0. Prologue
The mission of the University of Texas Medical Branch is a coordinated effort in education, patient care and research for the benefit of the people of Texas and the world. A strategic plan being necessary to the effective pursuit of this mission, a research strategic plan was drafted in 2006 outlining present strengths and potential development into new areas of research.

Over the next three years, UTMB is poised to grow its educational, clinical and research enterprise with a focus on integration of efforts to facilitate outstanding teaching, patient care and research. The Research Executive Committee (REC) sought guidance from the UTMB leadership at the level of departments, institutes, and centers in order to ascertain our present areas of research strength (based on external support), future plans of the leadership, and perceived opportunities for the next three years. This summary is meant to serve as a working document to be revised annually in an effort to maintain a dynamic approach during a time of change and growth.

1. Existing Research Strengths
It was of interest to note that there were six areas of research strength articulated in the 2006 Strategic Plan. In 2012, there are nine such areas based on metrics of external research support.

- Infectious Diseases and Vaccine Development
- Cancer
- Neurosciences
- Aging
- Women's Health
- Burns
- Cardiology
- Pulmonary and Asthma
- Gastrointestinal

These nine areas of strength are reflected in a growing participation of our research community in multidisciplinary translational research. The listed strengths are exemplary, not exhaustive, and other programmatic strengths also exist on campus.

2. Opportunities for Strategic Expansion of the Research Enterprise
There was some consensus among the Chairs, Center Directors, and REC members about which multidisciplinary fields would provide convergence and synergy between and among basic science and clinical/translational science strengths. These areas are
summarized in the following listing. The consensus areas reflect perceived opportunities for extramural funding either current, or in the foreseeable future, based on the changing federal and non-federal research landscape. Funding opportunities include Program grants (P-series), multi-investigator research grants (R-series), contractual grants (U-series), and small business partnership grants (SBIR), from NIH, NSF, DOD, and a handful of smaller agencies. Examples of the envisioned landscape changes include: new enabling technologies (stem cells, ‘omics’, epigenetics), critical emerging human health problems (obesity, human immunology and host response), existing areas of UTMB leadership (structural biology, vaccine development, virology, etc.), the growing utilization of team-based science to address increasingly complex scientific problems, and convergence of technology with national directives (CER, bioinformatics).

Areas of convergence
(not listed in order of preference)

- Basic science of stem cells
- Patient outcome research/clinical research/ comparative effectiveness research
- Bioinformatics/Medical Informatics/Advanced Analytics all under a Data Coordination Center (BCC/DCC)
- Epigenetics/genetics
- Host Response Human Immunology
- Nutrition/Obesity
- Vaccine Development
- Structural Biology/Virology
- Vascular Biology and Inflammation
- Systems biology encompassing “omics”

The overarching theme of the input received and the discussions of the REC emphasized the need for coordinated faculty recruitment efforts among departments and centers, the need for partnership in the development of these areas of research, and most importantly a concerted effort to assure broad-based, multi-investigator participation to assure successful translational development benefitting from the spectrum of expertise of our present and future faculty.

There was also a strong conviction that tools to facilitate successful participation of clinical and basic faculty in these research efforts must be crafted. Examples of these tools would include mechanisms for clustering of investigators around trans-disciplinary themes, mentoring and development of faculty, and aid in grant development, preparation, and review with the purpose of increasing the competitiveness of extramural grant applications from UTMB.
NOTES

1 Over the past year, a subcommittee of the REC with the aid of a number of external consultants and in house questionnaires and a mini-retreat established that the most likely approach to development of a coordinated translational effort in stem cell biology would be to seek a partner in the Houston/Galveston area and focus efforts on basic science development of stem cell biology at UTMB with a more clinically oriented partner in the area of cancer.

2 The REC discussed the strategic importance of development of a comprehensive Data Coordination Center under the umbrella of the CTSA structure as being the most effective and rational approach to the development of tools and services to serve the UTMB clinical / translational research community. This DCC would initially provide biostatistical and bioinformatics services for trial design and management for UTMB clinical and translational investigators, and as demand increases, could expand to serve as a nationally recognized DCC for nationwide NIH clinical trials.