research teams by funding projects to collect preliminary data leading to independent funding at the equivalent of an R01 level or higher.

Regulatory Knowledge and Support

Expedite implementation of research by helping with navigation of the complex regulatory environment. Provide comprehensive and researcher-focused services and tools designed to remove institutional impediments to research.

- Facilitate the conduct of translational and clinical research from the regulatory perspective, improving compliance and efficiency.
- Provide a structure for the evaluation of existing programs for regulatory management and the development of innovative new programs. Areas addressed include:
  - Protection of human subjects
  - Ethical conduct of research
  - Maintenance of animal welfare
  - Compliance with Food and Drug Administration rules and regulations
  - Federal grant management
Translational Technologies

Support outstanding clinical investigation by facilitating analysis of biological samples and assisting with acquisition and interpretation of laboratory data. Support research that involves imaging and body composition measurements.

• Provide expertise in sample collection, handling, and processing to ensure high quality clinical data outcomes
• Ensure that data is accurately managed and translated
• Facilitate use of standard protocols
• Provide access to biorepository and the Biomolecular Resource Facility
• Assist with technology acquisition, development, data analysis, and quality assurance

Tracking and Evaluation

Refine program activities, improve outcomes, and promote innovation. Help research teams become more cohesive and productive.

• Provide training in program evaluation and team building
• Facilitate creative problem solving and solution implementation
• Develop and implement evaluation processes
• Enhance tracking of team progress
• Clarify challenges and growth opportunities related to team development