The AAE Foundation will offer additional awards of $500 to the top rated student and non-student proposals.

Grant Application Policies

1. Submissions will not be accepted after 5 p.m. Central Standard Time on the day of the deadline. Applicants are notified that their proposal was received and deemed complete within one week of the deadline. Funding is announced in November and in May.

2. No dollar limits are set for grants. Funds awarded are made payable to the principal investigator and his/her institution. Unused funds must be returned to the AAE Foundation within 60 days of completing the grant.

3. The Foundation does not support indirect costs to a recipient’s institution. All funds must be spent in support of the proposed investigation and within the funding period of the grant.

4. A progress report must be submitted within 30 days of the project’s completion. An abstract of the results must also be submitted within six months after completion of the project. The failure of a grantee to submit a final project report will make his/her school ineligible for funding for one year. All grant recipients are highly encouraged to present their research at the AAE Annual Session within one year of the project’s completion.

5. Applicants who are submitting a revised proposal should write an introduction in which they respond to the Research and Scientific Affairs Committee’s critique of their original proposal on a point-by-point basis. Wherever possible, applicants should indicate changes by striking out previous language and highlighting inserts.

6. New submissions from previous grantees must include evidence that the results of the most recently funded project have been published, are in press or have been submitted for publication. A letter from the editor of a refereed journal acknowledging that a manuscript was submitted will meet this requirement. Former grantees who do not include this material with their new application will be disqualified.

7. Manuscripts based on research supported by the AAE Foundation must be submitted first to the *Journal of Endodontics*. The following statement must be included in any written or oral presentation of research supported by the AAE Foundation:

   *This research was supported in part by a Research Grant from the American Association of Endodontists Foundation.*
Purpose and Priorities
The AAE Foundation inspires and supports research and the genesis of new knowledge in endodontics. To make the best use of funds, the AAE has identified research priorities, included with these guidelines (See page 5). Where two proposals are judged equal, the one that addresses AAE priorities will be given preference. Proposals with budgets over $25,000 must directly address a priority.

Eligibility
Researchers who meet the following criteria are eligible: students of an advanced specialty education program in endodontics at a dental school that is accredited by or has a reciprocal agreement with the Commission on Dental Accreditation of the American Dental Association (ADA); faculty or researchers in endodontontology or related fields (microbiology, pathology, physiology) of a dental school that is accredited by or has a reciprocal agreement with the Commission on Dental Accreditation of the ADA; active members of the AAE. Dental school faculty or research staff who are not endodontists are strongly encouraged to include an endodontist as consultant or co-investigator. To encourage international scientific exploration, an international researcher may be included as a collaborator on projects that are carried out at institutions that are accredited by or have a reciprocal agreement with the Commission on Dental Accreditation of the American Dental Association. Travel expenses may be included in the request for funding as part of the itemized budget.

Postgraduate Students
Postgraduate students must be AAE members. Priority will be given to students in the first year of a two-year endodontic program or the first or second year of a three-year program. The student should decide on a research project early in his/her training so that it may be completed by graduation.

Review Process
Applications are reviewed by the AAE Research and Scientific Affairs Committee. Each protocol is evaluated in competition with all others. The committee submits recommendations to the Board of Trustees of the AAE Foundation. The Trustees allocate and award funds. Committee members who have a vested interest in a project or an institution are excluded from evaluating that grant application. When necessary, the committee obtains evaluations from outside reviewers.

Applications are evaluated based on the following criteria:
A. Significance of research and its relation to the AAE Research Priorities
B. Scientific merit and potential for discovering new information
C. Excellence of research design and statistical methods and probability of successful completion
D. Extent to which the project has been previously funded
E. Extent to which alternative funding sources were sought
F. Extent to which the research can lead to future innovations in clinical endodontics, or future research that is funded by national or federal funding agencies

All applicants will receive a critique of their proposal. For further information, call the Development Coordinator of the AAE Foundation at 312/266-7255, ext. 3008.

Outline and Instructions for Preparing a Proposal
All proposal materials must be submitted on the submission website. Below you will see an outline of what will be submitted online.

A. **Abstract**
Include hypothesis, aims and a brief outline of the methodology, and at the top of the page, the applicant’s name and the title of the project. The abstract should not exceed 150 words in length. (The
AAE Foundation reserves the right to publish abstracts of funded grants for the purpose of informing the AAE membership of research funded by the Foundation.

B. **Research Proposal**
Word limits for each section are listed below.

1. **Introduction and Specific Aims of the Project**
   Include the scope, objectives, rationale and a clear statement of hypothesis for the research. Underline the hypothesis. (1,000 word max)

2. **Previous Work and Background of the Project**
   Describe the relevant literature and previous experience of both the principal investigator and other investigators involved in research related to the proposal. Inclusion of preliminary data is strongly suggested. (1,000 word max)

3. **Significance of Research in Relation to the AAE Research Priorities**
   Explain how the proposal relates to the AAE Research Priorities. If the proposal does not directly pertain, explain its significance to endodontics. (100 word max)

4. **Experimental Method**
   Describe the methodology, experimental format and time lines. Include techniques to be used, selection of sample and use of human or animal subjects. Include information on how the sample size was determined. (1500 word max)

5. **Data Analysis**
   Provide detailed statistical methodology, including data collection and analysis. Describe statistical tests and the reasons for their selection. Omission of this information may lower the ranking of a protocol. (750 word max)

6. **Resources and Environment**
   Describe the facilities available for the research. (750 word max)

7. **Time Schedule For Research**
   Provide the approximate dates of the project’s duration. Students must demonstrate that the project can be completed prior to graduation. (750 word max)

*Note: Only the Research Proposal items listed above are counted in the 10 page limit. The items below do not count toward the page limit.

C. **References Cited**
   References must follow the format required by the *Journal of Endodontics*. (1000 word max)

D. **Budget (Must be created in Excel and uploaded to the Uploads section)**
   Provide budget justification and itemize specific needs. **Funding is not permitted nor intended to supplement salaries**, tuition, travel (Travel expenses related to international collaboration may be included as part of the itemized budget), alterations, renovations of facility or publication. Funding for consultants or other research resources will be considered on an individual basis.

State the total funding requested. Include other sources of funding committed to the budget. List any grants previously received or applied for and specify where there is overlap with the current research proposal. The requested funding must equal the expenses. There is no budget ceiling. Applicants should request the total amount needed for the project.
Funding is permitted for the following:

1. **Equipment (permanent).** Requests must not duplicate any equipment in the principal investigator’s department and must be justified and essential. All equipment purchased shall remain the property of the institution. Equipment requests of $1,000 or more must include a signed statement from the university to verify need and itemized price quotes.

2. **Expendable Supplies.** Requests must be justified and should not include supplies expected to be available from other sources.

3. **Costs for Animal Care and Human Subjects**

4. **Data Analysis**

E. **Biographical Sketch (upload to the submission site)**
   Provide biographies for the principal investigator and all co-investigators, not to exceed three pages each. Include recent publications and any publications relating to the proposal.

F. **Recommendations and Approvals (upload to submission site)**
   Applications will not be considered without these documents.
   1. **Letters of Recommendation (upload in the Grant Submitter section)**
      Postgraduate students must include two letters of recommendation from faculty members familiar with the proposal. One letter must be from the faculty member supervising the student’s research. Proposals that have been submitted previously must include new letters of recommendation.
   2. **Statistical Approval (upload to the Uploads section)**
      A letter of support and approval of the statistical analysis from the institution’s statistician or research director.
   3. **Statement of Approval or Exemption From Human/Animal Use Committees (upload to the Uploads section)**
      Approvals for the use of humans or animals. If these are not yet available, include a letter or statement from the institutional review board, human/animal use committee, associate dean of research or the director of research, indicating that the proposal has been submitted for approval.

Private practitioners must include the consent form and HIPAA-related forms which will be used to obtain consent from participating patients.

A proposal will not be funded until all necessary approvals are received by the Foundation.

**AAE Research Priorities Research**

The AAE accepts proposals in the following areas of investigation. Systematic reviews of topics related to the priority list will be considered along with other types of research.

A. **Assessment of Clinical Outcomes**
   1. Factors affecting success of endodontic treatment
      a. Nonsurgical and surgical endodontic treatment
      b. Effect of number of visits
      c. Effect of instrumentation and obturation techniques
      d. Timeliness and quality of the coronal restoration
e. Effect of the dental operating microscope on the success of nonsurgical retreatment and surgical endodontic treatment
f. Effect of residual microorganisms following instrumentation and/or medication

2. Management of anxiety, infection, inflammation and pain

3. Long-term cost effectiveness of endodontic treatment compared to treatment alternatives

B. Assessment of New Technology Such as Devices and Materials

C. Biology of Pulpal and Periradicular Disease
1. Focal infection (relationship, if any, of endodontic treatment to systemic diseases)
   a. Fate of remaining microorganisms in endodontically treated teeth and the supporting periodontium
   b. Effects of acute and chronic periradicular infections and their management on systemic health
   c. Epidemiological relationship between endodontic treatment and systemic diseases
   d. Pathogenesis and healing of endodontic infections in patients with chronic systemic diseases

2. Development of sophisticated methods of diagnosis including enhanced imaging of teeth and periradicular tissues

3. Identification, clarification and use of neurotransmitters, growth factors, genetic or genomic factors, and other biologic regulators to manage endodontic disease

4. Effect of endodontic materials on local tissue response and systemic health

5. Contribution of microorganisms to the pathogenesis of pulpal and periradicular disease

D. Cracks and Fractures in Teeth
1. Diagnosis of cracked teeth

2. Management of cracked teeth and repair of root fractures

3. Investigation of treatment modalities for vital teeth and endodontically treated teeth

4. Development of in vitro and in vivo model systems to evaluate materials, techniques, and assessment of clinical outcomes

5. Epidemiology of cracked teeth and endodontic sequelae

E. Demographics/Epidemiology of Pulpal and Periradicular Disease
1. Prevalence of pulpal and periradicular disease and projections
2. Current and projected demand for endodontic services

3. Current and projected status of the endodontic practice

F. **Endodontic/Implant Relationships**
   1. Relationship between endodontically treated teeth and adjacent implant(s)
   2. Assessment of clinical outcomes of implants vs. endodontically treated teeth

G. **External and Internal Resorption**
   1. Etiology and biology of root resorption
   2. Effective treatment modalities with assessment of clinical outcomes

H. **Educational Research**
   1. Current and projected status of endodontic education
   2. Development and assessment of creative models and application of these models in graduate student, dental student and continuing education programs
   3. Design of innovative programs that would use technology to improve the quality and efficiency of graduate student, dental student and continuing education programs
   4. Development of a telecommunication system, “teledentistry,” to enhance continuing education and consultations

I. **Tissue Engineering—Regeneration of the Pulpodentin Complex and Periradicular Tissues**
   1. Optimal scaffold materials and signaling molecules needed to regenerate the pulp-dentin complex
   2. Source of cells needed to regenerate pulp-dentin complex
   3. Molecular processes that control stem cell activity within the pulp-dentin complex
   4. The fate of the stem cells within the pulp-dentin
   5. Advantages and disadvantages of different sources of cells to regenerate the pulp-dentin complex
   6. Animal models that can be used to replicate disease conditions and test hypotheses related to regenerating the pulp-dentin complex
   7. The influence of enhanced methods of disinfecting and shaping the root canal system on regenerative procedures
   8. Identification of desirable/undesirable outcomes of regenerative procedures
   9. Identification of appropriate outcome measures of regenerative endodontic procedures: for example; bioimaging, new technologies, laser Doppler flowmetry, micro CT, etc.
   10. Patient and clinical factors affecting the outcomes of regenerative endodontic procedures