CURRICULUM VITAE

DATE: January 2017

NAME: Roger W. Howell

PRESENT TITLE: Professor of Radiology
Chief, Division of Radiation Research

OFFICE ADDRESS: Department of Radiology
New Jersey Medical School
Rutgers, The State University of New Jersey
Cancer Center, F1208
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Newark, NJ 07103

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CITIZENSHIP: USA

EDUCATION: University of Massachusetts, Amherst, MA 01003
B.S., Physics, Feb 1982.

University of Massachusetts, Amherst, MA 01003
Ph.D., Physics, Sept 1987.
Mentor: KSR Sastry.

OTHER TRAINING: Georgia Institute of Technology, Atlanta, GA
Chemical Engineering Department
Undergraduate fellowship on fluid dynamics in heart valve prostheses.
Summer 1980. Mentor: AJ Yoganathan

Harvard Medical School, Boston, MA
Department of Radiology
Radiochemistry/radiobiology with *cis*-^{195m}Pt and *trans*-^{195m}Pt.
1985-1987. Mentors: AI Kassis and SJ Adelstein.

ACADEMIC APPOINTMENTS:

Feb 1982 - May 1984: Teaching Associate, Department of Physics & Astronomy, University of Massachusetts Amherst, MA.

May 1984 - Aug 1987: Research Assistant/Teaching Associate, Department of Physics & Astronomy, University of Massachusetts, Amherst, MA.

Oct 1987 - Jun 1989: Instructor, Department of Radiology, University of Medicine & Dentistry of NJ, Newark, NJ.

Oct 1990 - Apr 1991: Acting Director of Radiation Safety, University of Medicine & Dentistry of NJ, Newark, NJ.

Jul 1989 - Jun 1995: Assistant Professor, Department of Radiology, University of Medicine & Dentistry of NJ, Newark, NJ.

Jul 1995 – June 2001: Associate Professor (with tenure), Department of Radiology, University of Medicine & Dentistry of NJ, Newark, NJ.

Jul 2001 – Jun 2013: Professor (with tenure), Department of Radiology, University of Medicine & Dentistry of NJ, Newark, NJ.

Jul 2013 - present: Professor (with tenure), Department of Radiology, New Jersey Medical School, Rutgers, The State University of New Jersey, Newark, NJ.

Oct 2015 – present: Professor, Department of Radiation Oncology, Robert Wood Johnson Medical School, Rutgers, The State University of New Jersey, New Brunswick, NJ.

OTHER PROFESSIONAL APPOINTMENTS AND MAJOR VISITING APPOINTMENTS: MAJOR ADMINISTRATIVE RESPONSIBILITIES

A. Acting Director of Radiation Safety, Oct 1990 - Apr 1991: University of Medicine & Dentistry of NJ, Newark, NJ
B. Chairman, Radiation Safety Committee (medical broad-scope radioactive materials license), University of Medicine & Dentistry of New Jersey, Newark, NJ. July 2000 – June 2013.
C. Chief, Division of Radiation Research, Department of Radiology, New Jersey Medical School, University of Medicine & Dentistry of New Jersey. July 2001 – June 2013.
D. Chairman, Radiation Safety Committee (medical broad-scope radioactive materials license), Rutgers Biomedical Health Sciences, Newark. July 2013 – present.
E. Chief, Division of Radiation Research, Department of Radiology, New Jersey Medical School, Rutgers – The State University of New Jersey. July 2013 – present.
F. Commissioner, International Commission on Radiation Units and Measurements (ICRU). June 2014-2018.
G. Full Member, Rutgers Cancer Institute of New Jersey. Aug 2016 - present

MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

Memberships:	Society of Nuclear Medicine, Jan 1985 to present.
	American Assoc. of Physicists in Medicine, Jan 1985 to present.
	Radiation Research Society, Feb 1990 to present.
	Health Physics Society, May 1991 to present.
Offices:	2nd International Symposium on Biophysical Aspects of Auger Processes, Secretary, 1991.
	Scientific Program Sub-Chair, Dosimetry/Radiobiology. 1993 and 1994, 2001 Annual Meetings of the Society of Nuclear Medicine.
Committees:	American Association of Physicists in Medicine Task Group on Auger Electron Dosimetry, June 1989 - 1995.
	Program Committee, 1991-1994, 1998, 2001 Annual Meetings of the Society of Nuclear Medicine.
	Program Committee, 1993-1995, Annual Meeting of the American Association of Physicists in Medicine.
	American Association of Physicists in Medicine Task Group No. 7: Radionuclide therapy & data acquisition methods. 2001.
	Membership Committee, Radiation Research Society. 2012-2015.

HONORS AND AWARDS:

- 1980 Tau Beta Pi
- 1992 UMDNJ Teaching & Service Award
- 1995 Outstanding Manuscript Award by the Journal of Nuclear Medicine. S. Murty Goddu, R.W. Howell, D.V. Rao. "A generalized approach to absorbed dose calculations for dynamic tumor and organ masses". J. Nucl. Med. 36: 1923-1927 (1995).
- 2004 Loevinger-Berman Award, Society of Nuclear Medicine.
- 2006 Research displayed on cover of Journal of Nuclear Medicine, June 2006
- 2007 Conference Keynote Lecture. 6th International Symposium Physical, Molecular, Cellular, and Medical Aspects of Auger Processes. Boston, MA, July 5-7, 2007.
- 2009 Basic Science Faculty of the Year, New Jersey Medical School
- 2014 Nominated for Golden Apple Teaching Award, New Jersey Medical School
- 2014 Elected Commissioner, International Commission on Radiation Units & Measurements
- 2014 December 2014, Press release, Society of Nuclear Medicine & Molecular Imaging
- 2015 Nominated for Golden Apple Teaching Award, New Jersey Medical School
- 2015 Honorary Member, Society for Radiation Research
- 2016 Nominated for Golden Apple Teaching Award, New Jersey Medical School

BOARDS OF DIRECTORS/TRUSTEES POSITIONS:

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

1. Reviewer for NIH/NCI Radiation Research Study Section (RAD). November 1999, October 2000.
2. Reviewer for Department of Energy Scientific Grant Program. FY 2006.
3. Reviewer for Department of Defense CBS.MEDRAD.01 - Medical Radiological Defense Research Program. March 2009.
4. Reviewer for Department of Defense Basic Research for Combating Weapons of Mass Destruction (WMD). September 2009.
5. Council Member. National Council on Radiation Protection and Measurements (NCRP). 2003-present.
6. Representative for American Association of Physicists in Medicine. NCI/SNMMI Workshop on Targeted Radionuclide Therapy, National Institute of Health (NIH), Bethesda, MD, March 18-19, 2013.
7. Reviewer for NIH/NCI 2014/05 ZRG1 OTC-B (02) Immune and Radiotherapy Study Section (RAD). January 17, 2014.
8. Representative for American Association of Physicists in Medicine. NCI/SNMMI Workshop on Targeted Radionuclide Therapy, National Institute of Health (NIH), Bethesda, MD, October 24-25, 2014.
9. Reviewer for NIH/NCI 201501 ZRG1 OTC-B (02) Immune and Radiotherapy Study Section (RAD). December 11, 2014.
10. Special Emphasis Panel Review Group for Centers for Medical Countermeasures against Radiation Consortium (U19). NIH/NIAID 2015/05 ZAI1 LAR-I (M1) March 6, 2015.
11. Special Emphasis Panel Review Group for Centers for Medical Countermeasures against Radiation Consortium (U19). NIH/NIAID 2015/05 ZAI1 PA-I (M2), March 24-26, 2015.
12. Lead Visitor. Quinquennial Review of CRUK/MRC Oxford Institute for Radiation Oncology. Professor Katherine Vallis. Oxford, England. November 29-30, 2016.

SERVICE ON MAJOR COMMITTEES:

A. International
   a. Program Committee, Second International Symposium on Biophysical Aspects of Auger Processes, July 5-6, 1991, Univ. of Massachusetts, Amherst, MA.
   b. International Commission on Radiation Units and Measurements (ICRU). Advisory Committee to Examine the Conceptual Basis for Dose Specification in Nuclear Medicine. August 1995 - 1998.

c. International Commission on Radiation Units and Measurements (ICRU). Report Committee on Dose Specification in Nuclear Medicine. 1998-2002.
d. Program Committee. 12th International Microdosimetry Symposium, Lake Maggiore, Italy, May 2001.
e. Scientific Committee, The 13th LH Gray Workshop 5th Auger Symposium, Peter MacCallum Cancer Institute, Melbourne, Australia. August 13-15, 2003.
f. Program Committee, 14th International Symposium on Microdosimetry. Venice, Italy. November 2005.
g. Program Committee, Sixth International Symposium on Physical, Molecular, Cellular, and Medical Aspects of Auger Processes, July 6-7, 2007, Harvard Medical School, Boston, MA.
h. Program Committee, 15th International Symposium on Microdosimetry. Verona, Italy. November 2009.
i. Program Committee, Seventh International Symposium on Auger Processes, August, 2011, Jülich, Germany.
j. International Commission on Radiation Units and Measurements (ICRU). Report Committee on Approaches to the Dosimetry of Low-Dose Exposures to Ionizing Radiation. 2003-2011.
k. International Commission on Radiation Units and Measurements (ICRU). Report Committee on Bioeffect Modeling. 2011-present.
l. Program Committee, 16th International Symposium on Microdosimetry. Treviso, Italy. October 20-25, 2013.
m. Program Committee, Eighth International Symposium on Auger Processes, Kyoto, Japan, 2015.

B. National
a. New Jersey State Commission on Cancer Research, Advisory Committee on Radiation Oncology, 1988-1990.
b. Society of Nuclear Medicine, Medical Internal Radiation Dose Committee (MIRD). Committee Member July 1992 – July 2000; Corresponding Member July 2000 – Nov 2006; Committee Member Nov 2006 - present.
c. National Council on Radiation Protection and Measurements (NCRP) Scientific Committee 1-13. July 2003 – 2011.
d. Program Committee, MIRD Radiopharmaceutical Dosimetry Symposium. Baltimore, MD. June 5, 2015.
e. Program Committee. 2015 Annual Meeting of the Health Physics Society, July 13-14, 2015. Special Session: Health Risks from Low Doses and Low Dose-Rates of Ionizing Radiation.

C. Medical School/University
a. Radiation Safety Committee, University of Medicine & Dentistry of New Jersey, Newark, Oct 1987 to June 2013.
b. Human Use Subcommittee of the Radiation Safety Committee, University of Medicine & Dentistry of New Jersey, Newark, Oct 1987 to June 2013.
c. Radiation Emergencies Subcommittee of the Radiation Safety Committee, University of Medicine & Dentistry of New Jersey, Newark, 2006-2010.
d. Chairman, Education & Training Subcommittee of the Radiation Safety Committee, University of Medicine & Dentistry of New Jersey, Newark, Oct 1989 to June 2013.
e. Secretary, NJMS Faculty Organization, Sept 1995 - Sept 1996.
f. NJMS Faculty Council, Sept 1995 - Aug 1996.
g. Faculty Affairs Committee, NJMS, Sept 1996 – 1998
h. Secretary/Treasurer, American Association of University Professors, UMDNJ Newark Chapter, 1998.
i. Council, American Association of University Professors, UMDNJ, 1998.
j. Board of Governors, American Association of University Professors, UMDNJ Newark Chapter, 1999-2001, 2004-2009, 2010-2013.
k. Faculty Committee on Appointments and Promotions, NJMS, Sept 1998 – August 2000.
l. Search Committee for Director of Comparative Medicine Resources, NJMS, May 2006 – May 2007.
m. Radiation Safety Search Subcommittee for Director of Radiation Safety Services/RSO, UMDNJ, 2008 – 2010.
n. Faculty Organization Ad-Hoc Committee on Tenure Review. NJMS, 2008-2012.

o. Radiation Safety Committee, Rutgers Biomedical Health Sciences, Newark, July 2013 to present.
p. Human Use Subcommittee of the Radiation Safety Committee, Rutgers Biomedical Health Sciences, Newark, July 2013 to present.
q. Chairman, Education & Training Subcommittee of the Radiation Safety Committee, Rutgers Biomedical Health Sciences, Newark, July 2013 to present.
r. Faculty Investigator Committee, NJMS, Sept 2013-Aug 2014.
s. Review Panel, New Jersey Health Foundation Signature Initiatives Research Grant Program, Nov 2014.
t. Search Committee for Chair of NJMS Department of Radiology, Rutgers Biomedical Health Sciences, Newark, March 2015 to present.

D. Department
   a. Chair, Radiology Research Fund Committee. Sept 2015 to present.
E. Editorial Boards
   a. Guest Associate Editor, Medical Physics (past and 2016)
   b. Journal of Radiation and Cancer Research. 2016- present.
F. *AdHoc* Reviewer for Academic Journals
   a. Radiation Research
   b. Medical Physics
   c. Journal of Nuclear Medicine
   d. International Journal of Radiation Applications and Instrumentation, Part B
   e. Nuclear Medicine and Biology
   f. International Journal of Radiation Oncology, Biology, Physics
   g. European Journal of Nuclear Medicine
   h. Acta Oncologica
   i. Proceedings of the National Academy of Sciences
   j. International Journal of Cancer
   k. International Journal of Radiation Biology
   l. Radiation Protection Dosimetry
   m. Radiation and Environmental Biophysics
   n. Cancer Research
   o. Cancer Biotherapy and Radiopharmaceuticals
   p. Dose Response
   q. Frontiers in Oncology
   r. Physics in Medicine & Biology

SERVICE ON GRADUATE SCHOOL COMMITTEES:

A. Rutgers GSBS Internal Review Committee. March 2016 to present.

SERVICE ON HOSPITAL COMMITTEES:

A. Chair, Radiation Safety Committee. University Hospital, Newark, NJ. July 2013 - present (see above Major Administrative Responsibilities). Radiation-related activities at University Hospital are conducted under the Rutgers RBHS Newark medical broad scope license from the NJDEP.

SERVICE TO THE COMMUNITY:

B. Public Education: Radon effects and mitigation. Established radon monitoring service in the Division of Radiation Research, Department of Radiology. Lectured to public audience - Exxon Corporation, Florham Park, NJ. Interviewed by cable TV network.
C. 1998. Public Education. Town of Bloomfield, NJ. Lectured to residents of Bloomfield on uranium and thorium present in vacated Westinghouse facility.
D. Televised interview on radon. Princeton Community Television. March 31, 2010.
E. Participated in "MedKnight Thunder" Counterterrorism Weapons of Mass Destruction Exercise on March 15, 2011 at Rutgers University, Piscataway, NJ.

F. Invited Speaker for various New Jersey County Medical Reserve Corps volunteers. Co-Sponsored by the NJ Public Health Training Center and the NJMS Department of Preventive Medicine & Community Health. Radioactivity, Fission and Radiation: Risks vs. Benefits to Humanity. See invited lectures to see counties and dates.

G. Quoted in NJ Monthly. To Test Or Not To Test? Comprehensive Information About Screening Procedures. Posted October 15, 2012 by Leslie Garisto Pfaff. http://njmonthly.com/articles/topdoctors/to-test-or-not-to-test.html.

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

A. 1994, PhD Thesis Committee. Michael T. Azure, Departments of Chemistry and Physics, University of Massachusetts, Amherst, MA.
B. 2009, MS Thesis Committee. Frank Portugal. Department of Pharmacology & Physiology and Department of Radiology. UMDNJ GSBS, Newark, NJ.
C. 2010, MS Thesis Committee. Grace Shim. Department of Radiology. UMDNJ GSBS, Newark, NJ.
D. 2011, PhD Thesis Committee. Manuela Buonanno. Department of Radiology. UMDNJ GSBS, Newark, NJ.
E. 2011, PhD Thesis Committee. Geraldine Gonon. Universite Franche de Compte. Besancon, France.
F. 2012, PhD Thesis Examiner. M Chinnadurai. Sri Ramachandra University, Chennai, India.
G. 2014-2015, MS Thesis Advisor, Thomas Tritt, Department of Radiology, Rutgers GSBS, Newark, NJ.
H. 2013-2016, PhD Thesis Committee. Jason Domogauer, Department of Radiology. Rutgers GSBS, Newark, NJ.
I. 2013-2016, PhD Thesis Committee. Neha Sharma, Department of Radiology, Rutgers GSBS, Newark, NJ.
J. 2013-2015, MS Thesis Advisor, Alisha Khullar, Department of Radiology, Rutgers GSBS, Newark, NJ.
K. 2014-, PhD Thesis Committee. Nicholas Colangelo, Department of Radiology. Rutgers GSBS, Newark, NJ.
L. 2015- PhD Thesis Advisor, Calvin Leung, Department of Radiology, Rutgers GSBS, Newark, NJ
M. 2016- PhD Thesis Advisor, Brian Canter, Department of Radiology, Rutgers GSBS, Newark, NJ

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

A. Venkat R. Narra, PhD
    a. Associate Professor, Robert Wood Johnson Medical School, Rutgers Biomedical Health Sciences, New Brunswick, NJ.
B. De-Yan Hou, MD
    a. Research Scientist, Medical College of Georgia, Augusta, GA
C. S. Murty Goddu, PhD
    a. Associate Professor of Radiation Oncology, Washington University, St. Louis, MO
D. Michael T. Azure, PhD (*dec*. 1960-2013)
    a. Associate Professor of Radiology, University of Alabama, Birmingham, AL
E. Marek Lenarczyk, PhD
    a. Research Associate, University of Tennessee Health Science Center
F. Anupam Bishayee, PhD
    a. Professor and Chair, Department of Pharmaceutical Sciences, College of Pharmacy, Larkin Health Sciences Institute. Miami, FL.
G. Bogdan Gerashchenko, PhD
    a. Research Scientist, Department Radiobiology & Ecology, R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology, Kyiv 03022 , Ukraine
H. Prasad VSV Neti, PhD
    a. Director of Radiation Safety Services, Rutgers Biomedical Health Sciences, Newark, NJ
    b. Adjunct Assistant Professor of Radiology, New Jersey Medical School, Newark, NJ
I. Massimo Pinto, PhD

a. Tenured Scientist, National Institute of Ionizing Radiation Metrology, ENEA Casaccia, Rome, Italy

J. Sandeep K. Shukla, PhD
   a. Scientist C, INMAS, Delhi, India

K. John M Akudugu, PhD
   a. Tenured Associate Professor, Director of Radiobiology, Stellenbosch University, Cape Town, South Africa

TEACHING RESPONSIBILITIES:

A. Course Directorships
   a. July 1991 – July 2007: University of Medicine & Dentistry of NJ, Newark, NJ, Department of Radiology. Radiological Physics Lecture Coordinator.

B. Radiology Residency Review Course – New Jersey Medical School. 2013, 2014.

C. Lectures
   a. Oct 13, 2015. Lecture for Rutgers Blaustein School of Public Health course Public Health Preparedness I: Agents of Mass Injury or Destruction, 10:832:401, 34:832:501, ENOH 0697J. Kevin Sumner, Course Director.
   b. Oct 21, 2014. Lecture for Rutgers Blaustein School of Public Health course Public Health Preparedness I: Agents of Mass Injury or Destruction, 10:832-401, 34:832-501, ENOH 0697J. Kevin Sumner, Course Director.
   c. Dec 4, 2013. Lecture for Rutgers Blaustein School of Public Health course Public Health Preparedness I: Agents of Mass Injury or Destruction, 10:832-401, 34:832-501, ENOH 0697J. Kevin Sumner, Course Director.
   d. Jun 2013 – present 2013: Rutgers, The State University of New Jersey, New Jersey Medical School, Newark, NJ, Department of Radiology. Physics of Diagnostic Radiology
   e. July 22-23, 2013. Radiology Review Course, Rutgers New Jersey Medical School. Physics of Diagnostic Radiology.
   f. Nov 30, 2012. Lecture for Rutgers Blaustein School of Public Health course Public Health Preparedness I: Agents of Mass Injury or Destruction, 10:832-401, 34:832-501, ENOH 0697J. Kevin Sumner, Course Director.
   g. Oct 1987 – Jun 2013: University of Medicine & Dentistry of NJ, Newark, NJ, Department of Radiology. Physics of Diagnostic Radiology
   h. May 2011, 2009, 2008. Princeton University. Invited lecture on polonium-210 for introductory chemistry course directed by Dr. Andrew Bocarsly.
   i. Oct 1993 - 2004. Lecturer for NJMS Preventive Medicine Course entitled Public Health Methods and Challenges.
   j. July 10-14, 1999. Invited Faculty Member for Graduate Course entitled Dosimetry in Diagnostic and Therapeutic Nuclear Medicine, University of Lund, Lund, Sweden.
   k. August 21-23, 1995. Invited faculty member for graduate course entitled Radiation Dosimetry and Dose Planning in Radionuclide Therapy and Nuclear Medicine. University of Lund, Radiation Physics Department, Lund, Sweden.

D. Research Training
   a. High School Students
      i. Kenneth Lewis
      ii. Cabral Miller
      iii. Edwin Perez
      iv. George Lewis
      v. Alyshia McGuire
   b. Predoctoral Fellows
      i. Suzy Aresta, College of St. Elizabeth
      ii. Dom Terrone, New Jersey Medical School
         1. Currently Associate Director, Division of Maternal-Fetal Medicine, Saint Barnabas Medical Center, Livingston, NJ

iii. Tiffany Cooke, College of St. Elizabeth and Robert Wood Johnson Medical School
    1. Currently Instructor of Pediatrics, Northwestern University, Feinberg School of Medicine, Chicago, IL
iv. Darshan Trivedi, Boston University
    1. Now MD PhD, pathology resident at Tulane University
v. Han Wu, New Jersey Institute of Technology
vi. Isaac Chu, New Jersey Medical School
    1. Now Assistant Professor, Keck Medicine of USC
vii. Susan Nestor, UMDNJ Graduate School of Biomedical Sciences
    1. Now at Cardiovascular Inflammation Reduction Trial (CIRT), Center for Cardiovascular Disease Prevention, Harvard Medical School
viii. Naiim Ali, New Jersey Medical School
    1. 2nd prize, 2010 NJMS Cancer Research student competition
    2. Now resident at University of Vermont, Department of Radiology
ix. Jordan Pasternack, College of New Jersey and New Jersey Medical School
    1. 1st prize, 2011 NJMS Cancer Research student competition
    2. 2nd prize, 2012 NJMS Cancer Research student competition
    3. Top 10 out of 306 posters in category at 2012 Annual Meeting of the Society of Nuclear Medicine, Miami Beach, FL.
    4. 2 first author publications, 2 patents
    5. Now resident at Maimonides Medical Center
x. Elizabeth J Paul, Princeton University
xi. Rozana Rhaman, Noor-ul-iman School, Monmouth Junction, NJ
xii. Behrooz Vaziri Khorrami, New Jersey Medical School
    1. First author publication
    2. Patent
    3. Now resident at Johns Hopkins University, Department of Radiology
xiii. Tomer Nawrocki, New Jersey Medical School
xiv. Jay Solanki, New Jersey Medical School
xv. Julia Kim, The College of New Jersey and New Jersey Medical School
xvi. Akhil Dondapati, NJIT.
xvii. Alex Rosen, NJIT.

c. M.S. Students (see SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE)
d. Ph.D. Students (see SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE)
e. Postdoctoral Fellows (see SPONSORSHIP OF POSTDOCTORAL FELLOWS).

GRANT HISTORY:

A. Principal Investigator:
    a. June 2015- June 2018. National Institute of Health Grant No. **R01 CA198073-01**. Level of support $1,264,836. Multi-Principal Investigator with EI Azzam. *Radiation induced bystander effects in radium-223 therapy.*
    b. January 2015 – December 2016. New Jersey Commission on Cancer Research. DFHS15PPC009 (Mentee: Leung). Level of support $50,000. *Radiation induced bystander effects in radium-223 therapy.* Pre-doctoral fellowship for MD PhD student, Calvin Leung.
    c. 2012-2013 (extended to April 2015). NJ Healthcare Foundation Grant # PC85-12. Level of support $25,000. Principal Investigator. *Effects of nonuniform distributions of radioactivity.*
    d. 2010 Society of Nuclear Medicine Bradley-Alavi Student Fellowship Award awarded to NJMS medical student Naiim Ali. Level of support $3,000. Mentor.
    e. 2010 Radiological Society of North America Research Medical Student Grant awarded to NJMS medical student Naiim Ali. Level of support $3,000. Mentor.
    f. Sept 2009 to February 2010 (no cost extension to 2/28/2011). National Institute of Health Grant No. 3 **RC1 AI078518-01S1**. Level of support $186,648. Principal Investigator. *Protection against radiation-induced damage to intestinal nutrient transport.*

g. Sept 2007-February 2009 (extended to February 2010). National Institute of Health Grant No. **1 RC1 AI078518-01**. Level of support $870,739. Principal Investigator. *Protection against radiation-induced damage to intestinal nutrient transport.*
h. July 2006–June 2010 (extended to June 2011). National Institute of Health Grant No. **R01 CA83838**. Level of support $1,000,464. Principal Investigator. *Effects of nonuniform distributions of radioactivity*.
i. March 2006–February 2007. UMDNJ Foundation and Dean's Biomedical Bridge Grants Program. Level of support $35,000. Principal Investigator. *Radiation-induced bystander effects in mouse testes*.
j. June 2004-May 2006. New Jersey Commission on Cancer Research Post-doctoral Fellowship (for Massimo Pinto). Level of support $69,000. *Radiation induced bystander effects in a 3D model.*
k. June 2003-May 2005. New Jersey Commission on Cancer Research Post-doctoral Fellowship (for Bogdan Gerashchenko). Level of support $58,050. *Effects of radiation on unirradiated bystander cells.*
l. July 2000–June 2006. National Institute of Health Grant No. **R01 CA83838**. Level of support $1,222,268. Principal Investigator. *Effects of nonuniform distributions of radioactivity*.
m. 1998. Northeast Hazardous Substance Research Center Subcontract No. 991653. Level of support $30,713. Principal Investigator. *TOSC Project – Bloomfield Westinghouse Site*.
n. July 1991-June 1997. National Institute of Health Grant No. **R29 CA54891**. Level of support $546,540. Principal Investigator. *Effects of radon laden water on mouse testes*.
o. April 1991-Mar 1993. National Institute of Health Grant No. **R13 CA53064**. Level of support $5,000. Principal Investigator. *2nd International symposium on biophysical aspects of auger processes*.
p. June 1988-May 1991. New Jersey Commission on Cancer Research Grant No. 688-009. Level of support $83,325. Principal Investigator. *Intracellular distribution and radiotoxicity of Auger emitters*.
q. March 1988-March 1989. National Institute of Health Biomedical Research Support Grant No. 2 **S07 RR05393**. Level of support $8,000. Principal Investigator. *Intracellular distribution and radiotoxicity of Auger emitters*

B. Co-Investigator:

a.	2015-2019	NASA Grant NNJ13ZSA002N-RADIATION Ground-Based Studies in Space Radiobiology. Notice of award on Oct 15, 2014. (7.5-10% effort)	$1.9M
b.	2006-2010	NASA Grant No. NNJ06HD91G	$1.2M
c.	2006-2009	Department of Energy Grant No. DE-FG02-07ER64344	$0.8M
d.	2006-2007	NJMS Annual Research Grants Program	$80,000
e.	2006-2007	UMDNJ Foundation	$35,000
f.	2003-05	PBL Laboratories subcontract	$85,000
g.	2002-06	National Institute of Health Grant No. CA92262	$763,000
h.	2002-06	Department of Energy Grant No. DE-FG02-02ER63447	$887,884
i.	1992-94	UMDNJ Foundation Grant No. 26-93	$ 25,000
j.	1987-93	National Institute of Health Grant No. CA 32877	$840,000
k.	1989-91	NJ Cancer Commission Grant No. 689-042	$ 80,000

PUBLICATIONS:

A. Refereed Original Articles in Journals (H-index = 34)

1. D. V. Rao, K. S. R. Sastry, H. E. Grimmond, R. W. Howell, G. F. Govelitz, V. K. Lanka, and V. B. Mylavarapu, Cytotoxicity of some indium radiopharmaceuticals in mouse testes. *J. Nucl. Med.* **29,** 375-384 (1988).
2. D. V. Rao, V. R. Narra, R. W. Howell, G. F. Govelitz, and K. S. R. Sastry, In-vivo radiotoxicity of DNA-incorporated I-125 compared with that of densely ionising alpha-particles. *Lancet* **II,** 650-653 (1989).
3. R. W. Howell, D. V. Rao, and K. S. R. Sastry, Macroscopic dosimetry for radioimmunotherapy: Nonuniform activity distributions in solid tumors. *Med. Phys.* **16,** 66-74 (1989).

4. H. A. Wright, R. N. Hamm, J. E. Turner, R. W. Howell, D. V. Rao, and K. S. R. Sastry, Calculations of physical and chemical reactions with DNA in aqueous solution from Auger cascades. ***Radiat. Prot. Dosim.*** **31,** 59-62 (1990).
5. D. V. Rao, V. R. Narra, R. W. Howell, and K. S. R. Sastry, Biological consequence of nuclear versus cytoplasmic decays of I-125: Cysteamine as a radioprotector against Auger cascades *in vivo*. ***Radiat. Res.*** **124,** 188-193 (1990).
6. R. W. Howell, V. R. Narra, D. V. Rao, and K. S. R. Sastry, Radiobiological effects of intracellular polonium-210 alpha emissions: A comparison with Auger-emitters. ***Radiat. Prot. Dosim.*** **31,** 325-328 (1990).
7. D. V. Rao, V. R. Narra, G. F. Govelitz, V. K. Lanka, R. W. Howell, and K. S. R. Sastry, In vivo effects of 5.3 MeV alpha particles from Po-210 in mouse testes: Comparison with internal Auger emitters. ***Radiat. Prot. Dosim.*** **31,** 329-332 (1990).
8. D. V. Rao, V. R. Narra, R. W. Howell, V. K. Lanka, and K. S. R. Sastry, Induction of spermhead abnormalities by incorporated radionuclides: Dependence on subcellular distribution, type of radiation, dose rate, and presence of radioprotectors. ***Radiat. Res.*** **125,** 89-97 (1991).
9. R. W. Howell, D. V. Rao, D.-Y. Hou, V. R. Narra, and K. S. R. Sastry, The question of relative biological effectiveness and quality factor for Auger emitters incorporated into proliferating mammalian cells. ***Radiat. Res.*** **128,** 282-292 (1991).
10. V. R. Narra, R. W. Howell, K. L. Thanki, and D. V. Rao. Radiotoxicity of ^{125}I-iododeoxyuridine in preimplantation mouse embryos. ***Int. J. Radiat. Biol.*** **60,** 525-532 (1991).
11. R. W. Howell, V. R. Narra, and D. V. Rao, Absorbed dose calculations for rapidly growing tumors. ***J. Nucl. Med.*** **33,** 277-281 (1992).
12. V. R. Narra, R. W. Howell, R. S. Harapanhalli, K. S. R. Sastry, and D. V. Rao, Radiotoxicity of some I-123, I-125, and I-131 labeled compounds in mouse testes: Implications for radiopharmaceutical design. ***J. Nucl. Med.*** **33,** 2196-2201 (1992).
13. R. W. Howell, Radiation spectra for Auger-electron emitting radionuclides: Report No. 2 of AAPM Nuclear Medicine Task Group No. 6. ***Med. Phys.*** **19,** 1371-1383 (1992).
14. D. V. Rao, and R. W. Howell, Time dose fractionation in radioimmunotherapy: Implications for selecting radionuclides. ***J. Nucl. Med.*** **34,** 1801-1810 (1993).
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Books, Monographs and Chapters

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71. F. W. Kemp, P. Neti, R. W. Howell, P. Wenger, D. B. Louria, and J. B. Bogdan, Seasonal blood lead and 25 hydroxy vitamin D concentrations in children. 12th International Symposium on Trace elements in Man animals. University of Ulster, Coleraine, Northern Ireland, June, 19-23, 2005.
72. P. V. Neti, and R. W. Howell, Multicellular dosimetry as an approach to predict the biological response to nonuniform distributions of Po-210. 52nd Annual Meeting of the Radiation Research Society in conjunction with ASTRO. Denver, Colorado, October, 16-19, 2005.
73. P. V. Neti, and R. W. Howell, Multicellular dosimetry as a tool for prediction of biological response to nonuniform distributions of radioactivity in three dimensional tissues. 53rd Annual Meeting of the Radiation Research Society in conjunction with ASTRO. Philadelphia, Pennsylvania, November, 5-8, 2006.
74. P. V. Neti, V. R. Narra, H. F. Huang, E. I. Azzam, and R. W. Howell. Bystander responses in mouse testes by incorporated radionuclides. 2007 Annual Retreat on Cancer Research in New Jersey. UMDNJ-Robert Wood Johnson Medical School, Piscataway, New Jersey, May, 31, 2007: 2007:P30.
75. P. V. S. V. Neti, V. R. Narra, H. F. Huang, E. I. Azzam, and R. W. Howell, Radiation-induced bystander responses in mouse testes. 13th International Congress of Radiation Research. San Francisco, CA, USA, July, 8-12, 2007.
76. P. V. S. V. Neti, V. R. Narra, H. F. Huang, E. I. Azzam, and R. W. Howell, Intercellular Communication in Testicular Responses to DNA-incorporated ^{125}I. 6th Auger Symposium, An International symposium on Physical, Molecular, Cellular, and Medical Aspects of Auger Processes. Harvard Medical School, Boston, USA, July, 5-7, 2007.
77. A. Agrawal, M. Roche, F. W. Kemp, P. V. S. V. Neti, A. Attanasio, V. Douard, E. I. Azzam, R. W. Howell, and R. P. Ferraris, Ionizing radiation can alter nutrient absorption rates by reducing, at different extents, mRNA abundance of intestinal nutrient transporters. 54th Annual Meeting of the Radiation Research Society in conjunction with ASTRO to be held at Boston, MA, September 21-24, 2008.
78. I. Chu, P. V. S. V. Neti, E. I. Azzam, and R. W. Howell, Cellular responses to nonuniform activity distributions of polonium-210. In eds. 54th Annual Meeting of the Radiation Research Society in conjunction with ASTRO to be held at Boston, MA, September 21-24, 2008.
79. M. Roche, P. V. S. V. Neti, F. W. Kemp, A. Agrawal, A. Attanasio, V. Douard, E. I. Azzam, R. W. Howell, and R. P. Ferraris, Intestinal active energy-dependent sugar transporters are less sensitive to acute doses of low-LET ionizing radiation than passive transporters. In eds. 54th Annual Meeting of the Radiation Research Society in conjunction with ASTRO to be held at Boston, MA, September 21-24, 2008.
80. L. S. Zuckier, P. Neti, V. Lanka, S. Marcus, and R. Howell, "Doctor, Am I Contaminated with Polonium?" Case Report, methods of analysis and general principles of value to the nuclear medicine physician in the wake of the Litvinenko poisoning. . 55th Society of Nuclear Medicine Annual Meeting. New Orleans, LA, June, 14-18, 2008.
81. Roger W. Howell, Prasad V. Neti. Modeling biological response to log normal distributions of cellular radioactivity. Abstract PS2.38. 55th Annual Meeting of the Radiation Research Society, Savannah, Georgia, October 3-7, 2009.
82. J. M. Akudugu, P. V. S. Neti, R. W. Howell. Formulation of radiochemotherapy cocktails to overcome therapeutic limitations of log normal distributions of radiopharmaceuticals. Abstract PS7.56. 55th Annual Meeting of the Radiation Research Society, Savannah, Georgia, October 3-7, 2009.
83. M. Buonanno, S. M. de Toledo, R. W. Howell, D. Pain, E.I. Azzam. Radiation quality and the induction of long-term biological effects in irradiated normal human cells and neighboring bystanders: the role of oxidative metabolism. Abstract PS5.31. 55th Annual Meeting of the Radiation Research Society, Savannah, Georgia, October 3-7, 2009.
84. M. Roche, P. V. S. Neti, F. W. Kemp, M. Brimacombe, A. Agrawal, A. Attanasio, V. Douard, E. I. Azzam, R. W. Howell, R. P. Ferraris, Dietary cocktail of vitamins protects intestinal nutrient transport against damage caused by chronic irradiation. Abstract PS6.50. 55th Annual Meeting of the Radiation Research Society, Savannah, Georgia, October 3-7, 2009.
85. F. A. Portugal, J. M. Akudugu, R. P. Ferraris, and R. W. Howell, Effects of low-LET ionizing radiation on nutrient transport and survival of intestinal cells of human origin. Abstract PS4.07. 56th Annual Meeting of the Radiation Research Society, Maui, Hawaii, September 26-29, 2010.
86. J. M. Akudugu, P. V. S. Neti, R. W. Howell, Lognormal shape parameter as a screening tool for design of patient-specific targeted radiochemotherapy cocktails. Abstract PS7.05. 56th Annual Meeting of the Radiation Research Society, Maui, Hawaii, September 26-29, 2010.

87. **DISCONTINUED 2010**
88. **RESTARTED 2016**
89. Calvin Leung, Edouard I. Azzam, Roger W. Howell. Skeletal Incorporation of Ra-223 Leads to Secretion of Factors that Sensitize Breast Cancer Cells to Gamma Rays. 2016 Annual Retreat on Cancer Research in New Jersey. Meeting of the New Jersey Cancer Commission, New Brunswick, NJ. May 26, 2016.
90. Jay H. Solanki*, Thomas Tritt*, Jordan B. Pasternack, Julia J. Kim, Jason D. Domogauer, Nicholas W. Colangelo and Roger W. Howell. Cellular Response to Exponentially Increasing and Decreasing Dose Rates. Abstract #2010. 2016 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging. San Diego, CA. June 10-13, 2016. *Jay Solanki and Thomas Tritt contributed equally to this publication and are co-first-authors.
91. Jay H. Solanki*, Thomas Tritt*, Jordan B. Pasternack, Julia J. Kim, Jason D. Domogauer, Nicholas W. Colangelo and Roger W. Howell. Radiotoxicity of exponentially increasing and decreasing dose rates encountered in nuclear medicine. 62nd Annual Meeting in Waikoloa, Hawaii, October 16-19, 2016. *Jay Solanki and Thomas Tritt contributed equally to this publication and are co-first-authors.

REPORTS

1. J. A. Siegel, S. R. Thomas, J.B. Stubbs, M.G. Stabin, M.T. Hays, K.F. Koral, J.S. Roberston, R.W. Howell, B.W. Wessels, D.R. Fisher, D.A. Weber, and A.B. Brill, MIRD Pamphlet No. 16: Techniques for quantitative radiopharmaceutical biodistribution data acquisition and analysis for use in human radiation dose estimates. *J. Nucl. Med.* **40:**2, 37S-61S (1999).
2. W.E. Bolch, L.G. Bouchet, J.S. Robertson, B.W. Wessels, J.A. Siegel, R.W. Howell, A.K. Erdi, B. Aydogan, S. Costes, and E.E. Watson, MIRD Pamphlet No. 17: The dosimetry of nonuniform activity distributions - radionuclide S values at the voxel level. *J. Nucl. Med.* **40:**1, 11S-36S (1999).
3. S.R. Thomas, E.E. Watson, W.E. Bolch, A.B. Brill, N.D. Charkes, D.R. Fisher, M.T. Hays, R.W. Howell, R.F. Meredith, J.S. Robertson, G. Sgouros, J.A. Siegel, B.W. Wessels. MIRD Pamphlet No. 18: Administered cumulated activity for ventilation studies. *J. Nucl. Med.* **42:**520-526 (2001).
4. International Commission on Radiation Units and Measurements. Absorbed Dose Specification in Nuclear Medicine. Report Committee: SJ Adelstein, Chair, AJ Green, R.W. Howell, JL Humm, PK Leichner, JA O'Donoghue, SE Strand, BW Wessels. *Journal of the ICRU* **2:**1 1-110 (2002).
5. National Council on Radiation Protection. NCRP Report No. 167, Potential Impact of Individual Genetic Susceptibility and Previous Radiation Exposure on Radiation Risk for Astronauts. Report Committee: A.L. Brooks, Chair. JS Bedford, KH Dinger, RW Howell, R. Komaki, WF Morgan, RP Shaw, CG Trotter. Bethesda, MD (January, 2011).
6. International Commission on Radiation Units and Measurements. Quantification and Reporting of Low-Dose and Other Heterogeneous Exposures. Report Committee: L. A. Braby, Chair. A. L. Brooks, W.F. Heidenreich, M. A. Hill, R. W. Howell, K. Kobayashi, W. Wilson, M. Zaider. *Journal of the ICRU* **11(**2) 1-77 (2011).

PRESENTATIONS:

1. American College of Nuclear Physicians and the Society of Nuclear Medicine Joint Symposium on Dosimetry of Administered Radionuclides. Washington D.C., Sept 1989.
2. Seminar. Memorial Sloan-Kettering. New York, NY, Nov 1989.
3. Seminar. National Institute of Standards and Technology. Gaithersburg, MD, Dec 1989.
4. Meeting of the Medical Internal Radiation Dose Committee. Washington, D.C., Nov 1991.
5. New England Regional Meeting of the American Association of Physicists in Medicine. University of Massachusetts Medical Center, Worcester, MA, Dec 1991.
6. Physics & Astronomy Colloquium, University of Massachusetts, Amherst, MA, Mar 4, 1992.
7. Dosimetry Workshop. 1993 Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7, 1993.
8. Seminar. Oak Ridge Associated Universities, Oak Ridge, TN. October 11, 1993.
9. Seminar. New Jersey Medical Physics Society, Springfield, NJ. February 9, 1994.
10. Dosimetry Workshop. 1994 Annual Meeting of the Society of Nuclear Medicine, Orlando, June 4, 1994.
11. 10th International Congress on Radiation Research, Wurzburg, Germany. Aug 27 - Sept 1, 1995.

12. Lecture for Graduate Course in Radiation Physics, University of Lund, Lund, Sweden. August, 1995.
13. Dosimetry Workshop. 1995 Annual Meeting of the Society of Nuclear Medicine, Minneapolis, June 11, 1995.
14. Dosimetry Workshop. 1996 Annual Meeting of the Society of Nuclear Medicine, Denver, June 2, 1996.
15. Categorical Seminar. "Workshop on Calculation of Absorbed Dose Using the MIRD Method". 1997 Annual Meeting of the Society of Nuclear Medicine, San Antonio, June 1, 1997.
16. Seminar. National Institute of Standards and Technology. Gaithersberg, MD. December 18, 1997.
17. Seminar. Memorial Sloan-Kettering. New York, NY, April 6, 1998.
18. U.S. Department of Energy Workshop on Alpha Emitters for Medical Therapy, Toronto, Canada. June 4, 1998.
19. Continuing Education Course. "Special Topics in Absorbed Dose Estimates". 1998 Annual Meeting of the Society of Nuclear Medicine, Toronto, June 10, 1998.
20. 13th Annual Meeting of the International Research Group on Immunoscintigraphy and Immunotherapy. Göttingen, Germany, May 7-8, 1999.
21. Invited Faculty Member for Graduate Course entitled Dosimetry in Diagnostic and Therapeutic Nuclear Medicine, University of Lund, Lund, Sweden. July 10-14, 1999.
22. 4th International Symposium on Biophysical Aspects of Auger Processes, University of Lund, Lund, Sweden. July 16, 1999.
23. 11th International Congress on Radiation Research, Dublin, Ireland. Symposium entitled Auger electrons: Experimental and Theoretical Tools in Radiation Research. Jul 23, 1999.
24. Third Annual Symposium of the John B. Little Center for Radiation Sciences and Environmental Health, Harvard School of Public Health. October 20-21, 2000.
25. Seminar. Brookhaven National Laboratory, Upton, NY. March 30, 2001.
26. Seminar. Joint Program in Nuclear Medicine, Harvard Medical School, March 27, 2003.
27. Continuing Medical Education Course. "Radiobiology and Dosimetry for Targeted Therapy". 2004 Annual Meeting of the Society of Nuclear Medicine, Philadelphia, June 22, 2004.
28. Seminar. NJMS Tumor Board, Newark, NJ. April 4, 2005.
29. Mini-Symposium on Skeletal Dosimetry, Advanced Laboratory for Radiation Dosimetry Studies, Department of Nuclear and Radiological Engineering, University of Florida, September 23, 2005.
30. 14th Symposium on Microdosimetry, Venice, Italy, November 2005.
31. Lecture. NJ Health Physics Society, December 7, 2005.
32. Seminar. East Orange Veterans Administration. East Orange, NJ, March 17, 2006.
33. 2nd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry. Athens, Greece. October 3, 2006.
34. Conference Keynote Lecture. 6th International Symposium on Physical, Molecular, Cellular, and Medical Aspects of Auger Processes. Boston, MA, July 5-7, 2007.
35. Lecture. NJMS/CC 2007 Cancer Related Summer Research Program. July 19, 2007.
36. Seminar. Memorial Sloan-Kettering. New York, NY, February 4, 2008.
37. Seminar. Harvard Medical School. Boston, MA, Sept 19, 2008.
38. Invited Speaker. Animal Models & Countermeasure Development for Gastrointestinal Acute Radiation Syndrome. February 2-3, 2009. North Bethesda Marriott Hotel and Conference Center, Rockville, MD.
39. Invited Lecture. Alpha Radiobiology/Dosimetry. 3rd International Symposium on Radionuclide Therapy and Dosimetry, Toronto. June 13, 2009.
40. Invited Lecture. Alpha Refresher Course, 3rd International Symposium on Radionuclide Therapy and Dosimetry, Toronto. June 14, 2009.
41. Invited Lecture. Alpha Dosimetry – In Vitro, Clinical & Pre-Clinical. 2009 Annual Meeting of the Society of Nuclear Medicine. June 14, 2009. Toronto.
42. Invited Lecture. Auger Microdosimetry Update. 2009 Annual Meeting of the Society of Nuclear Medicine. June 16, 2009. Toronto.
43. Invited Lecture. Radiobiology of Low-Dose Systemic Therapy. 2009 Annual Meeting of the Society of Nuclear Medicine. June 17, 2009. Toronto.
44. Guest Lecture. Nuclear adventures in correlating biological response with radiation absorbed dose. Department of Radiology, Research Division, University of Texas HSCSA, San Antonio. July 16, 2009.
45. Invited Speaker. 15th Symposium on Microdosimetry, Verona, Italy, November 2009.

46. Invited Speaker. Eighth Annual Gilbert W. Beebe Symposium. Radiation Exposures from Imaging and Image Guided Interventions. The National Academies, Washington DC, December 9, 2009.
47. Invited Speaker. International Scientific Symposium on Human Health and the Biological Effects of Tritium in Drinking Water. McMaster University. August 26-27, 2010. Hamilton, Ontario.
48. Invited Speaker. MC2010 Stockholm. An international workshop in Monte Carlo computational methods in radiation track simulation and applications in physical, biological, and medical sciences. 09-12 November 2010, The Royal Swedish Academy of Sciences, Stockholm, Sweden.
49. Invited Speaker. Public Health and Preventive Medicine Grand Rounds, Co-Sponsored by the NJ Public Health Training Center and the NJMS Department of Preventive Medicine & Community Health. Radioactivity, Fission and Radiation: Risks vs. Benefits to Humanity. May 17, 2011. New Jersey Medical School, Newark, NJ with simulcast to UMDNJ School of Public Health, Piscataway, NJ.
50. Invited Speaker. Co-Sponsored by the NJ Public Health Training Center and the NJMS Department of Preventive Medicine & Community Health. Radioactivity, Fission and Radiation: Risks vs. Benefits to Humanity. Sept 30, 2011. Ocean County Fire Academy, Wareton, NJ
51. Invited Speaker. Camden and Gloucester County's Medical Reserve Corps volunteers. Co-Sponsored by the NJ Public Health Training Center and the NJMS Department of Preventive Medicine & Community Health. Radioactivity, Fission and Radiation: Risks vs. Benefits to Humanity. Dec 14, 2011. Camden County Regional Emergency Training Center, Blackwood, NJ.
52. Invited Speaker. Morris County's Medical Reserve Corps volunteers. Co-Sponsored by the NJ Public Health Training Center and the NJMS Department of Preventive Medicine & Community Health. Radioactivity, Fission and Radiation: Risks vs. Benefits to Humanity. Apr 2, 2012. Morris County Office of Health Management, Morris Plains, NJ.
53. Invited Speaker (2 lectures). 2012 Annual Meeting of the European Association of Nuclear Medicine. October 25-31, 2012. Milan, Italy.
54. Conference Lecture (one of two international invitees). 2013 Swedish Cancer Society Meeting, Gothenberg University, Gothenberg, Sweden. November 14-15, 2013.
55. Invited Speaker. Radiation Physics Department, Lund University, Lund, Sweden. November 18, 2013.
56. Invited Speaker. International Commission on Radiation Units and Measurements Annual Meeting, Bethesda, MD, May 15, 2014.
57. Invited Speaker. 2014 Annual Meeting of the Society of Nuclear Medicine & Molecular Imaging. St. Louis, Mo. June 8, 2014. Presentation of the 2014 Loevinger-Berman Award.
58. Invited Speaker. MIRD Radiopharmaceutical Dosimetry Symposium. Baltimore, MD. June 5, 2015. Radiopharmaceutical Therapy Involving Auger Emitters.
59. Invited Speaker. 2015 Annual Meeting of the Health Physics Society, July 13-14, 2015. Special Session: Health Risks from Low Doses and Low Dose-Rates of Ionizing Radiation, Session 1: Responses of Biological Systems to Low Doses. Where are We Today? Physical Considerations.
60. Invited Speaker. 2016 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging, Jun , 2016. Treatment Planning at the Cellular Level is Required to Sterilize Disseminated Tumor Cells with Radiopharmaceuticals.

MODERATOR AND PANEL MEMBER AT NATIONAL AND INTERNATIONAL MEETINGS:

1. Discussion Panel Member. Dosimetry of Administered Radionuclides. American College of Nuclear Physicians, Washington D. C., September 21-22, 1989.
2. Co-Moderator for Session 51 entitled Dosimetry/Radiobiology I: Small scale dosimetry-Suborgan, Cellular, DNA. 41st Annual Meeting of the Society of Nuclear Medicine. June 7, 1994.
3. Moderator for Session 74 entitled Dosimetry/Radiobiology - Radiation Bioeffects. 44th Annual Meeting of the Society of Nuclear Medicine. June 4, 1997.
4. Moderator for Session 47 entitled Dosimetry/Radiobiology - General. 45th Annual Meeting of the Society of Nuclear Medicine. June 9, 1998.
5. Introductory Lecture and Leader of Panel Discussion. 4th International Symposium on Biophysical Aspects of Auger Processes, University of Lund, Lund, Sweden. July 16, 1999.
6. Session Chair, 6th International Symposium Physical, Molecular, Cellular, and Medical Aspects of Auger Processes. Boston, MA, July 7, 2007.

7. Discussion Panel Member. Dosimetry/Radiobiology in Targeted Alpha Therapy – How Best to Implement Clinically? 2009 Annual Meeting of the Society of Nuclear Medicine, Toronto. June 14, 2009.
8. Panel Member. Victor Bond Symposium, Richland, Washington, May 3-5, 2010.
9. Blog Monitor. 2011 Annual Meeting of the National Council on Radiation Protection.
10. CME Session Co-Moderator, Radiation Protection in Nuclear Medicine. Annual Meeting of the Society of Nuclear Medicine. Miami Beach, FL, June 10, 2012.
11. CME Session Co-Moderator, Risks and Benefits of Medical Imaging with Ionizing Radiation. Annual Meeting of the Society of Nuclear Medicine. St. Louis, MO, June 8, 2014.
12. Moderator. Dosimetry Software Presentations. MIRD Radiopharmaceutical Dosimetry Symposium. Baltimore, MD. June 4, 2015.
13. Panel Member. 2015 Annual Meeting of the Health Physics Society, July 13-14, 2015. Special Session: Health Risks from Low Doses and Low Dose-Rates of Ionizing Radiation.
14. Organizer and Moderator. 2016 Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging, Jun 11-15, 2016. CE83: Loevinger-Berman Award: Clinical Significance of Cell Level Dosimetry for Treating Prostate and Breast Cancer with Alpha Particle Emitters.