

# Center for Innovation and Research

A Partnership between Michigan State University and Sparrow Health System

## Criteria for Research Proposal Review

### Definitions of Criteria for Review

**Overall Assessment.** Reviewers will provide an overall assessment of the project in consideration of the following review criteria.

- 1) **Significance.** a) Does the project address an important clinical problem or a critical barrier? b) If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved or transformed? c) How will successful completion of the aims change the methods, technologies, treatments, services, or interventions that drive the delivery of health care i.e. quality, safety, cost, outcomes? d) Does the proposed project have commercial potential to lead to a marketable product, or transform the care process?
- 2) **Investigator(s).** a) Are the PD/PIs, collaborators, and other researchers well suited to the project? Does the project include investigators from MSU and Sparrow? Do they have appropriate experience to carry out the project? b) Do they demonstrate an ongoing record of research or related practice? c) If the project is collaborative, do the investigators have complementary and integrated expertise?
- 3) **Innovation.** a) Does the application challenge and seek to shift current research or existing clinical practice paradigms by utilizing novel concepts, approaches or methodologies, instrumentation, or interventions? b) Are the approaches or methodologies, instrumentation, or interventions to one focus area or novel in a broad sense? c) Is a refinement, improvement, or new application of approaches or methodologies, instrumentation, or interventions proposed? Why is the proposal Novel?
- 4) **Approach.** a) Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project? b) Are potential problems, alternative strategies, and benchmarks for success presented? c) If the project is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed? Is there an analysis plan? Are milestones clear? Metrics to measure the outcome exist and are applied and are well developed already tested for validity and reliability? Recruitment plan is described. Attrition expectation is addressed. There is clear articulation of the criteria and measureable goals to ensure that success will be evaluated.



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- 5) **Environment.** a) Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the environment, subject populations, or collaborative arrangement?
- 6) **Protections for Human Subjects.** The committee will evaluate the justification for involvement of human subjects and the proposed protections from research risk relating to their participation according to the following five review criteria: 1) risk to subjects, 2) adequacy of protection against risks, 3) potential benefits to the subjects and others, 4) importance of the knowledge to be gained, 5) data and safety monitoring for clinical trials, 6) If the project involves clinical research, are the plans for 1) protection of human subjects from research risks, and 2) inclusion of minorities and members of both sexes/genders, as well as the inclusion of children, justified in terms of the scientific goals and research strategy proposed?

**Inclusion of Women, Minorities, and Children.** When the proposed project involves clinical research, the committee will evaluate the proposed plans for inclusion of minorities and members of both genders, as well as the inclusion of children.

**Vertebrate animals.** The committee will evaluate the involvement of live vertebrate animals as part of the scientific assessment according to the following five points: 1) proposed use of the animals, and species, strains, ages, sex, and numbers to be used; 2) justifications for the use of animals and for the appropriateness of the species and numbers proposed; 3) adequacy of veterinary care; 4) procedures for limiting discomfort, distress, analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices; and 5) methods of euthanasia and reason for selection if not consistent with the AVMA Guidelines on Euthanasia.

**Budget and Timeline.** Reviewers will consider whether the budget and the requested period of support are fully justified and reasonable in relation to the proposed research.