Guide for the Classification of Research and Education Proposals to the MERC

The Medical Education and Research Committee (MERC) classifies proposals along a spectrum from basic, clinical, and population research to education. Some proposals may fall entirely into one category, whereas others may include aspects of one or more types of research and education:

**Basic research:** Research done to understand mechanisms underlying biological function and phenomena, including inherited and acquired diseases.

Goals of basic research include improved understanding of fundamental processes in normal or modified biological systems, identifying molecular and genetic determinants that are characteristic of these systems, and identifying possible molecular targets for perturbing these systems (with a view to therapeutic interventions). Research may be done in cell-free systems, on cells, isolated tissues or organs, or entire organisms, or in populations. Basic studies of health and disease are most often done in model systems but are also done using human tissue or human subjects.

**Type 1 translational research:** Research wherein a basic laboratory discovery becomes applicable to the diagnosis, treatment or prevention of a specific disease.

This type of research is brought forth by either a physician-scientist who works at the interface between the research laboratory and patient care or by a team of basic and clinical science investigators. Translational medicine may also refer to the wider spectrum of patient-oriented research that embraces innovations in technology and biomedical devices as well as the study of new therapies in clinical trials. Translational research does not always involve patients or medicine, e.g., development of technology that develops or improves products (e.g., mass spectrometers, bone scanning densitometers, etc.) that are used in research and clinical diagnosis, identification of microbes and studies of their toxins to develop antidotes/treatments to exposure/infection, etc are also applicable.

**Clinical research:** Research to examine the efficacy of diagnostic, therapeutic, or preventive interventions as well as investigation into mechanisms of disease, and which may include clinical trials as well as case control, cohort and other types of epidemiologic studies.

Investigators typically interact directly with well characterized patients or patient populations. This area of research includes: mechanisms of human disease, therapeutic interventions, clinical trials, clinical epidemiology, and development of new technologies.
**Type 2 translational research:** Applied research on improving human health through enhancing the adoption in clinical practice of new findings and evidence-based practices emanating from clinical research.

This research shows that an intervention is worth implementing in practice ("policy research"), confirms that it is applicable in typical practice settings ("effectiveness research"), and develops strategies to implement it on a large scale ("dissemination-implementation research").

**Applied public health research:** Related to improving the health of populations.

Research can be observational or interventional. Typical targets may include the general population or its subgroups, including schools, worksites, governmental agencies, mass media, voluntary agencies, churches, and other community-based groups.

**Education:** Proposals to develop or enhance education methods, increase capacity, and/or improve the capability of the current or future public health and health care workforce to improve health in Wisconsin.

Educational proposals can include those that improve current educational programs or develop and implement new programs addressing unmet educational and workforce needs. The target of these proposals can be along the continuum from health professionals in training to existing public health and health care workers. Evaluation of educational proposals should address not only dissemination of new knowledge but also changes in behaviors and practices leading to improved health outcomes.