

UMKC SOD RESEARCH SUPPORT COMMITTEE (RSC)
Guidelines for Submission of Research Proposals for Funding

Responsible Conduct of Research and Research Protections

Prior to initiation of any research, investigators are urged to review the guidelines for responsible conduct of research and research protection information provided on the university's web page at www.umkc.edu/research.

Additionally, when research involves humans or human tissues, the investigator and research supervisor in the case of student research, are required to complete a training program in human subjects' research. UMKC, its affiliated institutions, and its Institutional Review Boards (IRBs) require a set of modules of the Collaborative IRB Training Initiative (CITI). The training is available at <https://www.citiprogram.org/default.asp>.

RSC Purpose and Funding Priorities

This committee has been established to fulfill two major objectives: 1) to provide a funding mechanism for new research projects and 2) to facilitate the scientific development of the novice researcher by offering in-process peer review of research proposals. All applications will be considered; however, *priority for funding will be given to proposals received from pre-tenure full-time faculty members, graduate students at the MS and PhD level, and residents in various advanced education training programs*. Given sufficient funds at the end of the fiscal year, secondary consideration will be given to postdoctoral fellows, senior investigators with established research programs, DDS students or pre-degree dental hygiene students, or non-tenure track full-time faculty.

RSC Rationale

The Research Support Committee (RSC) would like to emphasize that these guidelines and the associated review process are necessary for several reasons. In particular, limited research funds, accountability for use of funds and equipment purchased, and quality of research projects which reflect upon the University and School of Dentistry are the focus of RSC responsibility. The review process is intended to support the new investigator by ensuring that the project will be of sufficient quality for publication and possibly to serve as a foundation for future research. The Research Support Committee works cooperatively with the Oral and Craniofacial Sciences MS & PhD programs as well as Dental Hygiene Education MS degree programs to ensure that graduate student research proposals will meet the needs of their respective programs, but also serve as a foundation for a possible academic career.

RSC Guidelines

For a research proposal to be considered by the RSC, the request for funding must be submitted prior to initiation of the project.

Pre-tenure full-time faculty members may apply for funding support a maximum of two times in a five year period. Each of the two funded research proposals should not exceed \$5,000.00. The total awards for two funded projects should not exceed \$10,000.00.

A tenured full-time faculty member may apply for funding support a maximum of one time in a five year period. The maximum funding limit for the proposal will be \$5,000.00. (Note: student projects supervised by faculty will not count against a faculty member's allowable requests).

Proposal budgets submitted by graduate students and/or residents in advanced education programs will be considered on a case-by-case basis, but are to be in the range of \$2,000 to \$3,000.

Proposals submitted by a student require the signature of their major advisor and all members of their research advisory committee. Typically, this will be on the title page of the proposal or a copy of the signed MS or PhD Research Proposal Approval Form can be submitted. Signature of the research mentor and committee constitutes approval of the research concept, knowledge of the project's chances for successful completion, and general support of the investigation and investigator during the period of research activity. Thus, the student's research advisory committee should have read the proposal prior to submission to RSC. A copy of the proposal title page is sufficient documentation of approval by the supervisory committee.

Proposals may be submitted at any time during the normal academic year. To be considered a complete proposal application, the following items should be submitted to Dr. Mary Walker at walkermp@umkc.edu

- An *electronic* copy of the proposal (a Word document is best)
- The IRB approval email (forward email directly to Dr. Walker), if required for the study
- A scanned pdf of the Signature page or MS/PhD Research Proposal Approval

RSC applicants are requested to review the RSC guidelines carefully, and prepare a complete request. Incomplete or inappropriate proposals will be returned to the authors and will result in delayed review. RSC will review proposals on an ad hoc basis, so that applicants will not be unduly delayed in their research efforts.

Initial submissions should be as complete as possible prior to submission, but open to revisions. The purpose of the RSC review is to suggest changes that may strengthen the proposal. To accomplish this, the RSC may distribute copies of the proposal to a subcommittee with expertise related to the proposal for additional feedback.

The RSC subcommittee will read and evaluate the proposal in detail and may consult with appropriate faculty members (and external experts if required) to assess problems and identify possible solutions. These deliberations will be discussed with the senior author and mentor who will then be responsible for revision of the proposal as required. Revised proposals will be discussed by the full RSC and recommendations made regarding funding.

An expedited review (review/approval by RSC chair) will be used with graduate student funding requests for less than \$500 when there is a clearly defined proposal and justified budget, and the faculty mentor(s) or the MS/PhD committee chair has reviewed and approved prior to submission.

Proposals submitted for evaluation for funding will be considered open to suggested revision.

Recommendations of the RSC and notification of award will be sent to the following: (1) Investigator; (2) Research mentor; (3) Dr. Walker; and (4) Ms. Della Damon (Business Office).

RSC Request Format (should not exceed 10 pages, excluding appendices)

1. Specific Aims

List the broad, long-term objectives and what the specific research proposed in this application is intended to accomplish, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, or develop new technology.

2. Background and Significance

Briefly sketch the background leading to the present application, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill. State concisely the importance and health relevance of the research described in this application by relating the specific aims to the broad, long-term objectives.

3. Materials and Methods

This section should include sample size and description, power analyses, sampling strategies and pilot tests, as appropriate. The research design should be included, along with the variables to be tested, and how they will be measured. Strategies to control measurement bias should be specified. A data analysis plans should also be included.

To assist readers who may be unfamiliar with the project it is particularly crucial that it indicates how the methodology will address the hypothesis(es). One easy way to handle this is to restate the hypothesis(es) and then specifically describe the methodology that will be used to address the hypothesis(es).

Human/animal subjects and human tissues: To appropriately protect human subjects or animals in research, UMKC's IRB (Institutional Review Board) is mandated by the Federal Policy for the Protection of Human Subjects and the Food and Drug Administration to review **all** research that involves human subjects or human tissues, determine whether a consent form is needed, and whether the study appropriately protects human subjects.

Use of human subjects or tissue from human subjects in research requires a human research consent form and approval by the UMKC IRB (Institutional Review Board). **A copy of the consent form must be included as an appendix to the research proposal.** IRB format should be followed for development of the proposal synopsis and consent form (contact: UMKC IRB umkcirb@umkc.edu (816) 235-5927).

Use of animals: Investigations requiring use of animals must conform to Federal and University guidelines. Such research will not be funded by the RSC until the protocol has achieved documented approval from the Institutional Animal Care and Use Committee (IACUC). Investigators anticipating use of animal models should contact the UMKC Research Compliance Office at umkciacuc@umkc.edu 816-235-5669.

Funds for research involving humans/human tissue/animals will not be released by the RSC until the proposal has been approval by the appropriate review committee and the necessary approval documentation has been sent to the RSC. Procedures and forms for IRB/IACUC approval are found at www.umkc.edu/research.

Hazardous materials: All research proposals that involve use of hazardous materials must conform to the standards and regulations of the University of Missouri-Kansas City. Information concerning compliance may be obtained through Chemical, Biological and Radiation Safety, Bio-safety Office at 816-235-1819.

4. References - List pertinent references that are identified in the proposal.

5. Budget

On a separate page of the proposal, list all materials and supplies required for conduct of research. These must be itemized with current costs, number of items requested and total costs clearly outlined, similar to a purchase request. **A justification for requested budget items is required for funding approval.** This is a common practice in grant writing, but is often puzzling for those who are writing their first budget justification. Remember, the reviewers may not know the science underpinning your project. The justification helps us understand why you need these items.

Funds awarded cannot be used for the following:

- Travel not required for the study
- Manuscripts, Thesis or Dissertation preparation
- Publication costs
- Salary of investigators

As a reference, this sample budget and budget justification:

Budget

Item	Quantity	Amount
One machined stainless steel striker	1	\$250.00
One Calset Composite Heater Model 110007-02	1	\$600.00
One set of self-cure acrylic and monomer	1	\$90.00
One set of clamps for mounting jig	1	\$40.00
One Phosphate buffered saline (PBS) PBS packet	1	\$30.00
Forty Victory Series/MBT premolar brackets (\$400 value)	10	donated
Transbond XT composite and Primer (\$150 value)	1	donated
Composite Gun (\$25 value)	1	donated
OrthoLux LED light and radiometer (\$450 value)	1	donated
Total Budget Requested		\$1,010.00

Budget Justification

1. As described in the methods and materials, a knife edge stainless steel rod will be attached to crosshead of universal testing machine. The rod will apply an occluso-gingival load to the bracket between the tie wing and tooth interface producing a shear force at bracket pad tooth interface. No such rod is currently exists for the Instron machine.
2. As described in the methods and materials, a Calset composite warmer will be needed in order accurately heat the experimental group to the correct pre-cure temperature.
3. Self cure acrylic resin will be needed to secure the extracted teeth for mounting on the Instron.
4. Clamps will be needed as a mounting jig to hold the clinical crown of the tooth perpendicular to the holder base as the acrylic resin cures.
5. 0.9% phosphate buffered saline (PBS) with 0.002% sodium azide is needed for storage of extracted teeth.
- 6-8. 3M Unitek has agreed to donate the brackets, primer, bonding agent, dispensing gun, LED source, and radiometer.

All project budgets must be activated within three months of the award date. At completion of the investigative project, the Dental School Business Office must be notified so the budget can be terminated. All project budgets will be automatically terminated eighteen months from award date unless the investigator has forwarded to the RSC a written request for continuance.

The RSC intends to consider all requests for technical assistance on a case-by-case basis but it is generally

accepted that investigators will do their own work whenever possible. However, consideration will be given to those proposals that require technical help due to the nature and sophistication of research design, instrumentation, and/or equipment inherent to the project.

6. Appendix items as required. (For example, signatures of supervisory committee, IRB approvals, consent forms, etc). Note: while the proposal itself is to be submitted in an electronic format, and the IRB approval email forwarded, appendix documents that are hard copy should be scanned and sent as a pdf attachment to Dr. Walker.