AWARD REQUIREMENTS AND OBLIGATIONS

I. Funding Opportunity

A. Funding Opportunity
   The Comparative Effectiveness Research (CER) Award aims to develop CER leaders within radiation oncology, and to stimulate research focused on evaluating the effectiveness, complication profile, cost and cost-effectiveness of various radiation therapy treatments, as well as the comparative effectiveness when compared to other therapies.

B. Research Scope
   This research will inform patients and providers with practical knowledge about which specific interventions within radiation oncology are most effective for certain clinical situations and patient populations.

C. Research Grants Evaluation Committee
   This award is provided by ASTRO’s Research Grants Evaluation Committee. Members of this committee will 1) provide high-quality and fair reviews for all submitted applications, 2) provide valuable feedback to all grant applicants on a timely basis, 3) guide and evaluate progress and direction of each research project and 4) govern all decisions and actions related to this award.

II. Award Information

A. Award Amount
   1. The total award is $100,000 ($50,000 annually over two years). The face amount of the award is the maximum financial consideration.

B. Award Specification
   1. Award payments of $25,000 biannually over two years will be made starting the first full month of the award period (July 1, 2015). Award payments are distributed upon receipt of an invoice from the host institution.
   2. A two-page interim report must be submitted after completion on the work for the first year (July 1, 2016), before the second year’s payment installments can be awarded.
   3. Funds must be used beginning within six months of the award and must be expended within the allocated time period. Unexpended funds must be returned to ASTRO.
4. Ownership of tangible assets purchased through the award shall remain the property of the institution unless specific arrangements are made before the end of the grant period with ASTRO.

C. Application Deadline
   Applications are to be submitted electronically no later than 11:59 p.m. Eastern time, Friday March 27, 2015. Applications received after that date will not be considered (§ IV: Application Submission Information).

D. Award Project Period
   1. The time period of this award is two years. The award period ends June 30, 2017.
   2. Time extensions can be requested to extend the award for an additional year (limit of two additional years). Extensions are granted to prolong the time period of the award; the total award amount will not increase (§ VI.E: Extension Request).

III. Eligibility Information

A. Eligible Applicants
   1. All applicants must be active members of ASTRO.
   2. The applicant must be employed by a recognized U.S. research university at the time the application is submitted.
   3. The applicant must be a board-certified or board-eligible physician or physicist in radiation oncology or a radiobiologist at the time the award commences.
   4. The applicant must show a commitment to a career that focuses primarily on academic radiation oncology.
   5. The research must be conducted at a recognized U.S. research university with qualified faculty in comparative effectiveness or similar research to serve as mentors if necessary.
   6. Applicants must name a primary mentor or co-mentor who together with the applicant is responsible for the planning, direction, and execution of the study. If the applicant has previously demonstrated high-level health services expertise as evidenced by extramural funding as a principal investigator in the discipline, then a mentor is not required.

B. Principle Investigator (PI) Commitment
   1. At least 40 percent of the recipient’s full-time professional effort must be devoted to the goals of this award. The remainder may be devoted to clinical, teaching or other research pursuits consistent with the objectives of the award.
   2. As required (§III.A.6.a), the applicant must choose a mentor who will assist in the preparation of the plan for this program (§VI.B: Mentor’s Requirement).
   3. Over the life of the grant, at least 50 percent of the budget must be spent on non-PI salary support. The award can still be used to support the salary of the PI or those providing direct research assistance.
   4. The grant may also be used for:
      a. Supplies and minor pieces of equipment (up to $500)
      b. Travel
      c. Secretarial assistance
d. Support or salary of the mentor.

5. ASTRO does not pay institutional indirect costs or overhead costs.

6. Applicants may not submit more than one ASTRO research or education grant application per year. Acceptance of a research award from another source for the same project at the same time is prohibited.

7. The recipient is required to contact ASTRO immediately if any problems are encountered that would prevent them from successfully completing the project.

C. Principle Investigator’s Institution Commitment

1. The institution must be recognized as providing a rich environment for trainee career development.

2. A responsible figure from the institution/department and the mentor must demonstrate, in writing, a commitment to the development of the applicant as a productive, independent investigator.

3. A responsible figure from the institution/department and the mentor must demonstrate, in writing, intent for 40 percent of the recipient’s full time professional effort to be devoted to the goals of the award.

4. The host department will act as the fiscal intermediary. The institution will pay the stipend to the winner and be responsible for satisfying tax withholding, deposit and/or reporting requirements applicable to the payment of the award. The winner will be responsible for individual income tax purposes.
   a. ASTRO does not pay institutional indirect costs or overhead costs.

5. The institution will be required to provide sufficient additional funds to supplement salaries or supplies as needed for the research.

6. Any change in institution, mentor and chair or in the applicant’s position that might affect their ability to successfully complete their training should be communicated as soon as possible to ASTRO so that appropriate action can be taken.

7. When a mentor at the grantee institution is to be replaced, the institution must submit a letter from the proposed mentor documenting 1) the need for substitution 2) the new mentor’s qualifications for supervising the program, and 3) the level of support for the applicant’s career development. The letter must also document that the specific aims of the research program will remain within the scope of the original peer reviewed research program.

IV. Application Submission Information

A. Application Deadline

Applications are to be submitted electronically no later than 11:59 p.m. Eastern time, March 28, 2015. Applications received after that date will not be considered (§ IV.B: Submission Information).

B. Submission Information

1. Applications will only be accepted through the ASTRO page in proposalCENTRAL: https://proposalcentral.altum.com/default.asp?GMID=105. Paper applications will not be accepted.
2. Applicants may save and continue their application once started but should allow adequate time for completion and submission.
3. Regardless of applications start date, applications submitted after the deadline will not be accepted.
4. Applications for ASTRO Awards must follow the format and the outline of the standard NIH-style research application.
5. Applicant should use the NIH biographical sketch template found on ProposalCENTRAL.
6. All materials must be prepared in English, single spaced with normal spacing between letters and words, using a font style (size 10-12) that is easy to read such as Arial or Times New Roman.
7. A minimum of one-half inch margins must be used on all page borders.
8. An abstract not exceeding 3000 characters should be uploaded to proposalCENTRAL.
9. The application may not exceed 15 pages, not including references.

C. Submission Content

All applications must contain the following:

1. A clear statement of the study’s aim(s) not to exceed one page.
2. A background section.
3. Preliminary data if any are available: The mentor’s relevant work in the field can be included as the basis for the current proposal, along with important unpublished data. It should be clear what work was performed by the applicant and what came from the mentor.
4. Experimental design:
   a. A detailed rationale for each series of experiments.
   b. A clear stated hypotheses.
   c. The choice for model systems and controls.
   d. The end-points, including statistical analyses.
   e. The likely outcomes from each series of experiments or research phase, with an emphasis on how results might guide future studies.
   f. Potential problems and possible solutions.
   g. Only unpublished methods.
   h. Emphasize “why” instead of “how”.
5. A realistic timeline for completion of the proposed studies
6. A complete curriculum vitae/biosketch that includes a statement on career goals and how this grant will further them.
7. Outline of budget including:
   a. Salary support (with benefits) if laboratory or other assistants will be paid by this grant.
   b. Equipment purchase and/or rental.
      1. Supplies
      2. Animal purchase and animal housing (if applicable)
      3. Other (specify)
   c. Animal and human subject approvals from Institutional Review Board.

D. Letters of Support:
Applicants are required to submit three (3) letters of support/recommendation within the application from the applicant’s mentor, department chairman and institution. The letter should detail the department’s reasons for supporting the proposed research, how this activity relates to the overall research activities of the department, a description of departmental support for the project and any other pertinent information that would be useful in evaluating the applicant and proposed research project.

1. **Mentor Letter**
   The applicant mentor letter should include the following:
   a. Acknowledgment that the mentor has already spent time with the applicant in developing this application.
   b. A statement from the mentor estimating the time that will be spent with the applicant to accomplish the goals of the program.
   c. The suitability of the applicant, both strengths and weaknesses, for the program and the proposed work.
   d. The applicant’s potential to develop into an independent researcher.
   e. Plans to correct deficiencies in the applicant’s training so far using didactic courses, laboratory meetings, guidance in writing clinical protocols, grants, papers, etc.
   f. Plans for career guidance.
   g. The research environment in the mentor’s lab/clinic, including current staffing (technicians, post-doctoral fellows, research nurses/data managers, etc.).
   h. Identification of non-mentor assistance:
      i. If the mentor will not be providing day-to-day guidance for the applicant, the person providing such guidance must be identified and their CV included in the application.
      j. A list of currently funded/pending research support.
   j. A description of how the applicant’s proposed research fits with the ongoing projects, how the applicant’s work differs from currently funded projects and the source(s) of support for research needs beyond this application.

2. **Department Chair Letter**
   The department chair letter should demonstrate the following:
   a. The suitability of the applicant, both strengths and weaknesses, for the program and the proposed work.
   b. A guarantee that the applicant will have 40 percent protected time to perform research and how the applicant’s time will be structured.
   c. A clear statement of the additional departmental and other support that will be provided to the applicant to supplement the award.
   d. The chairman’s goals for the applicant.

3. **Institution Letter**
   The institution letter should reiterate that the applicant’s plan for research has been approved. This letter may be provided from the IRB of the institution or the
department that handles grants and funding.

Applications submitted without all required materials, supporting documentation or in the incorrect format will be considered ineligible for review.

V. Application Review Information

A. Review and Selection Process
A study section consisting of physicians and scientists with expertise in the areas and topics of each grant will review the application for scientific merit and appropriateness for funding. Final decisions will be subject to the approval of the ASTRO Board of Directors. Each grant is scored according to seven individual criteria scores (§V.B: Scoring Criteria). In addition to the seven criteria scores, throughout the review process, the study section will concentrate on the following factors:

1. General qualifications of the applicant.
2. The commitment of the applicant to a career in academic radiation oncology.
3. The quality of the research plan.
4. Opportunities for the development of the applicant such as working conditions, institutional and departmental support and facilities.

B. Scoring Criteria
All applications are scored based on the NIH 9-Point Rating Scoring System (1=exceptional; 9=poor). This score is based on the overall impact and strength of the application, as well as seven individual criteria scores: Proposal worthiness, environment, budget, research relevance, background knowledge, experimental design and probability of aims.

1. Proposal Worthiness: Does the proposed project seem worthy of being funded? Does the project challenge existing patterns of clinical practice, or does it address an original theory or critical barrier to progress in the field?
2. Environment: Are the facilities, equipment and staff support adequate? Does the institution support the research being conducted?
3. Budget: Is the budget justified? Is at least 50 percent of the budget allocated to non-PI salary support.
4. Research Relevance: Does this project address an important problem in the radiation oncology field? If the aims of the application are achieved, how will scientific knowledge or clinical practice advance?
5. Background Knowledge: Does the researcher demonstrate significant background knowledge in relation to their topic?
6. Experimental Design: Are the clinical framework, design, methods and analyses sufficiently developed, and appropriate to the aims of the project?
7. Probability of Aims: What are the probabilities that the researcher will achieve the specific aims of the project? Do the specific aims seem feasible in the amount of time allotted?
C. **Anticipated Announcement and Award Dates**
   After committee scoring of the application is completed, chosen recipients’ applications are sent to the June Board of Directors meeting for approval. Applicants are notified prior to July 1, 2015, through email regardless of selection.

VI. **Award Administration Information**

   A. **Annual Reports and Post-Award Obligations**
      1. A two-page Interim Report must be submitted to ASTRO after completion on the work for the first year (on or before July 1, 2016). The interim report must be submitted before the second payment installment will be awarded.

      The **interim report** must:
      a. Restate the specific aims/goals of your research plan and demonstrate the results toward each aim/goal. Include all supporting data.
      b. Indicate any deviations you have made from the original research plan and justify these changes.
      c. Indicate the expenditures you have made to date and how they relate to the project.
      d. Indicate any problems or delays that you have encountered; for example, problems in obtaining protected time to do research, slow patient accrual in the study, etc.

      2. A final report of your research is due to ASTRO within 60 days of the end of the grant period (between June 30, 2017, and August 30, 2017) in order for the last installment to be awarded.

      The **final report** must:
      a. Restate the specific aims/goals of your research plan and demonstrate the results toward each aim/goal. Include all supporting data.
      b. Indicate any deviations you have made from the original research plan and justify these changes. If you did not reach one or more of your initial goals, explain why.
      c. Indicate any problems or delays that you have encountered; for example, problems in obtaining protected time to do research, slow patient accrual in the study, etc.
      d. Indicate if the results from your studies have been published, are being prepared for publication, or will be prepared for publication within the next six months.
      e. Indicate if the results from your studies will be used as preliminary data in a grant application to another granting agency.
      f. Indicate the clinical significance and future clinical impact of the results of your study.
      g. Indicate if you received adequate institutional support.
      h. Indicate the strengths and weaknesses of the ASTRO grant program in which you participated.
i. Include a one page statement as to the significance of the support in terms of its contribution to the training of the applicant for a career in radiation oncology, including future plans.

j. Include a financial report must be submitted at the same time as the final report with a complete financial accounting of all ASTRO funds expended over the entire life of the project including a list of assets and any equipment purchased with these funds and any travel expenses associated with the award. Please indicate how the expenditures relate to the project.

3. Reports are to be submitted electronically via proposalCENTRAL in .pdf form and accompanied by a printed, signed copy endorsed by the department chair.

B. Mentor’s Requirements (if necessary)
1. The mentor must be an active member of ASTRO
2. The mentor should be an externally funded health services researcher or radiation oncologist with significant health services research training.
3. The mentor should have a track record of success in training independent investigators.
4. Applicants may also nominate co-mentors as appropriate to the goals of the program.
5. It is expected that the mentor will meet with the applicant at least weekly.
6. The mentor should also provide a yearly report of the applicant’s progress.

C. Publications
All scientific posters, publications and oral presentations resulting from ASTRO funded-projects must acknowledge the Society by including a statement similar to: “This work was supported by the American Society for Radiation Oncology.” One reprint of each publication produced as a result of this grant (with the grant reference number included) should be sent to ASTRO.

D. Other Award Obligations
1. Recipients will be asked to publish all research results in ASTRO’s scientific journal the International Journal of Radiation Oncology•Biology•Physics (Red Journal).
2. Recipients will be asked to submit an abstract of their results to ASTRO’s Annual Meeting following completion of their research. If the abstract is selected for the Annual Meeting, recipients are prohibited from publishing their results until after Annual Meeting. Arrangements may be made with Red Journal to delay publication until after the ASTRO Annual Meeting.
3. A full manuscript reporting the work must be submitted at time of presentation. Recipients are expected to present their research in the form of a full oral presentation as an “ASTRO/ROI Comparative Effectiveness Research Award Recipient.”
4. Recipients are expected to send an electronic hi-resolution, 300DPI, 4-color photo (preferably 5x7 inches) to ASTRO for use in the ASTROnews and in other applicable ASTRO publications.
E. **Extension Requests**

If the applicant wishes to extend the award for an additional year (limit of one (1) additional year) a no-cost extension must be submitted ASTRO’s Research and Evaluation Department no later than January 15, 2017.

1. This competitive renewal will require the re-submission of an abbreviated application, which will substitute the following:
   a. The interim report for the background and significance; and
   b. The experimental design section shortened to reflect the duration of the award.

2. The approval of an extension does not include the awarding of additional funds, only additional time.

3. The request must state the reason for the extension and the length of the extension requested and must be co-signed by the department chair.

4. If the project is delayed, interim reports must be submitted every six months.

5. Review of this renewal will take into account the applicant’s productivity, progress and the likelihood that renewal will significantly help the applicant’s career.

6. Other requests for changes to the terms of an award should be addressed to ASTRO with similar documentation and institutional approvals.

F. **Modification or Termination of Support**

The Board of Directors reserves the right to modify or terminate the amount of funds granted under the terms of the ASTRO Comparative Effectiveness Research Award Program. Generally, such action would be based on the awardees’ receipt of support from sources other than ASTRO, which might:

1) limit the ability of the winner to successfully complete the terms of the award or

2) obviate the awardees’ need for funding from ASTRO.

G. **Formal Recognition by the Society**

Formal announcements of the award and recognition for the winner and mentor(s) will be made at the Business Meeting held during the ASTRO Annual Meeting. Awardees will be invited to attend a grant winner breakfast in addition to being presented with a ribbon of achievement at the ASTRO Annual Meeting. Grant winners will also be displayed along with a listing of their abstract in the main registration hallway at the ASTRO Annual Meeting as well as featured in the ASTROnews and ASTROgram.

VII. **Award Contact**

**ASTRO Staff Contact**
Shannon Regan, Program Coordinator
American Society for Radiation Oncology (ASTRO)
ASTRO Residents/Fellows in Radiation Oncology Research Seed Grant
Email: research@astro.org