



2018 CALL FOR ABSTRACTS



64th Annual International Meeting
BRINGING SCIENCE TO THE CITY THAT WORKS
Historic Hilton Chicago

September 23-26, 2018



Bringing Science to The City That Works

Historic Hilton Chicago | September 23-26, 2018



The 64th Annual Meeting of the Radiation Research Society will be held at the Historic Hilton Chicago Hotel on September 23-26, 2018. The full day SIT Workshop will be held Saturday, September 22, 2018.

Members of the Program Committee have assembled an outstanding scientific program with exciting plenary speakers, stimulating 8AM topical review sessions, and two presidential symposiums that include speakers with research programs that use state-of-the-art techniques to make important advances in radiation research. Approximately 50% of the speakers for the oral sessions will come from top scoring abstracts. Therefore, I encourage you and your colleagues to submit an abstract of your most exciting science so that you can further enhance the quality of what promises to be an outstanding scientific program. Continuing this year will be the inclusion of CME credits for selected scientific sessions.

The hotel is fabulous, the program is world class, and Chicago is an easily accessible, fun destination. I look forward to seeing you at the upcoming annual meeting for an extraordinary meeting!

See you in Chicago,

David Kirsch, MD, PhD
Chair, RRS 2018 Program Committee

We are pleased to have the following plenary speakers in our 2018 program:



Tyler Jacks, PhD



Cristian Tomasetti, PhD



Sandra Demaria, MD



Harald Paganetti, PhD



Confirmed Speakers for the 2018 Annual Meeting

Plenary

Sandra Demaria, MD	Radiation and immunotherapy
Tyler Jacks, PhD	Modeling cancer in the mouse
Harald Paganetti, PhD	Proton radiation therapy
Cristian Tomasetti, PhD	Variations in cancer risk

Presidential Symposium 1: Future radiobiology for advanced radiotherapies

Michael Baumann, MD	Determining and targeting radioresistance
Soren Bentzen, MSc, PhD, DMSc	Precision radiation medicine: spatio-temporal tailoring of radiotherapy to patients
Marco Durante, PhD	Future ion beam radiobiology
Dorthe Schaeue, MRes, PhD	Future radiobiology for leveraging the immune response

Presidential Symposium 2: p53 in radiation response and tumor suppression

Laura Attardi, PhD	Deconstructing p53 pathways in tumor suppression
Allan Balmain, PhD, FRS	Impact of environmental agents on mutation signatures in tumor genomes
Andrei Gudkov, PhD, DSci	Paradoxes and puzzles of DNA damage response in vivo
Michael Kastan, MD, PhD	p53 and DNA damage— has it really been over 25 years?

Topical Reviews

Christopher Bakkenist, PhD	DNA damage signaling to immune checkpoints
Marjan Boerma, PhD	Recent clinical and experimental insight into radiation-induced heart disease
David Brenner, PhD	Cancer risk among survivors of the atomic bomb and exposure for medical imaging
Timothy Chan, MD, PhD	The evolving landscape of immunotherapy biomarkers
Polly Chang, PhD	Noncarcinogenic effects of space radiation
Joseph Deasy, PhD	Information-driven radiotherapy: integrating data with radiobiology to understand outcomes
James DeGregori, PhD	Radiation carcinogenesis through alterations in adaptive landscapes
Scott Floyd, MD, PhD	Chromatin dynamics: the landscape for response to DNA damage
Piero Fossati, PhD	The rationale, physics and radiobiology of carbon ion radiation therapy
Gianluca Lattanzi, PhD	Computational biophysics: tools and challenges in radiation biophysics
James Lederer, PhD	Radiation injuries to the immune system
Walter Tinganelli, PhD	Hibernation and radiation effects
Gayle Woloschak, PhD	Nanoparticles for cancer imaging and therapy
Claudia Wiese, PhD	Transitioning to scientific independence
David Yu, MD PhD	Transitioning to scientific independence
Elaine Zeman, PhD	Biology didactics for radiation oncology residents: past, present, and future

Symposium

Mohamed Abazeed, MD, PhD	The associations between the cancer genome and ionizing radiation
Rebecca Abergel, PhD	Exploiting oncometabolites for selective tumor radiosensitization
Ranjit Bindra, MD, PhD	The history of Michael Fry and the Radiation Research Society
Eleanor Blakely, PhD	Michael Fry and radiation epidemiology: of mice and men
John Boice, PhD	Niche—derived mitigation of acute radiation sickness
Marta Bueno, PhD	Associating DNA repair deficiency to radiation-induced cancer and genetic factors of mice/men
John Chute, MD	Clinical outcomes for patients treated with proton radiation therapy
Sylvain Costes, PhD	Analysis of circulating tumor DNA for detection of molecular residual disease after radiotherapy
Thomas Delaney, MD	
Max Diehn, MD, PhD	



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Piero Fossati	Clinical outcomes following carbon ion radiotherapy
Don Fox, MD	Acentric DNA segregation during mitosis promotes radiation resistance
Thomas Helleday, PhD	Targeting DNA repair to improve radiotherapy
Maria Jasin, PhD	Protecting the genome by homologous recombination
Tadashi Kamada, MD, PhD	PSMA-targeted radiopharmaceutical therapy for prostate cancer
Ana Ponce Kiess, MD, PhD	Identifying metabolic dependencies in pancreatic cancer
Alec Kimmelman, MD, PhD	Impact of intestinal and cervical microbiome on radiation response in cervical cancer
Ann Klopp, MD, PhD	ROS metabolism in the ER as a novel cancer target
Marianne Koritzinsky, PhD	Targeting the UPR and ISR to improve response to radiotherapy
Constantinos Koumenis, PhD	Mentorship, basic science and radiation protection: lessons from the Drs. Fry
Amy Kronenberg, PhD	Radiation effects on salivary gland epithelial stem/progenitors
Quynh-Thu Le, PhD	Cancer imaging biomarkers to guide targeted cancer therapy
Isabelle Lombaert, PhD	FLASH radiation therapy—path to increase the therapeutic ratio?
David Mankoff, MD, PhD	Molecular determinants of response and resistance to radiation and immune checkpoint blockade
Peter Maxim, PhD, MSc	The combination of DNA damage response inhibitors with radiation
Andy Minn, MD, PhD	Genomic analysis of tumor response to DNA damaging therapies
Meredith Morgan, PhD	Dosimetry for advanced small animal radiation therapy: what's achievable?
Kent Mouw, MD, PhD	Mitigation of the hematopoietic acute radiation syndrome using murine models
Mark Oldham, PhD	Post-translational chromatin modifications: the therapeutic potential
Christie Orschell, PhD	Small animal image-guided proton irradiation: the SIRMIO project
Tej Pandita, PhD	Cherenkov and scintillation imaging in radiotherapy for quantitative dosimetry and molecular sensing
Katia Parodi, PhD	Reorganizing chromatin during DSB repair
Brian Pogue, PhD, MSc	Adrenergic stress and the SNS regular anti-tumor immunity and the sensitivity of tumors to ionizing radiation
Brendan Price, PhD	A framework for genomic precision radiation therapy
Elizabeth Repasky, PhD	Radiogenomics: Identification of genomic biomarkers predictive of outcomes following exposure to radiation
Javier Torres-Roca, MD	Radiation-induced apoptosis in healthy tissues and cancers
Barry Rosenstein, MD, PhD	TOPAS-nBio - a platform combining track structure Monte Carlo simulations with biological effect modeling
Kristopher Sarosiek, PhD	Clinical and preclinical evidence supporting metabolic therapy in cervical cancer
Jan Schuemann, PhD	Optimising radiotherapy fractionation - from clinical trials to molecular mechanisms
Julie Schwarz, MD, PhD	Normal tissue radioprotectors to enable ablative radiation in the abdomen
Navita Somaiah, MSSB, MD	Radiation biology studies with a small animal irradiator
Cullen Taniguchi, MD, PhD	Molecular carcinogenesis studies with mouse models
Phuoc Tran, MD, PhD	Flash-RT preserves normal tissue and enhances differential response: from pre clinical experiments to clinical applications
Robert Ullrich, PhD	Circulating tumor cells as a biomarker for radiation treatment response and tumor surveillance
Marie Catherine Vozenin, PhD	Approaches to understanding space radiation cancer risks
Andrew Wang, PhD	Clinical outcomes of immunotherapy plus XRT for NSCLC and SCLC
Mike Weil, PhD	Mechanisms of radiation-induced bystander effects
James W. Welsh, MD	Translational radiation and immunotherapy clinical trials
Ding Xue, PhD	Protection against radiation-induced intestinal injury, a matter of p53
Kristina Young, MD, PhD	Senescent cells are new targets for cancer and radiation-induced late effects
Jian Yu, PhD	
Daohong Zhou, PhD	



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RRS 2018 Call for Scientific Abstracts

ABSTRACT SUBMISSION

Approximately 50% of oral session speaking slots will be selected from top scoring abstracts. All abstracts must be submitted online using the Oasis submission site. Directions will be sent via email or visit the RRS home page (www.radres.org) for details. To avoid delays, prepare your abstract offline and save it as a text, Word, or WordPerfect (.txt., .doc, or .wpd) file before starting. The abstract size is limited to 2,000 characters (not including spaces). Be sure your abstract is accurate before you complete the submission and retain the control number you receive upon completion.

NEW PROCESS FOR 2018:

- For your convenience, you will be able to submit your abstract without the added step of obtaining an RRS Member to act as your sponsor
- During the process, you will be asked if you are submitting to “**Poster Session Only**” or if you would like to be considered for an “**Oral Presentation**” spot. You will have the opportunity to select the category that is most relevant to your work. ***If you have submitted an abstract to be considered for “Oral Presentation”, please do not submit a duplicate abstract to the “Poster Only” category. Please be assured that your abstract will still be considered for a poster even if you are not selected for an oral presentation at the 2018 Annual Meeting.***
- Reminders:
Your membership must be up to date for 2018
Only one poster will be allowed to be presented per poster category
The presenting author must be registered for the meeting by July 20, 2018

REGISTRATION & HOTEL

The RRS 2018 Annual Meeting will be held at the Historic Hilton Chicago in Chicago, Illinois. All presenters at the RRS 2018 meeting are expected to register for the meeting. Meeting registration and hotel reservations will be accepted online starting in early-March. All hotel reservations must be made through the RadRes meeting registration site: www.radres.org/Chicago2018. Do not call the hotel directly.

Important Dates

March 8, 2018

Submission Site Opens
(*Scientific, SIT, ECI*)

March 8, 2018

Registration Opens

April 23, 2018

Submission Site Closes
(*Scientific, SIT, ECI*)

May 22, 2018

Travel Award Notification

July 20, 2018

Deadline for Poster Presenters
to Register for Meeting





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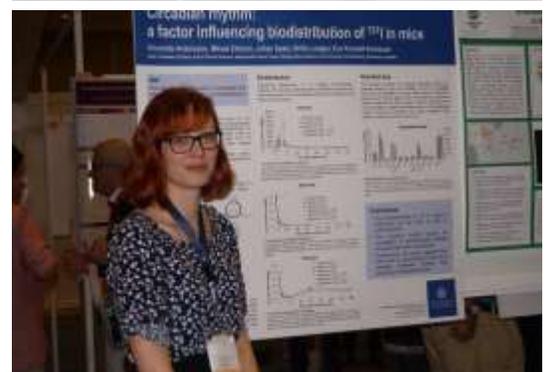
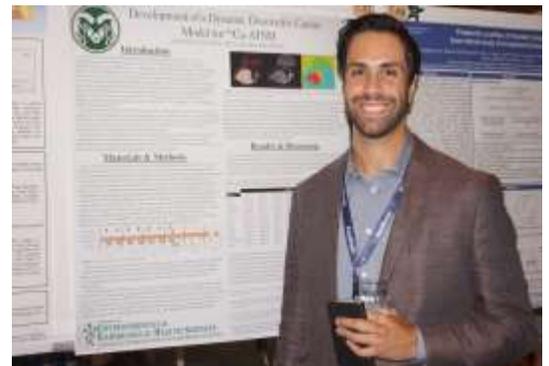
ORAL SUBMISSION CATEGORIES

Top scoring abstracts will be selected for the following planned oral sessions within topics ranging from mechanisms and modulators of cell, normal tissue and tumor effects of radiation, radiation physics and chemistry to clinical trials of radiation therapy:

Radiation-Induced GI Syndrome
Radiation Dosimetry: In Patients and Phantoms
Mechanisms of Cell Death after Radiation
Hypofractionation: From Pre-clinical Models to Clinical Trials
Genomics of Normal Tissue Toxicity and Tumor Response to Radiation
Hypoxia and ER Stress
Imaging and Circulating Biomarkers of Radiation Response
Radionuclides for Imaging, Therapy, and Dosimetry
Chromatin Biology and Radiation Response
Space Radiation and Cancer Risk (Joint Session, CRH)
Pre-clinical Mechanisms of Radiation and Immunotherapy
Dose Rate and Radiation Toxicity
Reactive Oxygen Species, Redox and Metabolism
Track Structure and Monte Carlo Modeling of Biological Effects
Radiation Biology of Model Organisms: Flies, Worms, and Fish
DNA Damage Response and DNA Repair
Clinical Trials of Radiation Therapy and Immunotherapy (ASTRO Co-Sponsor)
Radiomics, Radiogenomics, and Artificial Intelligence
Medical Countermeasures of Radiation (Mitigators)
Stem Cells and Radiation Toxicity
Microbiome and Radiation Response: Pre-Clinical Studies to Clinical Trials
Radiation Modifiers (Protectors and Sensitizers)
Proton and Carbon Ion Radiotherapy
Small Animal Irradiation

****Poster Size for 2018****

4' (width) x 4' (height)
(48" x 48" / 1.21m x 1.21m)



ABSTRACT CONTENT AND FORMAT

All presentations must be scientific in nature and without inclusion of commercial messages or inappropriate references to specific products, services, or commercial concerns. The title should be in lowercase letters with only the first word capitalized unless it is normally capitalized.

EXAMPLE: Temperature dependence of ionizing radiation effect on dry preparations of bacterial DNA. The body of the abstract should be single-spaced. Tables, graphs, and structural formulae may not be included, although simple mathematical formulae are acceptable.

PRESENTATION

Poster dimensions are limited to 48" (width) x 48" (height) (1.21m x 1.21m or 4' x 4'). Each poster should include a heading with title and author (s) using lettering at least 22mm (1") high. The abstract should be part of the poster presentation. The legible print should be viewable from 1 meter away. Therefore, lettering should be heavy and at least 10mm (3/8") high.

PROGRAM AND ABSTRACTS

The Program Book will be distributed on-site to meeting registrants and an Abstract PDF will be emailed to registered attendees approximately 2-weeks prior to the meeting. In addition, content will be available via the meeting website and mobile app for the 2018 conference.



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Scholars-in-Training (SIT)

SIT TRAVEL AWARD APPLICATION

Applications for the SIT Travel Awards shall be completed online at the time the abstract is submitted. Both the applicant's faculty sponsor and the institution's department chair must make an affirmation when applying online. To avoid any delays in submission, prepare a brief resume (2-page limit) offline and save it as a text, Word, or WordPerfect (.txt, .doc, or .wpd) file before starting your online application. The resume should describe you:

1. Educational background (include degree & dates– MM/YY)
2. Honors and relevant experience
3. Description of current training program and objectives, including a description of how the program relates to the radiation sciences
4. List of relevant publications

SIT TRAVEL AWARD CRITERIA

RRS shall provide travel awards of up to \$800 (depending on the availability of funds), which is inclusive and designed to offset travel and registration fees, and additional amounts for Merit Awards to encourage the participation of SITs at the meeting and to recognize the quality of their scientific submissions. Your travel award will be available to you onsite at the annual meeting during the designated pick-up hours (posted at the meeting). Selection of SIT Travel Award recipients shall be based upon an evaluation of their abstracts and travel award application. The criteria for consideration are:

1. A person may apply for a SIT Travel Award, regardless of current degree, as long as he/she is working toward a higher degree (e.g. PhD, MD, and DVM) or is in a post-graduate training program (post-doctoral, research associate etc.)
2. The online application must be completed and affirmed by both the faculty sponsor and the institution's department chair.
3. The applicant must submit an abstract via online submission by the April 23, 2018 deadline.
4. Each applicant must be an RRS member or have a membership application pending.
5. The SIT applicant may be awarded travel support for only 3 (calendar) years and no more.

SIT WORKSHOP

The RRS is pleased to announce, for the ninth year, a special one-day education workshop for Scholars-in-Training (SIT) members will be held on Saturday, September 22, 2018, which is one day prior to the start of the RRS Meeting. The aim of the radiobiology education workshop is to provide young scientists, post-doctoral fellows, and graduate students with a fundamental knowledge of radiobiological principles and an in-depth understanding of current issues in the field of translational research. This program has been established through generous grants from the National Institute of Allergy and Infectious Diseases (NIAID) and the National Aeronautics and Space Administration (NASA). SIT members accepted for this workshop will therefore be able to attend at little extra cost.

Important Dates

March 8, 2018

Submission Site Opens
(*Scientific, SIT, ECI*)

April 23, 2018

Travel Award Application
Deadline

May 22, 2018

Travel Award Notification

June 11, 2018

Deadline to Accept/Decline
Travel Award

July 20, 2018

Deadline for Poster Presenters
to Register for Meeting



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Early Career Investigator (ECI)

ECI TRAVEL AWARD APPLICATION

The RRS-ECI Committee will be offering travel awards to top scoring abstracts. You must be a Full or Sponsored Faculty Member of RRS, in good standing, to apply for an award. If you are not currently a Full or Sponsored Faculty member of RRS, please contact audrey@radres.org for assistance or join online at radres.org. To avoid any delays in submission, you must be a Full or Sponsored Faculty Member of RRS (not SIT or Associate), prepare a brief resume (2 page limit) offline and save it as a Word or Word Perfect (.txt, .doc, or .wpd) file before starting your online application. You should be prepared to address the following questions:

- Year you obtained your highest degree.
- Do you have an independent lab?
- When you started your own lab/group (independent of post-doc mentor).
- Identify independent funding intramural and extramural.
- Do you have staff that report to you? If so how many members in your group?
- Briefly, include your main areas of research.
- Please provide name and contact information for reference.

ECI TRAVEL AWARD CRITERIA

RRS shall provide travel awards of up to \$800 (depending on availability of funds), which is inclusive and designed to offset travel and registration fees. Your travel award will be available to you onsite at the annual meeting during designated pick-up hours (posted at the meeting). ECIs are also granted the opportunity, if selected, to speak or chair at the annual meeting.

Selection of ECI Travel Award recipients shall be based on an evaluation of their funding needs as identified in your application and quality of your abstract. The criteria for consideration are:

- Applicant must be a full RRS Member in good standing or have membership pending.
- ECI application must be completed and approved by the ECI Committee Leader.
- The ECI applicant must submit an abstract via online submission by April 23, 2018.

Further educational and career events are available to ECIs throughout the meeting.

Important Dates

March 8, 2018

Submission Site Opens
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April 23, 2018

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Continuing Education Credits

ACCREDITATION STATEMENT AND INFORMATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Medical Education (ACCME) through the joint relationship of the AMECDO and the Radiation Research Society (RRS). AMECDO is accredited by the ACCME to provide continuing medical education for physicians.

Faculty Disclosure:

In accordance with the ACCME guidelines, RRS requires all faculty speakers to disclose all commercial relationships relative to the content of this CME activity. Individual faculty disclosure will be provided in the course syllabus for the General Session. All presentations will be peer reviewed for fair balance and evidence based medicine.

CEU FOR SIT MEMBERS

If you are a SIT Member attending the SIT Workshop and/or the RRS Annual Meeting, we are once again happy to report that the American Academy of Health Physics (AAHP) will be assigning continuing education credits for both activities. The specific amount of credits and the ID numbers will be available in the coming months. If this is something that would be beneficial to you and you would like additional information, please contact Audrey Rinehart, audrey@radres.org.

