



## RSNA Research & Education Foundation Request for Application (RFA)

### OVERVIEW INFORMATION

<b>RFA Posted Date</b>	June 1, 2018
<b>RFA Number</b>	RSNARE-EDG1-IC
<b>Funding Opportunity</b>	RSNA Education Development Grant
<b>Funding Opportunity Topic</b>	Imaging Cancer
<b>Announcement Type</b>	New
<b>Funding Opportunity Purpose</b>	<p>The Radiological Society of North America (RSNA) is invested in ensuring that the current and next generation of radiologists are able to meet the needs of our continuously evolving profession. To fulfill this goal, RSNA is requesting applications to promote creation and dissemination of educational tools, technologies, materials and/or content of broad and ongoing value to the membership of RSNA.</p> <p>The specific purpose of this funding opportunity is to create programs, activities, and enduring materials designed to educate radiologists in practice and in training regarding the optimal performance, interpretation, and reporting of cancer imaging examinations in the era of evolving precision medicine, informatics and radiogenomics.</p>
<b>Pre-Application Deadline</b> <i>*required for all applicants</i>	September 3, 2018 No late applications will be accepted.
<b>Full Application Deadline</b> <i>*by invite only</i>	February 15, 2019 Applications will be accepted from invited individuals only, based on favorable results of the pre-application. No late applications will be accepted.
<b>Application Instructions</b>	<p>Pre- and full applications must be submitted through the RSNA R&amp;E Foundation online grant site, <a href="https://grants.rsna.org/grants">https://grants.rsna.org/grants</a>. Eligibility requirements, application instructions, and other details are in the RFA full text announcement.</p> <p>Applications that do not comply with the instructions will not be accepted for review.</p>
<b>Scientific Merit Review</b>	March 2019 (date TBD)
<b>Applicant Notified of Funding Outcome</b>	May 5, 2019 Applicants will be notified of the funding outcome by email communication. Awardees must comply with the grant policies and procedures.
<b>Earliest Start Date for Funded Grants</b>	July 1, 2019
<b>Contacts</b>	<p>Scott Walter Assistant Director, Grant and Award Administration <a href="mailto:swalter@rsna.org">swalter@rsna.org</a>   630-571-7816</p> <p>Rebecca Murray Senior Director: R&amp;E Foundation and Corporate Relations <a href="mailto:rmurray@rsna.org">rmurray@rsna.org</a>   630-590-7702</p>

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## FULL TEXT OF ANNOUNCEMENT

### **Funding Opportunity Description Purpose**

To create programs, activities, and enduring materials designed to educate radiologists in practice and in training regarding the optimal performance, interpretation, and reporting of cancer imaging examinations in the era of evolving precision medicine, informatics and radiogenomics.

### **Background**

Imaging examinations play a critical role in the detection, staging, and treatment selection of many cancers. The complexity of interpreting cancer imaging studies has increased due to the rapid evolution of cancer care. Numerous imaging examinations used in the evaluation of specific cancers have undergone critical recent developments, including introduction of new imaging technologies, advances in interpretation and reporting, response assessment in the era of targeted therapies, and application in new clinical areas. Such advances create a need to educate and train the radiology community in the examinations' optimal implementation. This grant is intended to address this need by supporting radiologists in developing educational materials focused on oncologic imaging examinations, and improving the capabilities and knowledge base of radiologists who interpret cancer studies.

### **Education Objectives and Scope**

Education topics appropriate for this initiative include, but are not limited to:

- The role of radiologists in clinical trials, clinical care/management of patients with cancer
- Current and emerging imaging biomarkers in oncological care
- Interpretation and reporting of oncological imaging exams
- Quality improvement and healthcare economics in oncological imaging
- The use of information technology, bioinformatics, machine learning and artificial intelligence in oncologic imaging and oncologic care
- Cancer systems biology and relevance to imaging (i.e. how cancer is more than a focal tumor, and has systemic effects that affect its growth and management)
- Response Assessment
- Emerging role of blood borne biomarkers and impact on imaging cancer

### **Award Information**

#### **Application Types Allowed (New, Resubmission, Revision)**

Currently accepting new applications

#### **Anticipated Number of Awards**

The RSNA R&E Foundation will award one grant, on condition the study section score for the top-ranked grant application falls within a quality threshold set by the R&E Foundation's Board of Trustees.

#### **Award Budget**

Application budgets of \$30,000 (minimum) and \$100,000 (maximum) direct costs in any project year will be considered.

#### **Award Project Period**

Grants of 1–3 years will be awarded for a maximum grant total of \$300,000. For multi-year grants, funding for subsequent years will be dependent upon successful completion of specific project milestones.

<b>Educational Focus</b>	<p>Educational activities may address one or more of the following educational gaps, but is not limited to:</p> <ol style="list-style-type: none"> <li>1. Educate the radiology community in basics of cancer biology and novel targeted therapies that relate to technical advances in oncologic imaging examinations</li> <li>2. Educate the radiology community in the spectrum of systems for assessing treatment response and in the evolving response assessment criteria</li> <li>3. Educate the radiology community in ways in which big data and machine learning can be applied to oncologic imaging examinations</li> </ol>
<b>Audience/Learners</b>	<p>Educational activities should address the needs of:</p> <p><b>Primary:</b> Radiologists in practice and in training</p> <p><b>Secondary:</b> Non-radiologist physicians who are involved in care of cancer patients.</p>
<b>Educational Format(s)</b>	<p>Enduring materials. Examples include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Online materials (interactive website, videos/webinars)</li> <li>• Curricula to be used at local institutions, with a plan to scale to a larger population</li> </ul> <p>This grant program is <i>not</i> intended to fund projects for educational theory, development of RSNA annual meeting content or advanced training in the discipline of education.</p> <p>Educational materials resulting from this grant mechanism will be made available to RSNA and its members at no cost. Any funds generated directly or indirectly from the sale, lease or distribution of the final product will be donated to the RSNA Research &amp; Education Foundation. Final products will be reviewed and evaluated by RSNA. RSNA will promote, support and host (if applicable) enduring content resulting from R&amp;E-funded grants through various RSNA outlets.</p>
<b>Selection Criteria</b>	<p>Applications will be reviewed on the following:</p> <ul style="list-style-type: none"> <li>• Innovation</li> <li>• Impact</li> <li>• Knowledge of and experience within the specific topic</li> <li>• Well-defined and researched needs assessments that identify current practice gaps of identified learners</li> <li>• Linkage of educational needs to achievable learning objectives</li> <li>• Incorporation of adult learning principles into the educational design</li> <li>• Metric-based Outcomes analyses that demonstrate achievement of learning objectives</li> <li>• Scalability/expandability</li> <li>• Content monitoring, update strategy and sustainability</li> <li>• Timeline and Milestones to completion (will be used to determine if subsequent years of funding is merited)</li> <li>• Plan for sustainable product and incorporation into the “RSNA education system”</li> </ul>
<b>Eligibility Information</b>	<p>Applicant (Principal Investigator) must:</p> <ul style="list-style-type: none"> <li>• be a dues-paying RSNA member at time of application and throughout the funding period</li> </ul> <p>Other investigators may include:</p> <ul style="list-style-type: none"> <li>• Co-PIs from the same or other institutions</li> <li>• individuals outside of radiology</li> <li>• teaching/education experts</li> <li>• other professionals as needed</li> </ul>

## PRE-APPLICATION – REQUIRED

Prospective applicants must submit a pre-application through the RSNA R&E Foundation grant application site, <https://grants.rsna.org/grants>, by the posted deadline date.

The pre-application must include the following information:

- Descriptive title of proposed activity
- Name(s), contact information and brief descriptions of the expertise, experience and specific roles for the PI(s).
- Names and brief description of other key personnel (co-investigators)
- Participating institution(s)
- Detailed abstract of the proposed education grant project. Abstract must include the following:
  - overall description of project
  - summary of objectives and aims
  - budget/use of funds
  - methods
  - expected outcomes
  - impact

Use size 11 Arial font, single spacing, 0.5" margins. There are no word limits for the abstract, however the total length of the pre-application is not to exceed 2 pages.

## FINAL APPLICATION – BY INVITE ONLY

Applicants who score well on the pre-application will be invited to submit a full application through the RSNA R&E Foundation grant application site, <https://grants.rsna.org/grants>, by the posted deadline date.

### **I. Summary of Proposed Education Program**

This section, when separated from the rest of the application, should serve as a succinct and accurate description of the proposed education program. The summary should include the long-term goals of the proposed educational activity to the radiologic community. Abstract not to exceed 500 words.

- A. Title
- B. Abstract
- C. Resubmission

### **II. Applicant(s)**

- A. Professional Data:
  - i) Institution
  - ii) Department
  - iii) Faculty position/rank
  - iv) Time allocated to the proposed project, and to other duties. Specify percent and time frame.
- B. Biosketch:
  - i) NIH-style biosketch, limited to 5 pages.
  - ii) Please see <https://grants.nih.gov/grants/forms/biosketch.htm> for the NIH biosketch blank form, instructions and sample. Please use the “non-fellowship” biosketch for all R&E grant applications.
- C. Other Investigators/collaborators:
  - i) Other investigators/collaborators who will contribute significantly to the project should be listed. Include a description of their background, experience and expertise, and the role(s) they will play in the proposed research project. To the extent possible, collaborators should be actively involved in each stage of the project, from initial application through analysis and reporting on the final product.
  - ii) Biosketch: Include a NIH-style biosketch, limited to 5 pages, for each investigator/collaborator with a major role in the project.

### III. Education Program

#### A. Detailed Education Plan:

*Not to exceed 5 pages. Use 0.5" margins and size 11 Arial font. Figures and tables are included in the five page limit. Additional pages may be included for references. Appendices may be included; however appendices should not be an extension of the detailed education plan.*

The detailed education plan should consist of the following:

- i) Introduction:
  - a) Rationale and purpose: describe why the project should be undertaken.
  - b) Present current needs assessment (concise, up-to-date literature/online review of existing material) with description of what gap the proposed project will address with any existing standard, product or curricula.
  - c) Objectives and Specific Aims
  - d) What learner group(s) will be served by the project?
  - e) What makes the proposal unique?
  - f) What are the intended outcomes or expected results? Will the proposed project result in a deliverable product/intellectual property?
  - g) Previous Experience: Relevant preliminary work/prior experience of investigator.
- ii) Project Plans:
  - a) What specific activities will be done to achieve the project objectives? Include specific collaborator roles and responsibilities.
  - b) Present a specific timeline of events to detail measurable milestones toward success of the completed project.
  - c) Outcomes: Detail the educational programs or materials that will be developed through this project. Indicate which metric(s) will be used to measure the impact of the proposed project. Explain how the metrics will be measured.
  - d) Dissemination: Describe how the product will be made available to RSNA members.
- iii) Evaluation
  - a) Evaluation is one of the most common areas of weakness in grant applications; considerable attention must be paid to this area in all successful applications. How will the outcomes of the project be assessed in terms of the purpose and objectives? Can the outcomes be quantitatively assessed?
- iv) Research Assurances
  - a) Education grant projects typically involve human subjects and require Institutional Review Board (IRB) approval. It is the responsibility of the applicant to contact their institutional IRB office to inquire if IRB approval is required for the proposed project and to publish subsequent manuscripts. Provide the status of IRB for this project. Applicants do not need research assurance approvals at the time of application; however funded grant recipients will be required to submit appropriate approval notifications before grant funds are released.
- v) References

#### B. Location of Study:

Specify the primary institution, department, and country where the education project will take place. List secondary institutions, departments and countries if applicable.

#### C. Resources and Environment:

Describe the facilities, support services, educational resources and/or other services that will be available for this project.

### IV. Budget

#### A. Detailed Budget:

Since plans differ, no specific format is required for this section. However, a complete description of the projected use of funds will assist the study section reviewers in determining the project's scope and feasibility. The budget should be a complete and detailed listing of the costs associated with the proposed program, including part-time salary support, supplies and materials, etc. Specify the following:

- i) Total project budget (direct costs)
- ii) Amount Requested
- iii) Explanation of how costs not covered by this grant will be paid (departmental funds, other grants, etc.)
- iv) Complete budget justification

*Note: The RSNA Research & Education Foundation does not pay institutional overhead costs or indirect costs. Travel expenses for the RSNA Scientific Assembly and Annual Meeting may not be paid by this grant.*

- B. Other Sources of Support (pending and received):  
Other non-conflicting sources of support for the proposed activity are encouraged and should be identified.
- C. Award Payment Information:  
To facilitate fund disbursement if the grant is approved for funding, please supply the payee information and mailing address. This information is available through the institution's research administration or grants and contracts office. The institution will serve as the fiscal agent.

#### V. Letters

- A. A letter from the department chair should address each of the following:
  - i) Amount of dedicated time (percent of time/hours per week) that will be available to the applicant.
  - ii) Does the applicant have access to appropriate educational resources, including equipment, other materials, space, assistants, and mentors?
  - iii) Will the educational and scientific environment in which the work will be done contribute to the probability of success?
  - iv) Will the activity benefit from unique features of the educational and scientific environment, subject populations, or collaborative arrangements?
  - v) Other factors or considerations that will lead to the short and long term success of the proposed project.
- B. A letter (or email) of intent/agreement from each investigator/collaborator listed in the application.
  - i) Letters must address only the deliverables that will be contributed to the project (equipment/supplies, time/expertise, etc.); letters should not include specific comments about the project or recommendations of the applicant. Letters should be written to the grant applicant, not to RSNA.

#### VI. Signatures

- A. Department Chair
- B. Grant Administrator
- C. Grant Applicant and all Co-PIs

*Note: Original signatures are required, no electronic or digital signatures allowed. Print signature page, obtain signatures, scan document and upload back into the grant application.*

### GRANT APPLICATION REVIEW INFORMATION

Applications are reviewed using an NIH-style study section and the NIH overall impact scoring system of 1 (exceptional) to 9 (poor). The RSNA Education Study Section is comprised of experts in the radiologic sciences with specific expertise and experience in education principles and the topics listed in the RFAs within a given year.

One primary and two secondary reviewers will be assigned to each grant application. After initial, individual review, the study section members will convene for group discussion of each meritorious grant application and assign a final overall impact score. Study Section members will use the following review criteria to assign an overall impact score for each application.

#### Overall Impact:

After considering all of the scored review criteria, briefly summarize the significant strengths and weaknesses of the application and state the likelihood of the project to exert a sustained powerful influence on the field. Briefly summarize the significant strengths and weaknesses of the application.

#### Scored Review Criteria:

- **Significance**

Does the proposed education program address a key audience and an important aspect or important need? Is there convincing evidence in the application that the proposed program will significantly advance the stated goals of the program?

- **Innovation**

Taking into consideration the nature of the proposed research education program, does the applicant make a strong case for this program effectively reaching an audience in need of the program's offerings? Where appropriate, is the proposed program developing or utilizing innovative approaches and latest best practices to improve the knowledge and/or skills of the intended audience?

- **Approach**

Does the proposed program clearly state its goals and objectives, including the educational level of the audience to be reached, the content to be conveyed, and the intended outcome? Is there evidence that the program is based on a sound rationale, as well as sound educational concepts and adult learning principles? Is the plan for evaluation sound, and does it incorporate metric-based outcomes analyses likely to provide

information on the achievement of learning objectives and overall effectiveness of the program? Is the project scalable/expandable? Is there a plan to monitor content, update and sustain the product? Are the timeline and budget realistic? Is there a proposed plan to incorporate the product into the 'RSNA Education System'?

• **Investigators**

Is the PI capable of providing both administrative and scientific leadership to the development and implementation of the proposed program? Is there evidence that an appropriate level of effort will be devoted by the program leadership to ensure the program's intended goal is accomplished? If the project is collaborative or multi-PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project

• **Environment**

Will the scientific and educational environment of the proposed education program contribute to its intended goals? Is there a plan to take advantage of this environment to enhance the educational value of the program? Is there tangible evidence of institutional commitment? Is there evidence that the faculty have sufficient institutional support to create a sound educational environment for the participants? Where appropriate, is there evidence of collaboration and buy-in among participating programs, departments, and institutions?

Additional Review Criteria

- Protections for Human Subjects
- Vulnerable Populations (medical students, residents/fellows etc.)

Resubmissions | Renewals | Revisions (not applicable at this time)

INTERIM REVIEW (FOR MULTI-YEAR GRANTS)

Grant recipients are required to submit progress reports and project updates throughout the funding period. Initial progress reports must be submitted 10 months after the date of funding. For multi-year grants, subsequent progress reports must be submitted on a six month basis, or as determined by the Education Grant Oversight Committee in order to remain eligible for future funding.

Progress reports must include documentation of the following:

- Provide a summary statement of the project status.
- Indicate any deviations you have made from the original educational plan and justify these changes.
- Restate the specific aims/goals of your education plan and indicate the progress made toward each aim/goal.
- Indicate progress made toward the milestones outlined in the original grant application.
- Indicate the expenditures you have made to date and how they relate to the project.
- Indicate any problems or delays that you have encountered.

The Education Grant Oversight Committee is responsible for reviewing funded education grant progress and milestones, and developing recommendations for subsequent funding for the Foundation's multi-year education grants.