

# Vice-President-Elect

## Susan Bailey

### Place of Birth:

Los Alamos, NM

### Current Position:

Professor

### Department/Institution:

Department of Environmental & Radiological Health Sciences/Colorado State University

### Educational Background:

- PhD Biomedical Sciences: University of New Mexico School of Medicine, Albuquerque, NM
- MS Biomedical Sciences: University of New Mexico School of Medicine, Albuquerque, NM
- BS Biological Sciences: Colorado State University, Fort Collins, CO

### Professional Experience:

- 2001-present: Assistant/Associate/Full Professor, Department of Environmental & Radiological Health Sciences, Colorado State University, Fort Collins, CO
- 1988-2001: Biochemical Technician VI, Los Alamos National Laboratory, Los Alamos, NM
- 1976-1979: Radiation Biology Technician, Department of Radiological Health Sciences, Colorado State University, Fort Collins, CO

### Fellowships & Honors:

- 2015-present: Councilor-at-large, RRS representative; International Association for Radiation Research
- 2012-2016: Patents pending and issued; KromaTiD, Inc.
- 2012-2015: Councilor-at-large; Radiation Research Society
- 2007: Michael Fry Research Award; Radiation Research Society

### Society Memberships:

- 2016-present: Member, National Academies of Sciences, Engineering, and Medicine Committee to



review NASA's Evidence Reports on Human Health Risks

- 2015-present: Chair, Radiation Research Society, Nominations Committee
- 2013-present: Member, University of Colorado Charles c. Gates Center for Stem Cell Biology
- 2010-present: Member, Radiation Research Society, Nominations Committee
- 2007-present: Faculty Affiliate, Colorado State University Center on Aging
- 2004-present: Member, Colorado State University Flint Animal Cancer Center
- 2004-present: Member, University of Colorado Cancer Center
- 1993-present: Member, Radiation Research Society
- 2008-2015: Member, US EPA Scientific Advisory Board, Radiation Advisory Committee
- 2002-2015: Member, American Association for Cancer Research
- 2005-2008: Member, Scientific Advisory Board, Colorado Cancer League

### Journal Editorships:

- 2010-present: Associate Editor, Radiation Research Journal
- 2006-2015: Editorial Board Member, Mutagenesis Journal
- 2011-2013: Editorial Board/Topics Editor,

# Vice-President-Elect

## Susan Bailey, Continued

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Frontiers in Cancer Molecular Targets and  
Therapeutics

### **Current Interests:**

Telomeres in space! We are currently assessing telomere length dynamics (i.e., changes in telomere length and telomerase activity with time) in twin and unrelated astronauts spending ~6 months to one year aboard the International Space Station. Our overall goal being to test the hypothesis that telomere length dynamics represent a particularly relevant biomarker of risk for the astronauts, as it reflects the combined exposures and experiences encountered during space flight. That is, exposures to galactic cosmic rays, an individual's genetic susceptibilities, as well as the unique lifestyle factors and stressors encountered (e.g., nutritional, psychological, physical), are all captured as changes in telomere length. Importantly, telomere length is emerging as a robust biomarker of aging and age-related degenerative pathologies, ranging from reduced immune function and dementia, to cardiovascular disease and cancer. Our studies are – for the first time – demonstrating changes in human telomere dynamics associated with space flight, thereby supporting telomeres as informative and integrative biomarkers that encompass the radiobiological response.

### **Vision Statement:**

The Radiation Sciences program at Colorado State University has been central to my own training and on-going professional pursuits. I view the urgency and critical importance of training the next generation of radiation scientists as a top priority. I will promote what I like to think of as r-STEM – radiation sciences, technology, education and medicine. I will make every effort to support and strengthen the RRS Scholars in Training and Early Career Investigators programs, as well as basic research funding opportunities; the future of our disciplines – and of our Society – depends on it.

# Councilor of Physics

## Jan Schuemann

### Place of Birth:

Hamburg, Germany

### Current Position:

Assistant Professor

### Department/Institution:

Radiation Oncology/Massachusetts General Hospital/  
Harvard Medical School

### Educational Background:

- 2005 Thesis title: Rare B meson decays with an  $\eta'$  in the final state
- 2000- PhD student at National Taiwan University, Taipei
- 2000 degree at the University of Hamburg, Title: Inelastic  $J/\psi$ -Photoproduction at HERA and the Color Evaporation Model (at H1, DESY, Germany)
- 1998 Research Topic: Applications of knot theory to quantum gravity
- 1997 – Visiting student at the University of Calgary
- 1994- Physics student at the University of Hamburg, Germany, Diplom (master's)

### Professional Experience:

- 2012 School, Topic: Creating an easy to use Tool for Particle Simulations for medical physics and particle therapy
- 2010- Research Fellow, Massachusetts General Hospital and Harvard Medical
- 2010 Universe, Tokyo University, Japan, Topic: Upgrading the Super-Kamiokande neutrino detector
- 2008- Project Researcher at the Institute for the Physics and Mathematics of the
- 2008 and Feodor Lynen Research Fellow (Alexander v. Humboldt Foundation) at Belle, KEK, Japan, related work: DAQ expert,  $B \rightarrow$  hadron hadron analysis
- 2006- Research-Fellow of the Japanese Society for the Promotion of Science (JSPS)
- 2005- Postdoctorate position at the National United University, Taiwan



### Teaching Experience:

- 2014 Lecturer, Medical Physics of Proton Radiation Therapy course, MIT/HST course, MIT, Boston, USA
- 2012,14,16 Guest lecturer, Radiation Biophysics, MIT/HST course, MIT, Boston, USA
- 2011-2014 Organizer of Journal Club, MGH Physics Division, Boston, USA
- 2006-2008 Co-coordinator of B to hh analysis meeting, Belle, KEK, Japan
- 1997-1998 Physics 101 Lab (masters' students), University of Calgary, Canada

### Fellowships & Honors:

- 2016 2x Early Career Investigator Conference Award from the Radiation Research Society
- 2015 Best of Physics and Best of ASTRO
- 2014 Best of Physics and Best of ASTRO and ASTRO Travel Grant for the ASTRO annual meeting
- 2013 Best Poster Prize in the category of Physics, 52nd Annual Conference of the Particle Therapy Co-Operative Group (PTCOG)
- 2006-2008: Fellowship from the Japanese Society for the Promotion of Science (JSPS), Japan, and Feodor Lynen research fellowship from the A. v. Humboldt Foundation, Germany
- 2005 Ministry of Education Scholarship for outstanding Foreign Students, Taiwan
- 2000-2003: Scholarship of the Deutscher Akademischer Austauschdienst (DAAD, German academic exchange) for outstanding German

# Councilor of Physics

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## Jan Schuemann, Continued

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students, Germany

- 1996-2000 Scholarship of the Friedrich Ebert Foundation (FES) for outstanding and socially active individuals, Germany
- 1995 Winner of the “Jugend forscht” (Youth Research) competition, Hamburg, Germany, Topic: Strange planetoid orbits in double star systems

### Society Memberships:

- 1995-1997: Member of the physics student representative association
- since 2003: Member, Deutsche Physikalische Gesellschaft
- since 2010: Member, American Society of Medical Physics
- since 2011: Organizer of the Departmental Journal Club
- 2012 Co-Chair Massachusetts General Hospital Postdoc Association (MGPA)
- since 2012: Member of Radiation Research Society (RRS)
- since 2016: Member of the Finance Committee and the Program Committee (RRS)
- since 2017: Member of the Early Career Investigator Interest Group (RRS)

### Journal Editorships:

- since 2011: Physics in Medicine and Biology journal
- since 2012: Medical Physics journal
- since 2013: Journal of Radiation Research and the Journal of Applied Clinical Medical Physics
- since 2014: International Journal of Radiation Oncology\*Biography\*Physics, Radiation Physics and Chemistry and Biomedical Journal
- since 2015: International Journal of Particle Therapy, Current Topics in Medicinal Chemistry, Nano-Micro Letters, Transactions on Nuclear Science
- since 2016: Radiation Research, Scientific Reports
- since 2017: PLOS ONE and the Journal of Biophotonics

### Current Interests:

Having worked in particle physics since my diploma

thesis in 1998, I have been rooted in the studies of the principle interactions of particles and Monte Carlo simulations. In 2010 I joined radiation research as one of the core developers of the TOPAS (Tool for Particle Simulations) Monte Carlo toolkit, an application making Monte Carlo simulations easy-to-use specifically for the radiation/medical physics community.

In 2011, I took part in lectures on radiobiology at MGH. The course convinced me that conjoining our efforts across the disciplines would offer a greater chance at curing cancer. Since then I am working to combine Monte Carlo simulations (physics) with the fundamental processes in radiation chemistry and biology to gradually advance our understanding of radiation response from the bottom up, and understand the underlying cell response processes at a nanometer scale. To advance this goal, I have formed a collaboration to develop TOPAS-nBio, a nanometer scale extension of TOPAS for radiobiology. My vision is to eventually develop a fully mechanistic radiation response model starting from the initial cell/DNA damage to cell and organ effects.

In my current studies, I employ the Monte Carlo method to estimate treatment-site specific range uncertainties and to understand the macroscopic biological effects of radiation using RBE models to improve clinical outcome. At the nanometer scale, I combine the Monte Carlo method with biological models to investigate effects of track structures of different irradiation modalities on biological endpoints and the potential of (gold) nanoparticles for radiosensitization

### Vision Statement:

Our Society provides a unique opportunity to bring studies from physics, chemistry and biology together with clinical research and practice. Our annual meeting provides an inclusive platform for scientists from all fields to meet and mingle. I believe we can make the greatest advances by combining efforts from across our disciplines.

The first RRS meeting I attended impressed me with the quality of the presented work and how simple it

# Councilor of Physics

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## Jan Schuemann, Continued

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was to find colleagues that relate to my work, albeit from a different field. However, this eye-opening experience also overwhelmed me with the quantity of unfamiliar information and new topics. My goal as Physics-Councilor would be to extend the enthusiasm I experienced during that first meeting, while facilitating participants to break more smoothly into unfamiliar topics. I aim to broaden the teaching/training opportunities to introduce participants to new topics. One of the missions of the RRS is the education of its members through the provision of an overview of the entirety of research under its umbrella, from basic sciences to translational research, from physics to biology. As Physics-Councilor I aim to be an advocate for cross-disciplinary research and the involvement of physics in (biological) experiment design and analysis. I will uphold the society's converging tradition, and organize more interdisciplinary sessions and workshops, both at our annual meeting as well as external meetings held by RRS-endorsed organizations. I further intend to continue the recent efforts by our society to encourage SIT/ECI involvement and support young investigators. This includes organizing sessions specifically designed to address the need of new investigators, promoting speaker selections from the SIT/ECI pool, and continue the educational functions of our society, in particular for SITs and ECIs.

# Councilor of Medicine

## Julie Schwarz

### Place of Birth:

Lafayette, Louisiana

### Current Position:

Associate Professor

### Department/Institution:

Radiation Oncology/ Washington University School of Medicine

### Educational Background:

- BS in Biology: Duke University
- MD: Washington University
- PhD: Washington University

### Professional Experience:

- 2016-present: Cancer Biology Division Director, Department of Radiation Oncology, Washington University School of Medicine, St. Louis, MO
- 2015-present: Associate Professor with tenure, Department of Radiation Oncology, Washington University School of Medicine, St. Louis, MO
- 2009-2015: Assistant Professor, Department of Radiation Oncology, Washington University School of Medicine, St. Louis, MO

### Fellowships & Honors:

- Michael J. Fry Research Award, Radiation Research Society 2012
- Roentgen Research Award, Radiological Society of North America 2008
- Alpha Omega Alpha 2008
- National Cancer Care Network Fellow 2008
- Resident Basic Science Research Award, American Society for Radiation Oncology 2007
- Leonard B. Holman Research Pathway, American Board of Radiology 2006
- *Magna cum laude*, Duke University 1995

### Society Memberships:

- 2012-Present: Member, Barnes Jewish Hospital Cancer Committee
- 2011-Present: Member, Division of Biology and Biomedical Sciences



- 2016 GCIG Translational Research Section
- 2016 NCI/NIH Radiation Therapy and Biology Study Section
- 2016 Radiation Research Executive Council
- 2015 AACR Radiation Oncology Think Tank
- 2010-2015: Member, Committee on Admissions, Washington University School of Medicine
- 2014 ASTRO Community of Radiation Oncology Physician Scientists (Mentor)
- 2014 ASTRO/NCI Radiobiology Consensus Workshop
- 2014 The Cancer Genome Atlas- Cervical Cancer Working Group

### Journal Editorships:

- 2008-Present: Journal reviewer, Journal of Nuclear Medicine
- 2009-Present: Journal reviewer, International Journal of Radiation Oncology, Biology and Physics
- 2011-Present: Journal reviewer, International Journal of Gynecologic Cancer
- 2012-Present: Abstract reviewer, American Brachytherapy Society
- 2013-Present: Abstract Reviewer, ASTRO Annual Meeting
- 2014-Present: Grant Reviewer American Cancer Society Institutional Research Grants
- 2015-Present: Journal Reviewer, Clinical Cancer Research
- 2013 Grant Reviewer/Study Section Panelist, DOD/

# Councilor of Medicine

## Julie Schwarz, Continued

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CDRMP BCRP, IDX Award

### **Current Interests:**

My current interests are functional imaging strategies, biomarker development, brachytherapy, glucose metabolism and radiation resistance, and obesity and radiation therapy outcomes.

### **Vision Statement:**

I have benefited tremendously as a scientist from interactions within the Radiation Research Society, which began as a recipient of the Michael Fry Award in 2012. Since that time, I have been overwhelmed by the generosity of the RRS membership, many of whom have volunteered their time as mentors, scientific collaborators and now friends.

As Councilor of Medicine, I hope to pay this forward by increasing membership and meeting participation amongst physician-scientists in radiation oncology, particularly young faculty. These efforts will bring cutting edge basic science observations closer to clinic. Through these interactions, the RRS will have a leading role in promoting hypothesis-driven, rational design in clinical trial development that can directly impact patients receiving radiation therapy.

On the flip side, clinical expertise in radiation oncology can be used to identify unmet needs for future research programs. These unmet needs include but are not limited to 1) using functional imaging to accurately identify tumor targets; 2) identifying and validating biomarkers of radiation therapy resistance in solid tumors; 3) optimizing dose, fractionation and radiation modality for radiation-resistant tumors; 4) generating high quality preclinical data to support the incorporation of biologics into standard-of-care chemo-radiation schedules; and 5) defining mechanisms and optimizing treatment regimens to decrease normal tissue radiation-associated toxicities.

I had the privilege to serve RRS on the Finance Committee and in an interim role on the RRS Council this year, where I worked to generate meeting support and to develop a Spring Workshop focused on tumor metabolism for 2018. I would be delighted to continue serving RRS as Councilor of Medicine.

# Councilor of Chemistry

## Amitava Adhikary

### Place of Birth:

Kolkata, West Bengal, India

### Current Position:

Research Assistant Professor

### Department/Institution:

Chemistry/Oakland University

### Educational Background:

- B.Sc. with Honors in Chemistry, Burdwan University, West Bengal, India (1988)
- M.Sc. in Chemistry with specialization in Physical Chemistry, Burdwan University, West Bengal, India (1990)
- Post M.Sc. in Biosciences, Saha Institute of Nuclear Physics, Kolkata, West Bengal India (1991).
- Ph.D. in Chemistry, University of Delhi, Delhi, India (1998), on "Theoretical and experimental studies on protection against DNA-strand breaks by minor-groove ligands in aqueous solution."

### Professional Experience:

- 2014-present: Research Assistant Professor, Department of Chemistry, Oakland University
- 2009-2014: Departmental Research Associate, Department of Chemistry, Oakland University
- 2004-2009: Post-Doctoral Research Associate, Department of Chemistry, Oakland University
- 2003: Visiting Fellow, Physikalisch-Chemisches Institut, Universität Heidelberg, Germany
- 2002: DAAD Fellow (Invited), Physikalisch-Chemisches Institut, Universität Heidelberg, Heidelberg, Germany
- 2000-2004: Assistant Professor (tenured), Department of Chemistry, Rajdhani College, University of Delhi, Delhi, India
- 1999-2000: Research Associate, Department of Chemistry, University of Delhi, Delhi, India
- 1999: DAAD Fellow (short-term), Max-Planck-Institut für Strahlenchemie, Mülheim an der Ruhr, Germany
- 1998: Assistant Professor (Ad-hoc), Department of Chemistry, University of Delhi, Delhi, India



### Fellowships & Honors:

- SIT (Scholar-in-Training) Travel Award to 59th Annual Radiation Research Society Meeting-2013.
- Financial assistance from the Chair, to attend and present the research findings at the 13th International Workshop on Radiation Damage to DNA, MIT, Boston, USA, 2014.
- Financial assistance from the Chair, to attend and present the research findings at the Gordon Research Conference of Radiation Chemistry at Proctor Academy, Andover, USA- 2014.
- Financial assistance from the Chair, to attend and present the research findings at the 14th International Workshop on Radiation Damage to DNA, Melbourne, Australia- 2016.
- Best poster presentation prize along with cash prize in TSRP-'94 (Trombay Symposium on Radiation and Photochemistry) held at Bhabha Atomic Research Center, Bombay, India- 1994.
- YIPP (Young Investigators' Preferred Paper) award in Radiobiology –2000 organized by Indian Society of Radiation Biology (ISRB) in Trivandrum, India- 2000.
- Received Marie Curie Award and delivered Marie Curie Award Lecture in the 13th International Congress of Radiation Research, San Francisco, USA- 2007.



# Councilor of Chemistry

## Amitava Adhikary, Continued

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### Society Memberships:

- Radiation Research Society
- Indian Photobiology Society (LM-129)
- Indian Biophysical Society (No. 442)
- Indian Society of Radiation Biology

### Radiation Research Committee Memberships:

- SIT committee (9th October 2007 – 1st September 2011)
- Ad-hoc committee of Government relations
- Constitutions and by-laws committee (October 2007 – December 2009)
- Finance committee (2010 – 2012)
- Website committee (2012 – 2014)

### Journal Editorships:

- Lead guest editor of the Clemens von Sonntag memorial issue of International Journal of Radiation Biology, vol 90, no 6. (June, 2014), pp 415 – 511.
- Member of the Editorial Board of Interdisciplinary J Chemistry.

### Current Interests:

Research Interest in the field of DNA-radiation chemistry: The principal biological effect of radiation on a cell is caused by the direct interaction of radiation with DNA and by the indirect action i.e., via interaction with water molecules immediately surrounding the DNA to produce OH-radicals, H-atom and  $e_{aq}^-$  which react with DNA. These pathways generate short-lived, primary and secondary DNA-radicals. These free radical reactions ultimately terminate in stable diamagnetic damage in the DNA. By using chemical radio-modifiers, one can, of course, increase or decrease the yields of these DNA-radicals that are precursors of strand breaks. My research interests are the following:

- (a) Elucidation of the mechanistic pathways involved in direct interaction of radiation with DNA,
- (b) Formation of aminyl radical via radiation-induced pre-hydrated electron attachment to azido-DNA models and the reactions of these aminyl radicals,

(c) Elucidation of chemical mechanisms of protection by cerium nanoparticles against radiation-induced damage in DNA,

(d) Investigation of chemical mechanisms of protection by minor groove ligands (e.g., Hoechst 33258 and 33342) against radiation-induced damage in DNA.

### Vision Statement:

I became a Scholar-in-Training (SIT) member of the Radiation Research Society (RRS) in 2004. In 2005, I attended the 52nd Annual Meeting of RRS; it took place in Denver, Colorado; I was fascinated by the very friendly and open exchange of ideas as well as very insightful, thorough, and positive critique by the members. Most importantly, I was highly impressed to see the interdisciplinary nature of the meeting, and of the members. In October 2007, I was invited to join as a member of the SIT committee to represent the Physics and Chemistry Pillars. I served the SIT committee until 1st September, 2011. As an SIT committee member, I experienced the keen interest, and enthusiasm that a council member spends to educate the SIT members about the radiation research and also about the society. These made me realize that Radiation Research Society is the most suitable platform to showcase the richness of a truly interdisciplinary approach (Physics, Chemistry, Biology, Medicine, Engineers, IT) for improving the therapeutic potential of radiation in cancer therapy and for understanding and minimizing the deleterious effects of radiation.

If I am elected as a Councilor-Chemistry, I would perform the following duties:

- (a) Encourage RRS membership in chemistry: I will strive to encourage RRS memberships in chemistry by attracting new groups in chemistry. I will work with RRS to observe that a new member can avail themselves of the opportunities that the Society offers, especially within the venue of the annual meeting and also through publications in the Journal.
- (b) Representation of Chemistry in RRS meetings: I will work with the council to see that the chemistry pillar is adequately represented in the Annual

# Councilor of Chemistry

## Amitava Adhikary, Continued

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meetings of the society.

(c) Support participation of young members: I would encourage and support the participation of young members (undergraduate students, graduate students, and post-doctoral fellows) as they will maintain the vitality of RRS. I will interact with the senior members to find out mechanisms by which support to young members can be arranged. Furthermore, I will attend the poster sessions and the platform presentations to ask question, provide advice and share the enthusiasm of these younger investigators.

(d) Work as a Liaison between the members and the council: As a Councilor-Chemistry, I would interact with the members to know their opinions, their ideas to improve the Society, and find ways and means to serve the society even better. If I get elected, I would try my best to continue and insure the interdisciplinary and collaborative nature of the Society.

(e) Work to increase the visibility of the society: I find the continuing need to increase the visibility of the Society and the research of her members within other scientific communities. Therefore, I would work towards this objective through the invitation of those outside the radiation community to present or attend the meetings, and encourage members to present their research within other meeting venues. The Society is a unique gem in the research community, let us preserve it and make it known.

# Councilor of Biology

## Richard A. Britten

### Place of Birth:

Nocton, United Kingdom

### Current Position:

Professor of Radiation Oncology

### Department/Institution:

Radiation Oncology/Eastern Virginia Medical School

### Educational Background:

PhD in Radiotherapy at University of Leeds (UK)

### Professional Experience:

- 2007-present: Professor of Radiation Oncology at Eastern Virginia Medical School
- 2001- 2007: Associate Professor of Radiation Oncology at Eastern Virginia Medical School
- 1993-2001: Assistant Professor of Oncology at University of Alberta
- 1992- 1993: Instructor at MD Anderson Cancer Center
- 1987: CRC Clatterbridge Cyclotron Center- Research Fellow

### Fellowships & Honors:

- Excellence in Research Award, Eastern Virginia Medical School- 2013
- Junior Investigator at the International Conference on the Chemical Modifiers of Cancer Therapy- 1991
- J.K. Douglas Traveling Fellowship (Inagural) for National Cancer Institute- 1991
- J.K. Douglas Research Fellowship 1989-1992

### Society Memberships:

- Radiation Research Society

### Journal Editorships:

- Editorial Board- Radiation Research Oncology Reports

### Current Interests:

My 30 year career in radiation biology, has been quite varied but the one consistent factor has been



an emphasis on particle radiation (fast neutrons, protons, Galactic Cosmic Radiation).

### Vision Statement:

The RRS has been a great organization for me, and I believe it is doing a good job in promoting our field of research to government agencies and the public. I believe that the success of the RRS is entirely dependent upon the success of its members. While the RRS has started many initiatives aimed at helping students and junior investigators get started in the field, I believe that RRS can play a greater role in aiding its members to survive and thrive in these austere times for research.

Nearly 2/3 of my career, like that of many RRS members, has been spent in small institutes, where appropriate intellectual, financial and infra-structure support makes establishing and maintaining a competitive program difficult. Increasingly, grant funding success is dependent upon the submission of multi-faceted grant applications, incorporating multiple approaches, and thus often requiring multiple investigators. Finding colleagues with appropriate expertise can be difficult, especially for new investigators or people trying to switch the emphasis of their research program. Currently, this is often limited by the colleagues at the home institute or through personal friendship of RRS members. The annual RRS meetings can be a great venue to establishing new collaborations, but

# Councilor of Biology

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## Richard Britten, Continued

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the establishment of a searchable database of RRS members by expertise, would enable members to more readily find colleagues with the complimentary skills required for a grant application.

The RRS is renowned for its collegiality, and over the years colleagues have provided me with great advice that has allowed me to survive a few hard times, and to get several promotions. The obstacles facing members located in smaller institutes and programs are many and varied, and I would like to establish a "Survival Guide" for RRS members at smaller institutes, outlining colleagues' ideas on how to deal with the isolation and limited financial backing, to establishing external networks, how to survive lean times and how to maximize the chances of promotion.

I have benefitted greatly from being part of the RRS, and I believe it is now time for me to do my part in strengthening the RRS further by serving as a Councilor of Biology.

# Councilor-at-Large

## Rebecca Abergel

### Place of Birth:

France

### Current Position:

CSD Staff Scientist

### Department/Institution:

Heavy Element Chemistry Program, Heavy Element Research Laboratory/Lawrence Berkeley National Laboratory

### Educational Background:

- PhD in Bio-Inorganic Chemistry, University of California, Berkeley 2006
- BS with Honor in Chemistry- Ecole Normale Supérieure de Paris/Université Pierre & Marie Curie, Paris, France

### Professional Experience:

- 2010-present: Staff Scientist- Lawrence Berkeley National Laboratory
- 2009-2010: Project Scientist- Lawrence Berkeley National Laboratory
- 2008-2009: Research Specialist- University of California, Berkeley
- 2007-2008: Post-Doctoral Research Fellow- Laboratories of Prof. K. Raymond, UC Berkeley, and Prof. R. Strong, FHCRC, Seattle
- 2002-2006: Graduate Student Researcher- Laboratory of Prof. K. Raymond, UC Berkeley
- 2002 Research Assistant- Laboratory of Prof, J. Arnold, UC Berkeley

### Fellowships & Honors:

- Director's Award for Exceptional Scientific Achievement (2013), Lawrence Berkeley National Laboratory, USA
- Junior Faculty NCRP Award (2013), Radiation Research Society, USA
- Young Investigator Research Fellowship (2009-2010), Cooley's Anemia Foundation, USA
- European Commission Marie Curie Actions Scholarship (2004), European School of Haematology, France



- Université Pierre et Marie Curie Annual Fellowship (2002), French Conseil Régional d'Ile de France, France

### Society Memberships/Institutional Service:

- 2009-Present: Radiation Research Society
- 2003-present: Advance Photo Source
- 2004-present: American Chemical Society
- 2005-present: Stanford Synchrotron Radiation Laboratory
- 2011-present: Health Physics Society
- 2011-present: Society of Toxicology
- 2011-present: International Biometals Society
- 2011-present: U.S. Women in Nuclear Organization
- 2011-Present: LBNL Radioactive Drug Research Committee Chair
- 2010, 2012: LBNL Chemical Sciences Division Director Search Committees

### Journal Reviewing and Editorial Services:

- Pharmaceutical Development and Technology, Journal of Controlled Release, Pharmaceutical Research, Chemical Research in Toxicology, PLoS, Radiochimica Acta, Dalton Transactions, ISRN Thermodynamics, Hemoglobin, Inorganic Chemistry, Health Physics, International Journal of Radiation Biology, Expert Opinion on Drug Discover, Journal of the American Chemical Society, Actinides 2009 Conference

# Councilor-at-Large

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## Rebecca Abergel, Continued

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- International Journal of Radiation Biology Guest Editor (HEIR 2013 Special Issue)

### **Current Interests:**

My research program is dedicated to investigating the fundamental coordination chemistry and biochemistry of heavy metals and radionuclides, with therapeutic and environmental applications such as chelation, separation, and bioremediation of toxic metals released in industrial processes, engineering of antimicrobial strategies targeting metal-acquisition systems, and design of advanced alpha-immuno-theranostic agents. I lead a large collaborative effort on the development of new drug products for the treatment of populations contaminated with radionuclides. One of these products was granted an Investigational New Drug status from the U.S. Food and Drug Administration in 2014. In addition, I have been actively involved in the new Lawrence Berkeley National Laboratory Initiative for Resilient Communities, the radiological component of which was sparked by the aftermath of the 2011 Fukushima Daiichi accident. Finally, my recent work has largely focused on the design of new bioconjugation strategies for short-lived alpha and beta emitters, and the evaluation of the resulting constructs for cancer and microbial targeting.

### **Vision Statement:**

Joining the Radiation Research Society has drastically enlarged my vision of research. I have tremendously benefited from the inherent multidisciplinary nature of the society but also from the extraordinarily early support and mentoring from leaders of the society. My goal is to continue contributing to RRS from the chemistry side, with a unique perspective on ionizing radiation centered around internal contamination with radionuclides but also the use of new promising radionuclides for therapy and diagnostics. I believe, new opportunities will arise as we reinforce our relationships with the Health Physics and Nuclear Medicine communities. I am also dedicated to develop programs that will help support and develop early career researchers from diverse backgrounds.