CURRICULUM VITAE
WESLEY E. BOLCH

Professor
Department of Biomedical Engineering (www.bme.ufl.edu)
202 Nuclear Science Center, University of Florida
Gainesville, Florida 32611-8300
(352) 392-1401 ext. 308 (office),
(352) 392-3380 (fax)
wbolch@ufl.edu

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GENERAL INFORMATION

Education

Year	*University*	*Location*	*Degree*
1984	University of Florida	Gainesville, FL	BSE in Environ Engineering (High Honors)
1986	University of Florida	Gainesville, FL	ME in Radiological Physics
1988	University of Florida	Gainesville, FL	PhD in Radiological Physics

Professional Certification and Registration

1992 - Present	Professional Engineer, State of Texas, P.E. 73421
1994 - Present	American Board of Health Physics

Professional and Academic Appointments

2007-Pres	Affiliate Professor, Dept. of Small Animal Clinical Sciences, Veterinary College, UF
2007-Pres	Affiliate Professor, Dept. of Pediatrics, Division of Oncology and Hematology, UF
2001-Pres	Professor, Radiological & Biomedical Engineering, University of Florida
2004-2010	Research Associate, Florida Institute for Nuclear Detection and Security (FINDS)
2003-2010	Graduate Coordinator, Dept. of Nuclear & Radiological Engineering, UF
2000-2010	Director, Health Physics Graduate Program, University of Florida
1998-2001	Associate Professor, Biomedical Engineering Program, University of Florida
1996-2000	NRE Departmental Coordinator, Biomedical Engineering Graduate Program, Dept of Nuclear & Radiological Engineering, University of Florida
1995-2000	Director, Medical Physics Graduate Program, Dept of Nuclear & Radiological Engineering, University of Florida
1995-2001	Associate Professor, Radiological & Biomedical Engineering, Dept of Nuclear & Radiological Engineering, University of Florida
1994	Associate Professor, Dept of Nuclear Engineering, Texas A&M Univ.
1992-1994	Director, Health Physics Graduate Program, Texas A&M University
1988-1994	Assistant Professor, Dept. of Nuclear Engineering, Texas A&M Univ.
1986-1988	Doctoral Research Assistant, Health & Safety Research Division, Oak Ridge National Laboratory
1985-1988	U.S. Department of Energy, Health Physics Fellow
1981-1985	Student Research Assistant, Environmental Surveillance Program, Crystal River Nuclear Power Station, Dept. of Environmental Engineering Sciences, UF
1983-1984	Student Research Assistant, US NRC, Radiation Monitoring Program,

Significant Honors, Awards, and Appointments

2011	Institute of Physics Highlights of 2011 [*Phys Med Biol* **56** 3137–3161 (2011)]
2011	Institute of Physics Highlights of 2011 [*Phys Med Biol* **56** 2309-2356 (2011)]
2010	Institute of Physics Highlights of 2010 [*Phys Med Biol* **55** 1785–1814 (2010)]
2009	Institute of Physics Select Paper Award [*Phys Med Biol* **54** 3613-3629 (2009)]
2007	International Educator of the Year for the UF College of Engineering
2007	Institute of Physics Select Paper Award [*Phys Med Biol* **52** 3309-3333 (2007)]
2006	Appointed, University of Florida Research Foundation Professor for 2006-2009
2005	Appointed, Member of Committee 2 and Chair of DOCAL Task Group, International Commission on Radiological Protection (ICRP)

2005 Appointed, Member of the Main Council, National Council on Radiation Protection
2003 Institute of Physics Select Paper Award [*Phys Med Biol* **48** 805-820 (2003)]
2003 Research Award, Dept. of Nuclear & Radiological Engineering, University of Florida
1998 Teaching Improvement Program (TIP) Award, University of Florida
1996 Health Physics Faculty Research Award, U.S. Department of Energy
1993 Appointed, Medical Internal Radiation Dose (MIRD) Committee, Society of Nuclear Med.
1993 Elda E. Anderson Award, Health Physics Society (Outstanding Young Health Physicist)
1992 Health Physics Faculty Research Award, U.S. Department of Energy

Academic Societies

Tau Beta Pi (Engineering Honors)
Epsilon Lambda Chi (Engineering Leadership)
Phi Kappa Phi (Academic Honors)
Sigma Xi (Scientific Honors)

Professional Organizations – Membership

Organizational Name	*Acronym*	*Initial Membership Date*
American Academy of Health Physics	AAHP	1994
American Assoc. for the Advancement of Science	AAAS	1986
American Association of Physicists in Medicine	AAPM	1993
American Nuclear Society	ANS	1980
Health Physics Society	HPS	1980
Radiation Research Society	RRS	1986
Society of Nuclear Medicine	SNM	1991

PROFESSIONAL SERVICE

Professional Society Activities - Current or Recent

American College of Radiology (ACR)
Dosimetry Consultant, National Lung Screening Trial, ACR Medical Physics Working Group.
Health Physics Society, University of Florida Student Branch,
Faculty Advisor (2003 – Present)
International Commission on Radiological Protection (ICRP)
Member, ICRP Committee 2 on Dosimetry Calculations (2005 – Present)
Chair, ICRP Committee 2 Task Group on Dose Calculations (DOCAL) (2005 – Present)
National Council on Radiation Protection and Measurement (NCRP)
Member, Main Council of the NCRP (2005 – Present)
Member, Program Area Committee 6 (Radiation Measurements and Dosimetry) (2005 – Present)
Member, Scientific Committee 4-1 (Management of Contaminated Persons) (2004 – 2010)
Member, Scientific Committee 6-3 (Uncertainties in Internal Dosimetry) (2005 – 2010)
Society of Nuclear Medicine (SNM)
Member and Secretary, Medical Internal Radiation Dose (MIRD) Committee (1993 – Present)
Leader, MIRD Task Group on Alternatives to the Effective Dose (2009 – Present)
Leader, MIRD Task Group on Hybrid Phantoms and Skeletal Models (2009 – Present)
Member, MIRD Task Group on Isoeffective Dose Weighting Factors (2009 – Present)
Member, MIRD Task Group on Web-based Tools for Cellular Dosimetry (2009 – Present)
Member, MIRD Task Group on Patient to Family Member Doses (2009 – Present)
Member, MIRD Task Group on Bone Palliation Agents (2009 – Present)

Member, MIRD Task Group on Regional and Interstitial Therapies (2009 – Present)

Editorial Board Memberships

Health Physics Society (HPS)
Associate Editor, *Health Physics* (2002 – Present)

Institute of Physics (IOP)
Member, International Advisory Board, *Physics in Medicine and Biology* (2006 – Present)

Society of Nuclear Medicine (SNM)
Member, Editorial Board, *The Journal of Nuclear Medicine* (2002 – Present)

Springer-Verlag Publishers
Member, Editorial Board, *Radiation and Environmental Biophysics* (2008 – Present)

Technical Program Committees

American Association of Physicists in Medicine (AAPM)
Abstract Reviewer, Scientific Program Committee, 2011 Annual Meeting
Abstract Reviewer, Scientific Program Committee, 2012 Annual Meeting

International Symposium on Internal Dosimetry of Radionuclides
Member of the Scientific Committee, Vienna, Austria, October 11-15, 2010

International Symposium on Standards and Quality Assurance in Medical Dosimetry
Chair, Session on Internal Dosimetry – Computational Phantoms and Radiological Modeling
International Atomic Energy Agency, Vienna, Austria, November 9-12, 2010

International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry
Member of Technical Program Committee, Toronto, Canada, June 13-17, 2009

Internal Workshop on Computational Phantoms
Member, International Steering Committee (2011 – Present)
Session Chair, 3rd International Workshop, Beijing, China, August 8-9, 2011

Society of Nuclear Medicine (SNM)
Coordinator, MIRD Committee Continuing Education Session, June 15, 2008.
Session Chair, Dosimetry and Data Analysis, 2011 Annual Meeting, June 6, 2011.

Reviews – Journals/Books

Reviewer, *Acta Physica Polonica* (2010 – Present)
Reviewer, *Applied Radiation & Isotopes* (2011 – Present)
Reviewer, *Cancer Biotherapy and Radiopharmaceuticals* (2004 – Present)
Reviewer, *European Journal of Nuclear Medicine* (2006 – Present)
Reviewer, *Health Physics* (1989 – Present)
Reviewer, *IEEE Transactions on Nuclear Science* (2006 – Present)
Reviewer, *Imaging and Vision Computing* (2006 – Present)
Reviewer, *International Journal of Computing Assisted Radiology & Surgery* (2011 – Present)
Reviewer, *International Journal of Molecular Imaging* (2011 – Present)
Reviewer, *International Journal of Radiation Biology* (2010 – Present)
Reviewer, *International Journal of Radiation Oncology, Biology, and Physics* (1997)
Reviewer, *Journal of Bone and Mineral Research* (2001)
Reviewer, *Journal of Nuclear Medicine* (1996 – Present)
Reviewer, *Journal of Radiological Protection* (2011 – Present)
Reviewer, *Medical Physics* (1994 – Present)
Reviewer, *Radiation Physics and Chemistry* (1998 – Present)
Reviewer, *Radiation Research* (1992 – Present)
Reviewer, *Radiation Protection Dosimetry* (1992 – Present)

Reviewer, *Radioprotection* (2011 – Present)
Reviewer, *Proceedings of the Mayo Clinic* (2006 – Present)
Book Reviewer, *Radiation Research* (1995 – Present)
Book Reviewer, *Physics Today* (1997)

Reviews – Grants

Reviewer, U.S. Department of Energy, Office of Health and Environmental Research (1993, 1995)
Reviewer, U.S. Department of Energy, Office of Nuclear Energy (NEER Program) (2000 – present)
Reviewer, National Institute for Occupational Safety & Health (NIOSH), Special Emphasis Panel, (Nov 1998, July 2002, June 2004)
Site Reviewer, National Institute for Occupational Safety & Health (NIOSH), Training Grant Program (TPG), (Dec 2000, Dec 2003, Feb 2004)
Site Reviewer, National Institute for Occupational Safety & Health (NIOSH), Education and Research Center (ERG), (Jan 2007)
Reviewer, U.S. Department of Energy, Office of Health and Biomedical Research (2004)

Reviews – Governmental Reports

Reviewer, National Council on Radiation Protection and Measurements (NCRP)
Presidential Report on Radiation Protection Advice for the Pulsed Fast Neutron System Used in Security Surveillance. (July 2003)
Reviewer, Battelle Memorial Institute, Eastern Regional Technology Center
Proposed Approaches for Calculating Radiological and Chemical Doses from Inhaled and Ingested Depleted Uranium (May 2003)
Reviewer, Battelle Memorial Institute, Eastern Regional Technology Center
Human Health Risk Assessment for Capstone Depleted Uranium Aerosols (December 2003)

Professional Society Activities - Past

American Nuclear Society
Faculty Advisor, Texas A&M Student Branch (1989-1992)

Health Physics Society
Member, Manpower and Professional Education Committee (1990-1991)
Faculty Advisor, Texas A&M Student Branch (1991- 1994)
Lecturer, Professional Enrichment Program (1992-1998)
Lecturer, Continuing Education Session (1997-1998)
Lecturer, Summer School on Internal Radiation Dosimetry (1994)
Lecturer, Summer School on External Radiation Dosimetry (1996)
Chair, Academic Education Committee (1992-1997)
Co-Chair, Academic Education Committee (1991-1992) (1998-1999)
Member, Nominating Committee (2003-2006)
Member, Board of Directors (2000-2003)
Member, Finance Committee (2000-2003)
Member, HP Accreditation Subcommittee, Academic Education Committee (1998– 2009)

Florida Chapter, Health Physics Society
Executive Council Member (1999-2002)
President-Elect (2002-2003)
President (2003-2004)

Health Physics Program Directors Organization (HPPDO)
Chair (1999-2005)

Society of Nuclear Medicine

Member, Scientific Program Committee,
1st International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (2003-2004)
Member, Scientific Program Committee, Dosimetry/Radiobiology Sessions (2000)
Leader, MIRD Task Group on Dosimetric Models of the Head and Brain, Appointed (1994-1999)
Leader, MIRD Task Group on Dosimetric Models of the Kidneys (1997-2003)
Sub-chairman, Dosimetry/Radiobiology Sessions (1995)
Member, Scientific Program Committee, Dosimetry/Radiobiology Sessions (1993)
Lecturer, MIRD Categorical Seminar and Continuing Education Sessions (1993-1999)
Member, MIRD Task Group on Normal Tissue Dose Response (2001-2005)
Member, Radiobiological Effects of Ionizing Radiation (REIR) Committee (1995-2004)

South Texas Chapter - Health Physics Society

President-Elect, Elected (1994-1995)
Secretary and Executive Council Member, Elected (1992-1994)
Chair, Student Assistance Committee, Appointed (1990-1994)

University Activities

University of Florida

Minority Mentor Program (1995 - 1999)
Member, UF McKnight Brain Institute (1996 – Present)
Member, 4.7 T Advisory Committee, Center for Structural Biology (1996-1999)
Reviewer, Interdisciplinary Research Initiative, ORTGE (1996)
Member, Computer Core Advisory Committee, Center for Structural Biology (1996-1999)
Search Committee Member, Department of Radiology (1997)
Member, International Focus Subcommittee on Teaching (2001-2002)
Member, Faculty Task Group on UF Research One Programs (2002)
Member, UF Shands Cancer Center (2004 – Present)
Chair, Reactor Safety Review Subcommittee (2011 – Present)
Member, Radiation Safety Control Committee (2011 – Present)

Texas A&M

Texas A&M Chapter of Sigma Xi
Member, Interdisciplinary Research Taskforce (1991-1994)
Organizer, Campus Workshop, *Electronic Communication and Data Retrieval*, (October 1991)
Member, University Reactor Safety Board (1993-1994)
Search Committee Member, Engineering Representative (1992)
Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine

College Activities

University of Florida

Chair, College of Engineering Core Program Task Committee, Appointed (1995-2001)
Member, Biomedical Engineering Graduate Academic Program (BEGAP) Committee, Appointed (1995-1997)
Member, Biomedical Engineering Program (1997-2002)
Member, Academic Committee (1998-2006)
Member, Computational Resources Committee (1998)
Member, Public Relations Subcommittee (1998-2001)
Member, Search Committee for Chair of Biomedical Engineering (2001-2002)
Member, Sabbatical Leave Review Committee (2002)
Chair, Sabbatical Leave Review Committee, Appointed (2003-2004)

Member, Review Committee for the Office of Engineering Research (2004)
Member, Scholarship, Fellowship & Awards Committee (1999 - 2006)
Member, Honors and Awards Committee (2006 – 2008)
Member, Tenure and Promotion Committee (2007 – Present)
Chair, Tenure and Promotion Committee (2009 – Present)
Member, Department of Biomedical Engineering Chair Search Committee (2011 – Present)

Texas A&M
Scholarship, Honors, and Awards Committee, Appointed (1990-1992)

Departmental Activities

University of Florida
Member, Research Space and Laboratory Instrumentation Committee, Appointed (1995-2000)
Director, Medical Physics Graduate Program, Appointed (1995-2000)
Director, Health Physics Graduate Program, Appointed (2000-2011)
Chair, Department Chair Search Committee, Appointed (2000-2001)
NRE Graduate Coordinator, Appointed (2003-2011)
Chair, BME Department Executive Committee (2011 – Present)
Member, BME Department Undergraduate Affairs Committee (2011 – Present)
Members, BME Department Faculty Search Committee (2011 – Present)
Coordinator, Medical Physics Track, BME Undergraduate Program (2011 – Present)

Texas A&M
Texas A&M Student Branch of the Health Physics Society, Advisor (1991-1994)
EAC-ABET Coordinator, Radiological Health Engineering Program (1992)
University Coordinator, U.S. Department of Energy Fellowship Programs (1992-1994)
Program Director, Health Physics and Radiological Health Engineering Programs (1992-1994)

CONSULTING

Radiological Engineering Services, LLC
Wesley E. Bolch, PhD, PE, CHP, President and CEO
Essex Woodlands Health Ventures (2005 – Present)
Oraya Therapeutics (2006 – Present)
Sanford Cohen & Associates (SC&A), Associate Member (2008 – Present)

PUBLICATIONS

Notes: *The senior/principal author(s) are underlined*
Corresponding Author is indicated in bold
Graduate students of Dr. Bolch are indicated by an asterisk

Books and Book Chapters

1. *Answers to Problems in Atoms, Radiation, and Radiation Protection* by JE Turner, TA Rhea, and WE Bolch, Pergamon Press, New York, 1987, 14 pages.
2. "Radiation Interactions and Energy Transport in the Condensed Phase", by RH Ritchie, RN Hamm, JE Turner, HA Wright, and WE Bolch in *Physical and Chemical Mechanisms in Molecular Radiation Biology*, Basic Life Sciences, Vol. 58, WA Glass and MN Varma, Editors, Plenum Press, New York, 1991, pp. 99-135.
3. "Monte Carlo Track-Structure Calculations for Aqueous Solutions Containing Biomolecules", by JE Turner, RN Hamm, RH Ritchie, and WE Bolch in *Computational Approaches in Molecular Radiation Biology*, Basic Life Sciences, Vol 63, MN Varma and A Chatterjee, Editors, Plenum Press, New York, 1994, pp. 155-166.
4. "Interactions of Low-Energy Electrons with Condensed Matter: Relevance for Track Structure", by RH Ritchie, RN Hamm, JE Turner, and WE Bolch in *Computational Approaches in Molecular Radiation Biology*, Basic Life Sciences, Vol 63, MN Varma and A Chatterjee, Editors, Plenum Press, New York, 1994, pp. 33-47.
5. "Chapter 2 - Physical and Chemical Interactions of Radiation with Living Tissues", by WE Bolch in *Internal Radiation Dosimetry*, O. G. Raabe, Editor, Medical Physics Publishers, New York, 1994, pp. 27-40.
6. "Chapter 3 - Basics of External Dosimetry", by WE Bolch and LG Bouchet* in Applications of New Technology in *External Dosimetry*, J. G. Higginbotham, Editor, Medical Physics Publishers, New York, 1996, pp. 45-76.
7. "Chapter 15 - Monte Carlo Methods and Mathematical Models in the Dosimetry of the Skeleton and Bone Marrow", by LG Bouchet, WE Bolch, MG Stabin, KF Eckerman, JW Poston, and AR Bill, in *Monte Carlo Calculations in Nuclear Medicine: Therapeutic Applications*, Institute of Physics (2002).
8. "Chapter 5 - Mathematical Models of Human Anatomy", by JW Poston, WE Bolch, and LG Bouchet in *Monte Carlo Calculations in Nuclear Medicine: Therapeutic Applications*, Institute of Physics (2002).
9. "Chapter 1 – The Anatomical and Physiological Bases for Internal Dosimetry", by WE Bolch in *Practical Applications of Internal Dosimetry*, WE Bolch, Editor, Medical Physics Publishers, New York (2002).
10. "Chapter 6 – Medical Patient Dosimetry", by WE Bolch and CJ Watchman in *Operational Health Physics,* David Waite, Editor, Medical Physics Publishers, New York (2005).
11. "Chapter 2 – The Stylized Computational Phantoms developed at ORNL and Elsewhere", by KF Eckerman, JW Poston, Sr., WE Bolch, and XG Xu, in *Handbook of Anatomic Models for Radiation Dosimetry – Series in Medical Physics and Biomedical Engineering*, George Xu and Keith Eckerman, Editors, Taylor and Frances, New York (2009).
11. "Chapter 8 – The University of Florida Pediatric Phantom Series", by C Lee*, D Lodwick*, D Hasenauer*, S Whalen*, JL Williams, and WE Bolch, in *Handbook of Anatomic Models for Radiation Dosimetry – Series in Medical Physics and Biomedical Engineering*, George Xu and Keith Eckerman, Editors, Taylor and Frances, New York (2009).
12. "Chapter 15 – The ICRP Reference Computational Phantoms", by M Zankl, KF Eckerman, and WE Bolch, in *Handbook of Anatomic Models for Radiation Dosimetry – Series in Medical Physics and Biomedical Engineering*, George Xu and Keith Eckerman, Editors, Taylor and Frances, New York (2009).

13. "Chapter 21 – Computed Tomography for Pediatric Patients", by WE Bolch, C Lee*, C Lee*, J Hurtado*, and JL Williams, in *Handbook of Anatomic Models for Radiation Dosimetry – Series in Medical Physics and Biomedical Engineering*, George Xu and Keith Eckerman, Editors, Taylor and Frances, New York (2009).

14. "Chapter 30 – Summary and Future Needs Related to Computational Phantoms", by XG Xu, MG Stabin, WE Bolch, and WP Segars, in *Handbook of Anatomic Models for Radiation Dosimetry – Series in Medical Physics and Biomedical Engineering*, George Xu and Keith Eckerman, Editors, Taylor and Frances, New York (2009).

Monographs

1. *Head and Brain Dosimetry – Absorbed Fractions of Energy and Absorbed Dose per Unit Cumulated Activity within Pediatric and Adult Head and Brain Models for Use in Nuclear Medicine Internal Dosimetr*y, LG Bouchet*, WE Bolch, BA Wessels, and DA Weber, Society of Nuclear Medicine, Reston, Virginia, 200 pages (1999).

2. *MIRD Cellular S Values - Self-Absorbed Dose per Unit Cumulative Activity for Selected Radionuclides and Monoenergetic Electron and Alpha Particle Emitters Incorporated into Different Cell Compartments,* SM Goddu, RW Howell, LG Bouchet*, WE Bolch, and DV Rao, Society of Nuclear Medicine, Reston, Virginia, 180 pages (1997).

3. NCRP Report. No. 161 - *Management of Persons Contaminated with Radionuclides,* National Council on Radiation Protection, Scientific Committee 4-1, W Bair, Chair, WE Bolch, Member (2009).

4. ICRP Publication 110 - *Adult Reference Computational Phantoms.* International Commission on Radiological Protection, Committee 2, Task Group on Dose Calculations, WE Bolch, Chair. ICRP Publication 108. Annuals of the ICRP, 109 pages (2009).

5. NCRP Report. No. 164 – *Uncertainties in Internal Radiation Dose Assessment,* National Council on Radiation Protection, Scientific Committee 6-3, Andre Bouville, Chair, WE Bolch, Member (2010).

Refereed Journal Articles *(Published)*

1. **AES Green**, JM Schwartz, RP Singhal, and WE Bolch, "Wind Roses for Florida", *JAPCA* **32**, 822-825 (1982).

2. **WE Bolch**, JE Turner, RN Hamm, HA Wright, and GS Hurst, "A Method of Obtaining Neutron Dose and Dose Equivalent from Digital Measurements and Analysis of Recoil-Particle Tracks", *Health Phys*. **53**, 241-253 (1987).

3. **JE Turner**, RN Hamm, HA Wright, RR Ritchie, JL Magee, A. Chatterjee, and Wesley E. Bolch, "Studies to Link the Basic Radiation Physics and Chemistry of Liquid Water", *Radiat. Chem. Phys*. **32**, 503-510 (1988).

4. **WE Bolch**, JE Turner, H Yoshida, KB Jacobson, HA Wright, and RN Hamm, "Monte Carlo Calculations of Free Ammonia Production in Deoxygenated Solutions of Glycylglycine Irradiated by X-rays and ^{60}Co gamma-rays", *Radiat. Res*. **121**, 248-256 (1990).

5. **H Yoshida**, WE Bolch, KB Jacobson, and JE Turner, "Measurement of Free Ammonia Produced by X-irradiation of Aqueous Solutions of Glycylglycine", *Radiat. Res*. **121**, 257-261 (1990).

6. **WE Bolch**, JE Turner, H Yoshida, KB Jacobson, RN Hamm, and HA Wright, "Monte Carlo Simulation of Free Radical Attack to Biomolecules Irradiated in Aqueous Solution", *Radiat. Prot. Dosim.* **31**, 43-46 (1990).

7. **H Yoshida**, WE Bolch, JE Turner, and KB Jacobson, "The Radiation Chemistry of Glycylglycine in Aqueous Solutions", *Radiat. Prot. Dosim.* **31**, 67-70 (1990).

8. G Akabani, **JW Poston, Sr**., and WE Bolch, "Estimates of Absorbed Fractions in Small Volumes for Selected Radionuclides", *J. of Nucl. Med.* **32**, 835-839 (1991).

9. **JE Turner**, WE Bolch, H Yoshida, KB Jacobson, HA Wright, RN Hamm, RH Ritchie, and CE Klots, "Radiation Damage to a Biomolecule: New Physical Model Successfully Traces Molecular Events", *Int. J. Radiat. Appl. Instrum. Part A (Appl. Radiat. Isot.)* **42**, 995-1001 (1991).
10. **H Yoshida**, JE Turner, WE Bolch, KB Jacobson, and WM Garrison, "Measurement of Products from X-Irradiated Glycylglycine in Oxygen-Free Aqueous Solutions", *Radiat. Res.* **129**, 258-264 (1992).
11. **CK Brown***, WE Bolch, and JW Poston, Sr., "Characterization of Al_2O_3:C Thermoluminescent Dosimeter Response to Beta Radiation," *Radiat. Prot. Manag.* **11**, No. 1 (Jan/Feb) 30-40 (1994).
12. MG Stabin, **JE Turner**, RN Hamm, and WE Bolch, "Track Structure Simulation and Determination of Product Yields in the Radioloysis of Water Containing Various Solutes," *Radiat. Prot. Dosim.* **52**, 255-258 (1994).
13. **WE Bolch** and Eun-Hee Kim*, "Calculations of Electron Single-Event Distributions for Use in Internal Beta Microdosimetry," *Radiat. Prot. Dosim.* **52**, 77-80 (1994).
14. **RH Ritchie** and WE Bolch, "Aloof-Trajectory Interactions of Low-Energy Electrons with Condensed Matter," *Radiat. Prot. Dosim.* **52**, 135-138 (1994)
15. LG Bouchet*, **WE Bolch**, DA Weber, HL Atkins, and JW Poston, Sr., "A Revised Dosimetric Model of the Adult Head and Brain," *J. Nucl. Med.* **37**, 1226-1236 (1996).
16. EK Kim*, **WE Bolch**, WD Reece, and JW Poston, Sr., "A Microdosimetric Algorithm for Electron Point Kernel Data: 2. Beta-Particle Sources", *Radiat. Prot. Dosim*. **63**, 253-261 (1996).
17. EK Kim*, **WE Bolch**, WD Reece, and JW Poston, Sr., "A Microdosimetric Algorithm for Electron Point Kernel Data: 1. Monoenergetic-Electron Sources", *Radiat. Prot. Dosim*. **63**, 245-252 (1996).
18. **JW Poston, Jr.***, KA Kodimer*, WE Bolch, and JW Poston, Sr., "Calculation of Absorbed Energy in the Gastrointestinal Tract", *Health Physics* **71**, 300-306 (1996).
19. **JW Poston, Jr.***, KA Kodimer*, WE Bolch, and JW Poston, Sr., "A Revised Model for the Calculation of Absorbed Energy in the Gastrointestinal Tract", *Health Physics* **71**, 307-314 (1996).
20. **RD Naquin**, JW Poston, Sr., and WE Bolch, "Response of the Al_2O_3:C Thermoluminescent Dosimeter in a Research Reactor Environment", *Radiat. Prot. Manag.* **13**, 32-38 (1996).
21. TH Wagner*, **WE Bolch**, and W Vernetson, "An Improved Health Physics Laboratory Exercise in Neutron Activation Analysis" *Radiat, Prot. Manag.* **15**, 45-52 (1998).
22. DW Jokisch*, PW Patton*, LG Bouchet*, J Rifkin, BA Inglis, and **WE Bolch**, "NMR microscopy of trabecular bone and its role in skeletal dosimetry" *Health Phys.* **75** (6): 584-596 (1998).
23. **WE Bolch**, JE Turner, H Yoshida, KB Jacobson, RN Hamm, and OH Crawford, "Product Yields from Irradiated Glycylglycine in Oxygen-Free Solutions: Monte Carlo Simulations and Comparison with Experiments", *Radiat. Env. Biophys*. **37**: 157-166 (1998).
24. **WE Bolch**, JS Robertson, LG Bouchet*, BW Wessels, AK Erdi, JA Siegel, RW Howell, B Aydogan*, S Costes*, and EE Watson, "MIRD Pamphlet No. 17: The Dosimetry of Nonuniform Activity Distribution - Radionuclide S Values at the Voxel Level" *J. Nucl. Med.* **40** (1): 11S-36S (1999).
25. LG Bouchet*, **WE Bolch**, DA Weber, HL Atkins, JW Poston, Sr., "MIRD Pamphlet No. 15: Radionuclide S Values in a Revised Dosimetric Model of the Adult Head and Brain" *J. Nucl. Med*. **40** (3): 62S-101S (1999).
26. LG Bouchet*, **WE Bolch**, "Five Pediatric Head and Brain Mathematical Models for Use in Internal Dosimetry", *J. Nucl. Med*. **40** (8): 1327-1336 (1999).
27. LG Bouchet*, DW Jokisch*, **WE Bolch**, "A Three-Dimensional Transport Model for Determining Absorbed Fractions of Energy for Electrons within Trabecular Bone" *J. Nucl. Med*. **40** (11): 1947-1966 (1999).
28. LG Bouchet*, **WE Bolch**, "A Three-Dimensional Transport Model for Determining Absorbed Fractions of Energy for Electrons within Cortical Bone" *J. Nucl. Med*. **40** (12): 2115-2124 (1999).
29. LG Bouchet*, WE Bolch, RW Howell, and **DV Rao**, "S Values for radionuclides localized within the skeleton", *J. Nucl. Med*. **41** (1): 189-212 (2000).

30. A Bishayee, DV Rao, LG Bouchet*, WE Bolch, **RW Howell**, "Protection by DMSO against cell death caused by intracellularly localized I-125, I-131, and Po-210" *Radiat. Res.* **153** (4): 416-427 (2000).

31. LG Bouchet*, WE Bolch, SM Goddu, RW Howell, and **DV Rao**, "Considerations in the selection of radiopharmaceuticals for palliation of bone pain from metastatic osseous lesions", *J. Nucl. Med*. **41** (4): 682-687 (2000).

32. SM Goddu, Bishayee, A., LG Bouchet*, WE Bolch, DV Rao, and **RW Howell**, "Marrow toxicity of P-33 versus P-32 orthophosphate: implications for therapy of bone pain and bone metastases" *J. Nucl. Med*. **41** (41): 941-951 (2000).

33. A Bishayee, DV Rao, SC Srivastava, LG Bouchet*, WE Bolch, and **RW Howell**, "Marrow-sparing effects of Sn-117m(4+) DTPA for radionuclide therapy of the skeleton" *J. Nucl. Med.* **41** (12): 2043-2050 (2000).

34. DA Rajon*, DW Jokisch, PW Patton*, AP Shah*, and **WE Bolch**, "Voxel size effects in 3D NMR microscopy performed for trabecular bone dosimetry" *Med. Phys.* **27** (11): 2624-2635 (2000).

35. BD Pomije*, CH Huh*, MA Tressler, WE Bolch, and **DE Hintenlang**, "Comparison of angular "free-in-air" and "tissue-equivalent phantom" response measurements in p-MOSFET dosimeters" *Health Phys.* **80** (5): 497-505 (2001).

36. DW Jokisch*, LG Bouchet, PW Patton*, DA Rajon*, and **WE Bolch**, "Beta-particle dosimetry of the trabecular skeleton using Monte Carlo transport in 3D digital images" *Med. Phys* **28** (7): 1505-1518 (2001).

37. DW Jokisch*, PW Patton*, DA Rajon*, BA Inglis, and **WE Bolch**, "Chord distributions across 3D digital images of a human thoracic vertebra" *Med. Phys.* **28** (7): 1493-1504 (2001).

38. **WE Bolch**, "Alpha-particle emitters in radioimmunotherapy: New and welcomed challenges to medical internal dosimetry" *J. Nucl. Med.* **42** (8): 1222-1224 (2001).

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Refereed Journal Articles *(In Press)*

1.

Refereed Journal Articles *(Submitted or Re-submitted)*

1. RF Hobbs, H Song, CJ Watchman, WE Bolch, AK Aksnes, R Ramdahl, GD Flux, and **G Sgouros**, "Bone marrow toxicity considerations from ^{223}Ra alpha-emitter radiopharmaceutical therapy" *Phys Med Biol* (submitted).

2. S Popwell, KB Wagener, C Batich, R Milner, and **WE Bolch**, "Synthesis of polymers containing ligands for radionuclide cancer therapies", *Cancer Biother Radiopharm* (submitted).

3. AA Bahadori, JM Scheiman, M Van Baalen, MR Shavers, EJ Semones, and **WE Bolch**, "One-dimensional Monte Carlo transport of space radiation using PHITS: A comparison with NASA transport and uncertainty analysis for astronaut phantoms " *Adv Space Res* (submitted).

Refereed Journal Articles *(In Preparation)*

1. DA Rajon, WE Bolch, **RW Howell**, "Lognormal distribution of cellular uptake of radioactivity: Effect of labeled cell fractions on three-dimensional simulation of populations in carbon scaffolds" *J Nucl Med* (in preparation).

Proceedings and Transactions *(Refereed)*

1. MW Stafford, WE Bolch, and WE Bolch, "Development of a Data Base Management System for Environmental Radioactivity Data", *Proceedings of the 17th Midyear Topical Meeting of the Health Physics Society,* Pasco, Washington, February 5-9, 1984, pp. 317-324.

2. WE Bolch, JK Thomas, KL Peddicord, SM Stevenson, and A Willoughby, "A Radiological Assessment of Space Nuclear Power Operations Near Space Station Freedom", *Transactions of the 7th Symposium on Space Nuclear Power Systems,* Albuquerque, New Mexico, January 8-11, 1990, pp. 540-549.

3. TW Shearer, G Akabani, WE Bolch, and JW Poston, Sr., "A Model for Electron and Beta Energy Deposition within Trabecular Bone", *Proceedings of the Fifth International Radiopharmaceutical Dosimetry Symposium*, Oak Ridge, Tennessee, May 7-10, 1991, pp. 290-296.
4. JC Liu*, G Akabani, WE Bolch, and JW Poston, Sr., "Calculations of Scaled Dose Kernels for Electrons in Tissue", *Proceedings of the Fifth International Radiopharmaceutical Dosimetry Symposium*, Oak Ridge, Tennessee, May 7-10, 1991, pp. 297-308.
5. K Lee Peddicord, WE Bolch, and JK Thomas, "Radiation Protection Considerations in Space Station Missions", *Transactions of the 1991 Winter Meeting of the American Nuclear Society*, San Francisco, California, November 10-14, 1991, pp. 458-459.
6. WE Bolch, S Costes*, LG Bouchet*, BW Wessels, JA Siegel, and JS Robertson, "Cubical S values for the Rapid Assessment of Suborgan Dosimetry for Nonuniform Activity Distributions," 6th International Symposium on Radiopharmaceutical Dosimetry, Gatlinburg, Tennessee, May 6-10, 1996, pp. 210-225.
7. WE Bolch and CR Jones, "Viability of the United States Academic Community in Support of Nuclear Energy", International Workshop on Infrastructure for Nuclear Energy Deployment, Organization for Economic and Cooperative Development (OECD) Nuclear Energy Agency, Paris, France, June 10-11, 1996, pp. 151-179.
8. LM Thomsen*, WE Bolch, and WH Ellis, "Innovative Workstation Improves Laboratory Course at the University of Florida", *Transactions of the 1996 Annual Meeting of the American Nuclear Society*, Orlando, Florida, June 1-5, 1997.
9. WE Bolch and AP Shah*, "Skeletal dose estimates via a Paired-Image Radiation Transport (PIRT) model", *Transactions of the 2004 Winter Meeting of the American Nuclear Society*, Washington, DC, November 14-18, 2004.
10. A Al-Basheer, M Ghita, G Sjoden, W Bolch, and C Lee, "Whole-body dosimetry simulations using the PENTRAN-MP Sn code system", *Transactions of the 2007 Annual Meeting of the American Nuclear Society,* Boston, Massachusetts, June 24-28, 2007.
11. WE Bolch, L Padilla*, C Lee*, R Milner, and A Shahlaee, "An image-based skeletal canine model for pre-clinical evaluations of osteosarcoma molecular radiotherapy", *Transactions of the Computational Medical Physics Working Group – Workshop II – of the American Nuclear Society,* Gainesville, Florida, October 1-3, 2007.
12. C Lee*, D Lodwick*, and WE Bolch, "Effect of subcutaneous fat on organ dose in radiography and computed tomography: A Monte Carlo calculational study", *Transactions of the Computational Medical Physics Working Group – Workshop II – of the American Nuclear Society,* Gainesville, Florida, October 1-3, 2007.
13. KN Kielar*, WE Bolch, and AP Shah, "A skeletal reference dosimetry model for the adult female", *Transactions of the Computational Medical Physics Working Group – Workshop II – of the American Nuclear Society,* Gainesville, Florida, October 1-3, 2007.
14. D Hasenauer*, C Lee*, DL Lodwick*, CJ Watchman, and WE Bolch, "Development of hybrid computational newborn phantom for dosimetry calculation: the skeleton" *Transactions of the Computational Medical Physics Working Group – Workshop II – of the American Nuclear Society,* Gainesville, Florida, October 1-3, 2007.
15. S Whalen* and WE Bolch, "An anthropometric approach to assigning reference phantoms to individual patients for medical organ dose reconstruction", *Transactions of the Computational Medical Physics Working Group – Workshop II – of the American Nuclear Society,* Gainesville, Florida, October 1-3, 2007.

Proceedings and Transactions *(Non-refereed)*

1. WE Bolch, JE Turner, H Yoshida, KB Jacobson, "Calculated Yields of Ammonia in the Radiolysis of Deoxygenated Solutions of Glycylglycine", *Proceedings of the 11th Werner Brandt Workshop on*

Penetration Phenomena of Charged Particles in Matter Oak Ridge, Tennessee, April 14-15, 1988, pp. 281-296.

2. JE Turner, WE Bolch, H Yoshida, KB Jacobson, OH Crawford, RN Hamm, and HA Wright, "The Irradiation of Glycylglycine in Aqueous Solution - A Case Study of Calculations from Track Structure to Biochemical Change", *Proceedings of the 12th Werner Brandt Workshop on Penetration Phenomena of Charged Particles in Matter,* San Sebastian, Spain, September 4-7, 1989, pp. 154-165.

3. SM Stevenson, WE Bolch, and JK Thomas, "Accommodation of Nuclear Power and Propulsion Concepts", *Proceedings of the Space Station Evolution Conference* League City, Texas, February 6-8, 1990, pp. 320-332.

4. WE Bolch, "Health Physics Academic Programs: A Current Snapshot", *Proceedings of the 28th Midyear Topic Meeting of the Health Physics Society*, Charleston, South Carolina, January 29 - February 1, 1995, pp. 51-60.

5. JW Poston, Sr., WE Bolch, and JC Rock, "Health Protection Engineering: A Merging of Health Physics, Industrial Hygiene, and Safety Engineering at Texas A&M University", *Proceedings of the 28th Midyear Topic Meeting of the Health Physics Society*, Charleston, South Carolina, January 29 - February 1, 1995, pp. 79-84.

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1. WE Bolch, "Expressionist, Version 2.02", Software Review Section, *Health Phy*. **58**, 226 (1990).

2. MR Shavers and WE Bolch, "Freditor, Version 1.5", Software Review Section, *Health Phy*. **61**, 431 (1991).

3. WE Bolch, "Microdosimetry and Its Applications", Book Review, *Physics Today*, December 1997, 70-71.

4. WE Bolch, "Introduction to Nuclear Concepts for Engineers", Book Review, *Health Physics*, **78**, 102-103 (2000).

5. WE Bolch, "Medical Image Analysis", Book Review, *Health Physics*, **86**, 429 (2004).

Reports and Technical Memoranda

1. EE Watson, MG Stabin, and WE Bolch, "MIRDOSE: An IBM Basic Program for Determining Internal Dose by the MIRD Method", Oak Ridge Associated Universities, Copyright 1984.

2. WE Bolch, JE Turner, and RN Hamm, "An Algorithm for Unfolding Neutron Dose and Dose Equivalent from Digitized Recoil-Particle Tracks", Oak Ridge National Laboratory, ORNL/TM-10168 (1986).

3. WE Bolch, JE Turner, H Yoshida, KB Jacobson, RN Hamm, HA Wright, RH Ritchie, and CE Klots, "Monte Carlo Simulation of Indirect Damage to Biomolecules Irradiated in Aqueous Solution - The Radiolysis of Glycylglycine", Oak Ridge National Laboratory, ORNL/TM-10851 (1988).

4. WE Bolch, JK Thomas, KL Peddicord, P Nelson, DT Marshall, and DM Busche, "A Radiological Assessment of Nuclear Power and Propulsion Operations near Space Station Freedom", NASA CR-185185, Final Report for the project "Radiological Impact of Space Nuclear Power Applications," (NASA Lewis Research Center Contract NAG 3-944) Texas Engineering Experiment Station, Texas A&M University, College Station, Texas (1990).

5. AJ Willoughby, SM Stevenson, WE Bolch, and JK Thomas, "Astronaut Radiation Safety Evaluation for Combinations of Natural and Man-Made Sources", NASA Lewis Research Center, TM-103138 (1990).

6. KP Kim, WE Bolch, WE Bolch, CY Wu, and JW Nall, "Risk Assessment of Airborne Particulates in the Phosphate Industry", FIPR Report (March 2006).

7. KP Kim, WE Bolch, WE Bolch, CY Wu, and JW Nall, "Assessment of Airborne Particulate Lung Solubility and Internal Dose to Phosphate Workers", FIPR Report (June 2006).

Miscellaneous Publications

1. Wesley E. Bolch, "A Feasibility Study for Running Segments of a Systems Ecology Model Concurrently on Analog and Digital Computers", High Honors Program, College of Engineering, University of Florida, (1984).
2. Wesley E. Bolch, *An Algorithm for Unfolding Neutron Dose and Dose Equivalent from Digitized Recoil-Particle Tracks*, Master's Thesis, University of Florida (1986).
3. Wesley E. Bolch, *Monte Carlo Simulation of Indirect Damage to Biomolecules Irradiated in Aqueous Solution - The Radiolysis of Glycylglycine*, Ph.D. Dissertation, University of Florida (1988).
4. WE Bolch, "Health Physics Education - Back to the Future", *Health Physics Society Newsletter*, Vol. XXI, No. 6, June 1993.

PRESENTATIONS

International Professional Meeting Presentations - ***WE Bolch Presenter***

Notes: *The presenting author is underlined*
Graduate student co-authors of Dr. Bolch are indicated by an asterisk

1. WE Bolch, JE Turner, H Yoshida, KB Jacobson, RN Hamm, and HA Wright, "Monte Carlo Simulation of Indirect Radiation Damage to Biomolecules Irradiated in Aqueous Solution", 10th Symposium on Microdosimetry, Rome, Italy, May 21-26, 1989.
2. JC Liu*, G Akabani*, WE Bolch, and JW Poston, Sr., "Calculations of Scaled Dose Kernels for Electrons in Tissue," Fifth International Radiopharmaceutical Dosimetry Symposium, Oak Ridge, Tennessee, May 7-10, 1991.
3. WE Bolch and EH Kim*, "Calculations of Electron Single-Event Distributions for Use in Internal Beta Microdosimetry," 11th Symposium on Microdosimetry, Gatlinburg, Tennessee, September 13-18, 1992.
4. WE Bolch, S Costes*, LG Bouchet*, BW Wessels, JA Siegel, and JS Robertson, "Cubical S values for the Rapid Assessment of Suborgan Dosimetry for Nonuniform Activity Distributions," 6th International Symposium on Radiopharmaceutical Dosimetry, Gatlinbug, Tennessee, May 6-10, 1996.
5. WE Bolch and CR Jones, "Viability of the United States Academic Community in Support of Nuclear Energy", International Workshop on Infrastructure for Nuclear Energy Deployment, OECD Nuclear Energy Agency, Paris, France, June 10-11, 1996. **[Invited Presentation]**
6. WE Bolch, P Blanco*, LG Bouchet*, and D Rajon*, "Electron Absorbed Fractions for Use in Pediatric Medical Internal Dosimetry", World Congress on Medical Physics and Biomedical Engineering, Nice, France, September 14-19, 1997.
7. WE Bolch, LG Bouchet*, B Aydogan*, BW Wessels, and JA Siegel, "Voxel S Values for Use in Dosimetry for Nonuniform Activity Distributions", World Congress on Medical Physics and Biomedical Engineering, Nice, France, September 14-19, 1997.
8. WE Bolch "Skeletal Dosimetry Through NMR Microscopy", 2nd International Workshop on Anatomic Models, Oak Ridge, Tennessee, September 28-30, 1999. **[Invited Presentation]**
9. WE Bolch "Anatomic Models: The MIRD Perspective", 2nd International Workshop on Anatomic Models, Oak Ridge, Tennessee, September 28-30, 1999. **[Invited Presentation]**
10. BD Pomije*, C Huh*, J Sessions*, T Caridi, J Williams, and WE Bolch "Radiation Dosimetry of Newborn Patients in Diagnostic Fluoroscopy: Voiding Cystourethrograms (VCUGs)", World Congress on Medical Physics and Biomedical Engineering, Chicago, Illinois, July 23-38, 2000. [Supplement to *Med. Phys.* **27** (6) 1444, June 2000]

11. DA Rajon*, DW Jokisch*, PW Patton*, AP Shah*, and WE Bolch, "3D NMR Microscopy in Skeletal Dosimetry: A Study of Voxel Size Effects on Dose Estimates", World Congress on Medical Physics and Biomedical Engineering, Chicago, Illinois, July 23-38, 2000. [Supplement to *Med. Phys.* **27** (6) 1432, June 2000]

12. WE Bolch, PW Patton, AP Shah, DA Rajon, and DW Jokisch. "An assessment of anthropometric parameters for scaling radiation dose estimates to active marrow", 7th International Radiopharmaceutical Dosimetry Symposium, Nashville, Tennessee, April 17-19, 2002.

13. WE Bolch , Amish Shah*, James Brindle*, Phillip Patton, Derek Jokisch, and George Sgouros, "A reference skeletal dosimetry model of the adult male radionuclide therapy patient based on 3D microimaging and radiation transport", 2004 Annual Meeting of the European Association of Nuclear Medicine, 1st International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry", Helsinki, Finland, September 4-8, 2004.

14. C Lee*, C Lee, D Lodwick*, and WE Bolch, "NURBS-based 3D anthropomorphic computational phantoms for radiation dosimetry applications" 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006.

15. WE Bolch, AP Shah, CJ Watchman, DW Jokisch, PW Patton, DA Rajon, M Zankl, N Petoussi-Henss, and KF Eckerman, "Skeletal absorbed fractions for electrons in the adult male – considerations of a revised 50-μm definition of the bone endosteum", 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006. **[Invited presentation]**

16. WE Bolch, C Lee*, D Pafundi*, and L Padilla*, "Anatomic models of the lymphatic nodes within the UF adult and pediatric hybrid phantoms – Applications to lymphoma patient dosimetry", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008 [Supplement to *Eur J Nucl Med* **35** (2) S135, 2008].

17. C Lee*, D Lodwick*, J Hurtado*, D Pafundi*, and WE Bolch, "Development of a series of hybrid computational phantoms and their applications to assessment of photon and electron specific absorbed fractions", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008. [Supplement to *Eur J Nucl Med* **35** (2) S202, 2008].

18. WE Bolch, "Hybrid computational phantoms for medical dose reconstruction", National Cancer Institute Conference on Late Health Effects of Ionizing Radiation, Washington, DC, May 4-6, 2009. **[Invited presentation]**

19. D Pafundi*, C Lee, C Watchman, V. Bourke, J. Aris, and WE Bolch, "Image-based skeletal dosimetry models for the ICRP reference pediatric series", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 70P (2009)].

20. C Lee, D Lodwick, and WE Bolch, "Assessment of photon and electron internal organ dose for the University of Florida hybrid computational phantoms of the ICRP 89 reference male and female 1, 5, and 10-year-old", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 163P (2009)].

21. VA Bourke, C Watchman, A Dieudonne, and WE Bolch, "The spatial profile of blood vessels and hematopoietic stem cells with the marrow cavities of the human skeleton", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 70P (2009)].

22. JC Pichardo, WE Bolch, JR Forder, and RJ Milner, "Comparison of bone marrow cellularity measurements using proton nuclear magnetic resonance spectroscopy (H-NMRS) and histology performed at the same location on bone", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 384P (2009)].

23. WE Bolch, M Wayson, and D Pafundi, "Computational Phantoms and Skeletal Dose Models for Adult and Paediatric Internal Dosimetry", International Symposium on Standards, Applications, and Quality Assurance in Medical Radiation Dosimetry (IDOS), International Atomic Energy Agency (IAEA), Vienna, Austria, November 9-12, 2010 **[Invited presentation].**

24. WE Bolch, "A Review of Radiological Protection Guidance in Medical Dosimetry", 14th Congresso Federazione Nazionale, Collegi Professionali Tecnici di Radiologica Medica, Palazzo dei Congressi, Riccione, Italy, April 9, 2011 **[Invited Plenary Speaker]**.

25. WE Bolch, "The UF Series of Computational Hybrid Phantoms – Applications to Radiological Protection and Patient Medical Dosimetry", 3rd International Workshop on Computational Phantoms for Radiation Protection, Imaging, and Radiation Therapy, Beijing, China, August 8-9, 2011.

International Professional Meeting Presentations - ***Students and Collaborators***

1. JE Turner, WE Bolch, HA Wright, and RN Hamm, "Effects of Dissolved Oxygen on Calculated Yields in Irradiated Liquid Water", 8th International Congress on Radiation Research, Edinburgh, United Kingdom, July 19-24, 1987.

2. HA Wright, RN Hamm, JE Turner, RW Howell, DV Rao, KSR Sastry, and WE Bolch, "Calculation of Physical and Chemical Reactions in Aqueous Solution from Auger Cascades", 10th Symposium on Microdosimetry, Rome, Italy, May 21-26, 1989

3. H Yoshida, WE Bolch, JE Turner, and KB Jacobson, "The Radiation Chemistry of Glycylglycine in Aqueous Solutions", 10th Symposium on Microdosimetry, Rome, Italy, May 21-26, 1989.

4. JE Turner, WE Bolch, H Yoshida, KB Jacobson, OH Crawford, RN Hamm, and HA Wright, "The Irradiation of Glycylglycine in Aqueous Solution - A Case Study of Calculations from Track Structure to Biochemical Change", 12th Werner Brandt Workshop on Penetration of Charged Particles in Matter, San Sebastian, Spain, September 4-7, 1989.

5. TW Shearer, G Akabani, WE Bolch, and JW Poston, Sr., "A Model for Electron and Beta Energy Deposition within Trabecular Bone", 5th International Radiopharmaceutical Dosimetry Symposium, Oak Ridge, Tennessee, May 7-10, 1991.

6. MG Stabin, JE Turner, RN Hamm, and WE Bolch, "Track Structure Simulation and Determination of Product Yields in the Radioloysis of Water Containing Various Solutes," 11th Symposium on Microdosimetry, Gatlinburg, Tennessee, May 13-18, 1992.

7. LG Bouchet* , WE Bolch SM Goddu, RW Howell, and DV Rao, "Radionuclide Selection Criteria for Treatment of Painful Metastatic Bone Disease in Humans", World Congress on Medical Physics and Biomedical Engineering, Nice, France, September 14-19, 1997.

8. LG Bouchet* and WE Bolch, "New Three-Dimensional Models of Electron Transport in Both Trabecular and Cortical Bone", World Congress on Medical Physics and Biomedical Engineering, Nice, France, September 14-19, 1997.

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10. P Blanco*, LG Bouchet*, D Rajon*, and WE Bolch, "Considerations of Suborgan Dosimetry within the 1997 Versions of the MIRD Mathematical Phantoms", World Congress on Medical Physics and Biomedical Engineering, Nice, France, September 14-19, 1997.

11. A Bishayee, RW Howell, SC Srivastava, LG Bouchet*, WE Bolch, and DV Rao. "Marrow sparing effects of Sn-117m-DTPA in the treatment of metastatic bone pain" Annual Meeting of the European Society of Nuclear Medicine, October, 1999, Barcelona, Spain [Eur. J. Nucl. Med. **26** (9) OS-352, 1999].

12. I Gardin, F Robert, LG Bouchet*, WE Bolch, LL Sage, and EL Stanc, "Dosimetry at the Voxel Level following the MIRD Schema: Study of the Feasibility with Indium-111 Octreoscan Tomoscintigraphy", 38th Congrès Français de la Société Française des Physiciens d'Hôpital, Tours, France, May 19-21, 1999.

13. I Clairand*, M Richard, B Aubert, LG Bouchet*, and WE Bolch, "Development Of Mathematical Adult Models Of Different Size Dedicated To Internal Dosimetry", 2nd International Workshop on Anatomic Models, Oak Ridge, Tennessee, September 28-30, 1999.

14. DT Marshall, B Aydogan*, SG Swarts, JE Turner, AJ Boone, NG Richards, and WE Bolch. "Computational modeling of ·OH interactions with a 167-base pair segment of DNA and comparison with experimental results ", 7th International Workshop on Radiation Damage to DNA, Orléans, France, September 2-7, 2001.

15. B Aydogan*, DT Marshall, SG Swarts, JE Turner, AJ Boone, NG Richards, and WE Bolch. "Computational evaluation of ·OH site-specific attack preferences in sugar versus base moieties in DNA", 7th International Workshop on Radiation Damage to DNA, Orléans, France, September 2-7, 2001.

16. I Gardin, J Caron, LG Bouchet, A Lisbona, L Ferre, WE Bolch, and P Vera. "VOXELDOSE: A computer program for 3D dose calculation in therapeutic nuclear medicine", 7th International Radiopharmaceutical Dosimetry Symposium, Nashville, Tennessee, April 17-19, 2002.

17. KP Kim*, W Bolch, E Bolch, CY Wu, and B Birky, "Characterization and evaluation of technologically enhanced naturally occurring radioactive materials (TENORM) in aerosols in the phosphate industry", 2002 International Aerosol Conference, Taipei, Taiwan, September 8-13, 2002.

18. KF Eckerman, WE Bolch, M Zankl, and N Petoussi-Henss, "Response functions for computing absorbed dose to skeletal tissues from photon irradiation" 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006.

19. M Zankl, KF Eckerman, and WE Bolch, "Voxel-based model representing the male and female ICRP reference adult – the skeleton" 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006.

20. N Petoussi-Henss, WE Bolch, M Zankl, G Sgouros, and B Wessels, "Patient-specific scaling of reference S values for cross-organ irradiation – what is appropriate?" 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006.

21. JG Hunt, CJ Watchman, and WE Bolch, "Calculation of absorbed fractions to human skeletal tissues due to alpha particles using Monte Carlo and 3D chord-based transport techniques" 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France, October 2-5, 2006.

22. B Aydogan, WE Bolch, SG Swarts, JE Turner, and DT Marshall, "Monte Carlo simulation of site-specific radical attack to DNA bases", 13th International Congress on Radiation Research, San Francisco, California, July 8-12, 2007.

23. A Dieudonne, I Gardin, WE Bolch, P Zhang, K. Assié, S Hapdey, I Buvat, "Software development for 3D internal dosimetry in targeted radiotherapy", Workshop of Quantitative Imaging and Dosimetry in Nuclear Medicine, Berder Island, October 2007.

24. L Padilla*, C Lee*, D Pafundi*, R Milner, and WE Bolch, "Image-based canine skeletal model for bone microdosimetry in the UF Dog phantom", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008 [Supplement to *Eur J Nucl Med* **35** (2) S135, 2008].

25. D Pafundi*, C Lee*, DL Lodwick*, A Shahlaee, and WE Bolch, "Image-based pediatric skeletal dosimetry for the UF hybrid computational phantom series", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008 [Supplement to *Eur J Nucl Med* **35** (2) S135, 2008].

26. A Dieudonne, I Gardin, P Zhang, WE Bolch, K Assie, and I Buvat, "VoxelDose – A software for 3D dosimetry in targeted radiotherapy using S values at the voxel level", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008 [Supplement to *Eur J Nucl Med* **35** (2) S135, 2008].

27. A Dieudonne, WE Bolch, I Gardin, "Use of fine resolution Voxel-S-Values for absorbed dose calculation from SPECT or PET based cumulated activity distributions", 2008 Annual Meeting of the European Association of Nuclear Medicine, Munich, Germany, October 11-15, 2008. [Supplement to *Eur J Nucl Med* **35** (2) S136, 2008]

28. M Zankl, J Becker, N Petoussi-Henss, C Hoeschen, KF Eckerman, and WE Bolch, "Computational phantoms of the ICRP reference male and reference female," 12th Meeting of the International Radiation Protection Association (IRPA), Buenos Aires, Brazil, October 19–25, 2008.

29. M Ghita, G Sjoden, A Al-Basheer, M Arreola, W Bolch, and C Lee, "Deterministic radiation transport simulations for diagnostic imaging applications", International Conference on Mathematics, Computational Methods & Reactor Physics (M&C 2009), Saratoga Springs, New York, May 3-7, 2009.

30. M Ghita, G Sjoden, A Al-Basheer, M Arreola, W Bolch, and C Lee, "Deterministic radiation transport simulations for diagnostic imaging applications," International Conference on Mathematics, Computational Methods & Reactor Physics (M&C 2009), Saratoga Springs, New York, May 3-7, 2009.

31. A Al-Basheer, G Sjoden, M Ghita, and W Bolch, "Applications of electron dose kernels to account for heterogeneities in voxelized phantoms," International Conference on Mathematics, Computational Methods & Reactor Physics (M&C 2009), Saratoga Springs, New York, May 3-7, 2009.

32. NB Shagina, EI Tolstykh, JD Harrison. TP Fell, WE Bolch, and MO Degteva, "Improved assessments of doses to Techa River offspring cohort from maternal intakes of strontium-90", National Cancer Institute Conference on Late Health Effects of Ionizing Radiation, Washington, DC, May 4-6, 2009.

33. WB Li, M Zankl, H Schlattl, N Petoussi-Hess, KF Eckerman, WE Bolch, U Oeh, and C Hoeschen, "Dose coefficients of ^{141}Ce, ^{144}Ce, ^{95}Zr and ^{90}Sr using voxel phantom SAFs for photons and electrons," 2009 Internal Conference on the Health Effects of Ionizing Radiation, Santa Fe, NM, May 11-13, 2009.

34. K Kielar*, WE Bolch, A Shahlaee, "Effect of chemotherapy on the spatial distribution of stem cells in human bone marrow", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 70P (2009)].

35. L Padilla, D Pafundi, C Lee, R. Milner, and WE Bolch, "Image-based canine skeletal model for bone microdosimetry in the UF Dog phantom", Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009 [Supplement to *J Nucl Med* **50** (2) 383P (2009)].

36. N Shagina, E Tolstykh, M Degteva, J Harrison, T Fell, and WE Bolch, "Doses of in-utero and postnatal exposure to the Techa River Offspring Cohort", Third European Congress of the International Radiation Protection Association (IRPA), Helsinki, Finland, June 14-18, 2010.

37. RF Hobbs, H Song, CJ Watchman, WE Bolch, AK Aksnes, T Ramdahl, GD Flux, and G Sgouros, "A trabecular and cellular model of bone marrow dosimetry for targeted ^{223}Ra therapy", 7th Symposium on Targeted Alpha Therapy, Berlin, Germany, July 18-19, 2011.

International Seminars and Lectures – *WE Bolch Presenter*

1. Workshop Participant, Department of Energy / Commission of the European Communities Workshop on Critical Evaluation of Radiobiological Data for Biophysical Modeling. Oak Ridge, Tennessee, June 22-25, 1988.

2. U.S. Representative to the OECD Nuclear Energy Agency, Workshop on the Future Infrastructure of Nuclear Power, Paris, June 10-11, 1996.
3. "Current Internal Dosimetry Research at the University of Florida", **Invited Speaker**, Institut Gustave Roussy, Villejuif, France, October 8, 1996.
4. "Current Internal Dosimetry Research at the University of Florida", **Invited Speaker**, Service Hospitalier Frédéric Joliot, Département de Recherche Médicale, Direction Sciences du Vivant, Commissariat à l'énergie atomique, Paris, France, October 9, 1996.
5. "Third Year Educational Opportunities at the University of Florida", **Invited Speaker**, Ecole Nationale de Physique de Grenoble, Grenoble, France, October 10, 1996.
6. "Research and Educational Opportunities at the University of Florida College of Engineering", **Invited Speaker**, Institute National Polytechnique de Grenoble, Grenoble, France, February 16, 2000.
7. "Customized Phantoms and Organ Models for Medical Dosimetry Studies", **Invited Speaker**, Department of Medical Physics, Queen Elizabeth Hospital, University of Birmingham, Birmingham, UK, September 12, 2006.
8. "Scalable Pediatric Phantoms and Skeletal Dose Models", **Invited Speaker**, MIRD Continuing Education Session, Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009.
9. "New Dosimetry Models for Nuclear Medicine – Models of Bone Marrow Dose and Pediatric Scalable Phantoms", **Invited Speaker**, MIRD Continuing Education Session, Third International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry (ISRTRD), Toronto, Canada, June 13-17, 2009."
10. "The UF Series of Hybrid Computational Phantoms for Patient-Specific Medical Dosimetry", **Invited Speaker**, Department of Nuclear Engineering, Kyung Hee University, Seoul, Korea, May 13, 2010.
11. "The UF Series of Hybrid Computational Phantoms for Patient-Specific Medical Dosimetry", **Invited Speaker**, Department of Nuclear Engineering, National Seoul University, Seoul, Korea, May 14, 2010.
12. "Paediatric Dosimetry in Nuclear Medicine", Lecture in the Session on Clinical Dosimetry for Paediatric Imaging, **Invited Speaker**, International Symposium on Standards, Applications, and Quality Assurance in Medical Radiation Dosimetry (IDOS), International Atomic Energy Agency (IAEA), Vienna, Austria, November 9-12, 2010.
13. "Applications of Voxel Phantoms: A Selective Review", **Invited Speaker**, EURADOS School on Voxel Phantom Development and Implementation for Radiation Physics Calculations, Fontenay-aux-Roses, France, October 11-13, 2011.
14. "Modeling Small Tissue Structures", **Invited Speaker**, EURADOS School on Voxel Phantom Development and Implementation for Radiation Physics Calculations, Fontenay-aux-Roses, France, October 11-13, 2011.
15. "Recent Advances in Computational Phantoms", **Invited Speaker**, EURADOS School on Voxel Phantom Development and Implementation for Radiation Physics Calculations, Fontenay-aux-Roses, France, October 11-13, 2011.

National Professional Meeting Presentations - ***WE Bolch Presenter***

1. WE Bolch, JE Turner, and RN Hamm, "An Algorithm for Unfolding Neutron Dose and LET from Digitized Recoil-Particle Tracks", 34th Annual Meeting of the Radiation Research Society, Las Vegas, Nevada, April 12-17, 1986.
2. WE Bolch, HA Wright, JE Turner, RN Hamm, and CE Klots, "Yields of Chemical Species in Irradiated Liquid Water - A Comparison Between Monte Carlo Calculations and Experimental Data", 35th Annual Meeting of the Radiation Research Society, Atlanta, Georgia, February 21-26, 1987.
3. WE Bolch, JE Turner, RN Hamm, and HA Wright, "Fragmentation of Biopolymers in Irradiated Aqueous Solutions as the Basis for a Radiation Dosimeter", 32nd Annual Meeting of the Health Physics Society, Salt Lake City, Utah, July 5-9, 1987.
4. WE Bolch, JE Turner, HA Wright, RN Hamm, H Yoshida, and KB Jacobson, "The Radiation Chemistry of Glycylglycine: Monte Carlo Calculations of Product Yields", 36th Annual Meeting of the Radiation Research Society, Philadelphia, Pennsylvania, April 17-22, 1988.
5. WE Bolch, JE Turner, HA Wright, RN Hamm, H Yoshida, and KB Jacobson, "Monte Carlo Simulation of Indirect Radiation Damage to Simple Biomolecules", 33rd Annual Meeting of the Health Physics Society, Boston, Massachusetts, July 4-8, 1988.
6. WE Bolch, JK Thomas, KL Peddicord, SM Stevenson, AJ Willoughby, "A Radiological Assessment of Space Nuclear Power Operations Near Space Station Freedom", 7th Symposium on Space Nuclear Power Systems, Albuquerque, New Mexico, January 8-11, 1990.
7. MC Smith*, WE Bolch, and JE Turner, "Nearest-Neighbor Distributions of Free Radicals Produced within Charged-Particle Tracks in Liquid Water", 38th Annual Meeting of the Radiation Research Society, New Orleans, Louisiana, April 7-12, 1990.
8. WE Bolch, JE Turner, H Yoshida, KB Jacobson, and RN Hamm, "Calculated Chemical Yields from X-Irradiation of Glycylglycine in Oxygen-Free Aqueous Solution. I. Microsecond Chemical Yields", 38th Annual Meeting of the Radiation Research Society, New Orleans, Louisiana, April 7-12, 1990
9. WE Bolch, JK Thomas, KL Peddicord, SM Stevenson, AJ Willoughby, "A Radiation Protection Approach to Space Nuclear Power Operations", 35th Annual Meeting of the Health Physics Society, Anaheim, California, June 24-28, 1990.
10. WE Bolch, JK Thomas, KL Peddicord, SM Stevenson, AJ Willoughby, "A Radiation Protection Approach to Space Nuclear Power Operations", 2nd Annual Investigators Meeting on Space Radiation Research, Houston, Texas, April 22-23, 1991.
11. WE Bolch, JK Thomas, KL Peddicord, SM Stevenson, and AJ Willoughby, "Radiation Protection Considerations in Space Station Missions", 37th Annual Meeting of the Health Physics Society, Columbus, Ohio, June 21-25, 1992.
12. WE Bolch, A Zuzarte*, and JW Poston, Sr., "Monte Carlo Estimates of Electron Absorbed Fractions in Trabecular Bone," 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.
13. WE Bolch, and JW Poston, Sr., "A Revised Dosimetric Model of the Head and Brain," 42nd Annual Meeting of The Society of Nuclear Medicine, Minneapolis, Minnesota, June 12-15, 1995. [Supplement to *J. Nucl. Med.* **36** (5) 85P, 1995].
14. RA Parry*, WE Bolch, and JW Poston, Sr., "Revised Estimates of Electron Absorbed Fractions and Radionuclide S Values in Trabecular Bone," 42nd Annual Meeting of The Society of Nuclear Medicine, Minneapolis, Minnesota, June 12-15, 1995. [Supplement to *J. Nucl. Med.* **36** (5) 181P, 1995].
15. WE Bolch, P Blanco*, and LG Bouchet*, "Electron Absorbed Fractions for Use Under the MIRD Schema within the ORNL Mathematical Models of Pediatric Patients", 44th Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-5, 1997. [Supplement to *J. Nucl. Med.* **38** (5) 225P, 1997].

16. WE Bolch, LG Bouchet*, RW Howell, and DV Rao, "A New Three-Dimensional Model of Electron Transport in Trabecular Bone", 45th Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7-11, 1998. [Supplement to *J. Nucl. Med.* **39** (5) 183P, 1998].

17. WE Bolch, DW Jokisch*, PW Patton*, LG Bouchet*, DA Rajon*, BA Inglis, and SL Myers, "NMR Microimaging of Trabecular Bone: A New Tool for the Development of Bone Dosimetry Models", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S13, 1998].

18. I Gardin, EL Sage, LG Bouchet, F Robert, WE Bolch, "Application of the MIRD Voxel Dosimetry to ^{111}In Octreoscan Tomoscintigraphy", 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000. [Supplement to *J. Nucl. Med.* **41** 84P (No. 331) (2000)].

19. I. Clairand*, LG Bouchet, WE Bolch, "A New Macroscopic Model of the Long Bones for Skeletal Dosimetry", 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000. [Supplement to *J. Nucl. Med.* **41** 240P (No. 1062) (2000)].

20. LG Bouchet, I. Clairand*, WE Bolch, "Improvement of Skeletal Internal Dosimetry Associated with Photon Sources", 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000. [Supplement to *J. Nucl. Med.* **41** 237P (2000)].

21. LG Bouchet, I. Clairand*, WE Bolch, "Improvement of Skeletal Internal Dosimetry for Pediatric Patients", 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000. [Supplement to *J. Nucl. Med.* **41** 238P (2000)].

22. WE Bolch, DW Jokisch*, PW Patton*, DA Rajon*, and LG Bouchet, "Investigation of NMR Microscopy for Use in Skeletal Dosimetry Models", 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000. [Supplement to *J. Nucl. Med.* **41** 83P (2000)].

23. CH Huh*, WE Bolch, MS Bhutani, and E Farfan*, "In-vivo measurements of the GI tract wall thicknesses using endoscopic ultrasound: applications to internal dosimetry", 46th Annual Meeting of the Health Physics Society, Cleveland, Ohio, June 10-14, 2001. [Supplement to *Health Phys.* **80** (6) S125 (2001)].

24. WE Bolch, "An-imaged based skeletal reference model of the adult male radionuclide therapy patient", 2005 Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 19-22, 2005. [Supplement to *J Nucl Med* **46** (5): 193-194 (2005)]

25. WE Bolch, "Review of HP academic programs in the US", 2007 Annual Meeting of the Health Physics Society, Portland, Oregon, July 8-12, 2007 [Supplement to *Health Phys* **93** (1) S36 (2007)].

26. WE Bolch, "Challenges and potential solutions for patient-specific dose reconstruction in diagnostic and therapeutic medical exposures", 2007 Annual Meeting of the Health Physics Society, Portland, Oregon, July 8-12, 2007 [Supplement to *Health Phys* **93** (1) S95 (2007)].

27. WE Bolch, M Wayson, EC Frey, B He, S Treves, and G Sgouros, "Effect of body habitus on the relationship between administered activity and organ dose in pediatric Tc-99m DMSA SPECT," 2010 Annual Meeting of the Society of Nuclear Medicine, Salt Lake City, Utah, June 5-9, 2010 [Supplement to *J Nucl Med* **51** 87P (2010)].

28. WE Bolch, P Johnson*, D Borrego*, K Johnson, and D Siragusa, "Use of hybrid phantoms for individualized dose monitoring in interventional fluoroscopy", 2011 Annual Meeting of the Health Physics Society, Palm Beach, FL, June 25-29, 2011 [Supplement to *Health Phys* **101** S31 (2011)].

29. WE Bolch, P Johnson*, C Lee, and K Kim, "MicroCT based methods of assessing imaging dose to active marrow and endosteum in CT, fluoroscopy, and nuclear medicine" 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3116 (2010)].

30. WE Bolch, "The role of voluntary versus mandatory regulatory standards – standardization of medical patient dosimetry", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3766 (2011)].

31. WE Bolch, D Pafundi, and M Wayson, "NURBS and MicroCT-based tissue and dosimetry models of the pediatric and adolescent skeleton: Techniques for photon and beta-particle marrow dosimetry", 2012 Annual Meeting of the Society of Nuclear Medicine, Miami, FL, June 9-13, 2012 [Supplement to *J Nucl Med* **xx xxxx** (2012)].

National Professional Meeting Presentations - *Students and Collaborators*

1. RH Ritchie, WE Bolch, and JE Turner, "Energy Losses by Subexcitation Electrons in Liquid Water", Southeastern Section Meeting of the American Physical Society, Nashville, Tennessee, November 23-25, 1987.

2. HA Wright, RN Hamm, JE Turner, WE Bolch, JL Magee, and A Chatterjee, "A Model for Calculating Physical and Chemical Interactions Produced by Charged Particles in Liquid Water", 1988 Meeting of the American Physical Society, New Orleans, Louisiana, March 21-24, 1988.

3. H Yoshida, KB Jacobson, WE Bolch, and JE Turner, "The Radiation Chemistry of Glycylglycine: Measurements of Products", 36th Annual Meeting of the Radiation Research Society, Philadelphia, Pennsylvania, April 17-22, 1988.

4. HA Wright, CE Klots, RN Hamm, WE Bolch, and JE Turner, "Computer Simulation of Chemical Reactions in Charged-Particle Tracks", 36th Annual Meeting of the Radiation Research Society, Philadelphia, Pennsylvania, April 17-22, 1988.

5. HA Wright, JE Turner, WE Bolch, RN Hamm, GS Hurst, and SR Hunter, "Applications of an Optical Ionization Radiation Track Detector in Neutron Dosimetry and Microdosimetry", 33rd Annual Meeting of the Health Physics Society, Boston, Massachusetts, July 4-8, 1988.

6. H Yoshida, WE Bolch, KB Jacobson, and JE Turner, "Radiolysis of Glycylglycine in Deoxygenated Aqueous Solutions", 37th Annual Meeting of the Radiation Research Society, Seattle, Washington, March 18-23, 1989.

7. G Akabani, JW Poston, and WE Bolch, "Beta and Electron Transport in Internal Dose Calculations", 34th Annual Meeting of the Health Physics Society, Albuquerque, New Mexico, June 25-29, 1989.

8. MC Smith*, WE Bolch, and JE Turner, "Concentration of Free Radicals within Electron Tracks in Liquid Water", 34th Annual Meeting of the Health Physics Society, Albuquerque, New Mexico, June 25-29, 1989.

9. JE Turner, WE Bolch, OH Crawford, RN Hamm, H Yoshida, and KB Jacobson, "Calculated Chemical Yields from X-Irradiation of Glycylglycine in Oxygen-Free Aqueous Solution. II. Late Chemical Yields", 38th Annual Meeting of the Radiation Research Society, New Orleans, Louisiana, April 7-12, 1990.

10. SM Stevenson, WE Bolch, and JK Thomas, "Accommodation of Nuclear Power and Propulsion Concepts", Space Station Evolution Conference, League City, Texas, February 6-8, 1990.

11. H Yoshida, WE Bolch, JE Turner, KB Jacobson, and WM Garrison, "Measurement of Products from X-Irradiated Glycylglycine in Oxygen-Free Solutions", 38th Annual Meeting of the Radiation Research Society, New Orleans, Louisiana, April 7-12, 1990.

12. OR Hernandez*, WE Bolch, and JW Poston, Sr., "A Linear, Time-Varying Simulation of the New ICRP Lung Model", 36th Annual Meeting of the Health Physics Society, Washington, D.C., July 21-26, 1991.

13. KL Peddicord, WE Bolch, and JK Thomas, "Radiation Protection Considerations in Space Station Missions", 1991 Winter Meeting of the American Nuclear Society, San Francisco, California, November 10-14, 1991.

14. JE Turner, RN Hamm, MG Stabin, and WE Bolch, "Calculation of Radical Yields and their Dependences on Time and Solute Concentration in the Radiolysis of Water", 40th Annual Meeting of the Radiation Research Society, Salt Lake City, Utah, March 15-19, 1992.

15. JR Fulmer, JW Poston, Sr., and WE Bolch, "Internal Dosimetry Software Comparison Study", 37th Annual Meeting of the Health Physics Society, Columbus, Ohio, June 21-25, 1992.

16. CK Brown*, WE Bolch, and JW Poston, Sr., "Characterization of Al_2O_3:C Thermoluminescent Dosimeter Response to Beta Radiation," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

17. PC Fulmer*, WE Bolch, JW Poston, Sr., and RJ Brake, "Design and Evaluation of Thermoluminescent Dosimeters Based Upon Mixtures of TL Materials," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

18. DL Crady, Jr.*, WE Bolch, DA Weber, and HL Atkins, "Specific Absorbed Fractions for Photon Sources in a Revised Dosimetric Model of the Brain," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

19. JL Spence*, WE Bolch, and JW Poston, Sr., "A Feasibility Study of a Gelatin-Based Tissue Substitute," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

20. HM Lau*, WE Bolch, JE Turner, and RN Hamm, "Computer Simulation of Radiation Damage to Single-Stranded DNA," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

21. CL Delisle*, WE Bolch, SK Lee, and AG Parlos, "An Assessment of Crew Exposures During Manned Mars Missions," 38th Annual Meeting of the Health Physics Society, Atlanta, Georgia, July 11-15, 1993.

22. KA Kodimer*, WE Bolch, and JW Poston, Jr.*, "Monte Carlo Calculations of Electron Specific Absorbed Fractions for the Thyroid of Anthropomorphic Pediatric Phantoms," 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

23. JJ Sadler*, WE Bolch, and JW Poston, Sr., "Experimental Determination of Absorbed Fractions and Dose Profiles in a Gelatin-Based Tissue Substitute", 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

24. EH Kim*, WE Bolch, WD Reece, and JW Poston, Sr., "A Microscopic Approach in Cellular Dose Calculations for Electron Sources," 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

25. RA Parry*, WE Bolch, and JW Poston, Sr., "Monte Carlo Estimates of S-Values for Bone-Seeking Beta Emitters", 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

26. JW Poston, Jr.*, KA Kodimer*, WE Bolch, and JW Poston, Sr., "A Revised Dosimetric Model of the Gastrointestinal Tract", 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

27. S Calvo*, KF Eckerman, and WE Bolch, "Estimates of Electron Absorbed Fractions of Energy for the Upper Respiratory Tract," 39th Annual Meeting of the Health Physics Society, San Francisco, California, June 26-30, 1994.

28. LG Bouchet*, WE Bolch, DA Weber, HL Atkins, and JW Poston, Sr., "A New Dosimetric Model of the Head and Brain", 37th Annual Meeting of the AAPM, Boston, Massachusetts, July 23-27, 1995.

29. EH Kim*, WE Bolch, WD Reece, and JW Poston, Sr., "Microdosimetric Assessments of Cellular Dose in Tumor and Normal Tissues for Internal Beta-Emitting Sources", 37th Annual Meeting of the AAPM, Boston, Massachusetts, July 23-27, 1995.

30. EH Kim*, WE Bolch, WD Reece, and JW Poston, Sr., "A Microdosimetric Algorithm for Probabilistic Electron Point Kernels", 37th Annual Meeting of the AAPM, Boston, Massachusetts, July 23-27, 1995.

31. JW Poston, Jr.*, KA Kodimer*, WE Bolch, and JW Poston, Sr., "Monte Carlo Calculation of Beta Absorbed Fractions Using a Revised Model of the Gastrointestinal Tract", 40th Annual Meeting of the Health Physics Society, Boston, Massachusetts, July 23-27, 1995. [Supplement to *Health Phys.* **68** (6) S51, 1995].

32. MA Charlton*, WE Bolch, ME LcLain, and JW Poston, Sr., "Response Comparison of a Single-Diode Electronic Dosimeter, A Three-Diode Electronic Dosimeter, and a Conventional Four-Filter TLD Assembly in Several Irradiation Environments", 40th Annual Meeting of the Health Physics Society, Boston, Massachusetts, July 23-27, 1995. [Supplement to *Health Phys.* **68** (6) S37, 1995].

33. TH Wagner* and WE Bolch, "An Innovative Method of Teaching Gamma-Ray Spectroscopy in a Radiation Detection Laboratory Course at the University of Florida", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S11, 1996].

34. DA Smith*, and WE Bolch, "A Small-Scale Dosimetry Study of Radioactive Stents for Use in the Prevention of Restenosis Following Balloon Angioplasty and Stent Implantation", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S11, 1996].

35. LM Thomsen* and WE Bolch, "Upgrade of a Radiation Measurement Laboratory Course at the University of Florida", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S10, 1996].

36. R Reyes*, WE Bolch, and KL Hintenlang, "Estimates of Organ Doses for Pediatric Patients Undergoing Diagnostic X-Ray Procedures", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S12, 1996].

37. DW Jokisch* and WE Bolch, "Estimates of Electron Absorbed Fraction in Trabecular Bone Utilizing Nuclear Magnetic Resonance Imaging Modeling", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S13, 1996].

38. T Chohan* and WE Bolch, "A Survey of Radiographic Technique Parameters Used in Pediatric Diagnostic Examinations ", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S12, 1996].

39. LG Bouchet* and WE Bolch, "A Revised Dosimetric Model of the Adult Head and Brain", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S43, 1996].

40. SV Costes*, LG Bouchet*, and WE Bolch, "Cubical S Values for Use with SPECT, PET, and Autoradiographic Imaging Data in Performing Small-Scale Dosimetry", 41st Annual Meeting of the Health Physics Society, Seattle, Washington, July 21-25, 1996. [Supplement to *Health Phys.* **70** (6) S44, 1996].

41. LG Bouchet*, WE Bolch, B Aydogan*, "A New Direct Internal Dosimetric Approach for Non-Uniform Activity Distributions Using the MIRD Schema", 44th Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-5, 1997. [Supplement to *J. Nucl. Med.* **38** (5) 106P, 1997].

42. LG Bouchet* and WE Bolch, "Five New Pediatric Head and Brain Models for Internal Dosimetry Calculations for Photon, Electron, and Positron Sources", 44th Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-5, 1997. [Supplement to *J. Nucl. Med.* **38** (5) 105P, 1997].

43. LG Bouchet*, WE Bolch, SM Goddu, RW Howell, and DV Rao, "Bone Marrow Dosimetry for the Mouse Femur Using NMR Microimages", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S35, 1997].

44. P Blanco*, WE Bolch, and LG Bouchet*, "Electron Absorbed Fractions for Use in Pediatric Internal Dosimetry Under the MIRD Schema", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S47, 1997].

45. DW Jokisch*, PW Patton*, and WE Bolch, "A Comparison of Models Utilized to Assess Electron Absorbed Fractions in Trabecular Bone", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S35, 1997].

46. PW Patton*, DW Jokisch*, and WE Bolch, "Nuclear Magnetic Resonance Imaging for Use in Studying the Microstructure and Radiation Dosimetry of Trabecular Bone", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S34, 1997].

47. V Seghal*, WE Bolch, LG Bouchet*, and Z Li, "A Small-Scale Dosimetry Study of Radioactive Stents Used in the Treatment of Restenosis", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S34, 1997].

48. LM Thomsen*, and W. E. Bolch, "Design of a Gamma Spectroscopy System Using Low-Speed Analog Interface Cards and LabVIEW™ Software", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S51, 1997].

49. TH Wagner*, and WE Bolch, "Development and Revision of a Senior/First-Year Graduate Student Laboratory Course in Radiation Detection and Instrumentation", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S52, 1997].

50. RA Reyes*, WE Bolch, LG Bouchet*, and K Hintenlang, "A Comparative Study of Experimental Real-Time Dosimetry Data and Monte Carlo Transport Simulations in Estimating Organ Doses During Pediatric X-Ray Procedures", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S55, 1997].

51. B Aydogan*, WE Bolch, and LG Bouchet*, "Uncertainty Analysis for Absorbed Dose of a Brain Receptor Agent", 42nd Annual Meeting of the Health Physics Society, San Antonio, Texas, June 29 - July 3, 1997. [Supplement to *Health Phys.* **72** (6) S55, 1997].

52. SM Goddu, RW Howell, LG Bouchet*, WE Bolch, and DV Rao, "Marrow Sparing Effects of Low-Energy Versus High-Energy Beta Emitters for Palliation of Bone Pain", 45th Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7-11, 1998. [Supplement to *J. Nucl. Med.* **39** (5) 84P, 1998].

53. LG Bouchet*, WE Bolch, RW Howell, and DV Rao, "Selection of Radionuclides for Palliation of Bone Pain from Metastatic Osseous Lesions", 45th Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7-11, 1998. [Supplement to *J. Nucl. Med.* **39** (5) 84P, 1998].

54. RA Reyes*, WE Bolch, LG Bouchet*, and K Hintenlang, "Organ Doses for Children Undergoing Diagnostic X-Ray Procedures", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S36, 1998].

55. P Blanco*, LG Bouchet*, D Rajon*, and WE Bolch, "A New Mathematical Model of the Kidney for Use in Suborgan Dosimetry", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S38, 1998].

56. LG Bouchet*, WE Bolch, RW Howell, and DV Rao, "A New Three-Dimensional Dosimetric Model of Trabecular Bone", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S13, 1998].

57. PW Patton*, DW Jokisch*, LG Bouchet*, DA Rajon*, and WE Bolch, "Assessment of Potential Changes to the Microarchitecture of Trabecular Bone Under Sample Freezing and Thawing", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S38, 1998].

58. BJ Morabito*, RD Ice, WE Bolch, and RD Schinazi, "The Role of DNA Topology in Strand Breaks and Computer Modeling", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S31, 1998].

59. DW Jokisch*, PW Patton*, LG Bouchet*, DA Rajon*, and WE Bolch, "Methods for Characterizing the Geometry of Trabecular Regions of the Skeleton for Use in Internal Dosimetry", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S39, 1998].

60. BD Pomije*, MA Tressler*, WE Bolch, and DE Hintenlang, "Comparison of Angular Free-in-Air and Tissue-Equivalent Phantom Response Measurements in p-MOSFET Dosimeters", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S39, 1998].

61. V Sehgal*, DA Rajon*, LG Bouchet*, and WE Bolch, "Effects of Atherosclerotic Plaque Composition on the 3D Dose Distribution from a P-32 Radioactive Stent", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S39, 1998].

62. DA Rajon*, P Blanco*, L Bouchet*, and WE Bolch, "Electron Deposited Doses in New Mathematical Models for Internal Dosimetry", 43rd Annual meeting of the Health Physics Society, Minneapolis, Minnesota, July 12-16, 1998. [Supplement to *Health Phys.* **74** (6) S42, 1998].

63. DT Marshall, WE Bolch, WA Tome, and JM Buatti, "Redefining Dose - A Monte Carlo-Based Microdosimetry System to Quantify the Radiobiological Impact of Variations in the Tumor Microenvironment", 40th Annual Meeting of the American Society for Therapeutic Radiology and Oncology, Phoenix, Arizona, October 25-20, 1998.

64. A Bishayee, RW Howell, S Srivastava, LG Bouchet*, WE Bolch, and DV Rao, "Marrow Sparing Effects of Sn-117m-DTPA for Palliation of Bone Pain", 46th Annual Meeting of the Society of Nuclear Medicine, Los Angeles, California, June 6-10, 1999. [Supplement to *J. Nucl. Med.* **40** (5) 219P (1999)].

65. B Aydogan*, WE Bolch, BJ Morabito*, DT Marshall, and KE Wilson*, "Predicting Radiation Damage at the Molecular Level with Applications to Radiation Therapy", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S192, 1999].

66. V Sehgal*, K Hintenlang, and WE Bolch, "Radiation Safety Issues Associated with Intravascular Brachytherapy Clinical Trials", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S191, 1999].

67. BD Pomije*, CH Huh*, JB Sessions*, and WE Bolch, "Transformation of a Pediatric Dynamic Fluoroscopy Study into a Series of Static Projections for use in Organ Dose Reconstruction", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S190, 1999].

68. LG Bouchet* and WE Bolch, "New Estimates of Specific Effective Energy for Use in Skeletal Dosimetry", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S161-S162, 1999].

69. DW Jokisch*, PW Patton*, LG Bouchet*, and WE Bolch, "Monte Carlo Electron Transport within Voxels from a Three-Dimensional Image of Human Trabecular Bone", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S161, 1999].

70. DA Rajon*, DW Jokisch*, PW Patton*, LG Bouchet*, and WE Bolch, "Assessment of Minimum Voxel Size for Trabecular Bone NMR Imaging for Dosimetry Calculations", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S161, 1999].

71. E Farfan* and WE Bolch, "Probabilistic Lung Dosimetry with Application to Uranium Dioxide and Oxtoxide", 44th Annual Meeting of the Health Physics Society, Philadelphia, Pennsylvania, June 27 - July 1, 1999. [Supplement to *Health Phys.* **76** (6) S121, 1999].

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170. D Pafundi*, P Johnson*, C Lee*, D Rajon, D Lodwick*, and WE Bolch, "Internal electron and external photon skeletal dosimetry for the UF hybrid computational newborn phantom", 2008 Annual Meeting of the Health Physics Society, Pittsburgh, PA, July 13-17, 2008. [Supplement to *Health Phys* **94** (6) S49 (2008)].

171. C Lee*, R Howell, M Gertner, E. Chell, S Hansen, and WE Bolch, "Dosimetry characterization of a multi-beam radiotherapy treatment for age-related macular degeneration", 2008 Annual Meeting of the Health Physics Society, Pittsburgh, PA, July 13-17, 2008. [Supplement to *Health Phys* **94** (6) S69 (2008)].

172. KN Kielar*, WE Bolch, AH Shahlaee, and RC Braylan, "Effect of chemotherapy on the spatial distribution of stem cells in human bone marrow", 2008 Annual Meeting of the Health Physics Society, Pittsburgh, PA, July 13-17, 2008. [Supplement to *Health Phys* **94** (6) S70 (2008)].

173. C Lee*, D Lodwick*, J Hurtado*, D Pafundi*, and WE Bolch, "UF series of hybrid computational phantoms representing ICRP reference anatomy and CDC standardized anthropometric data" 2008 Annual Meeting of the Health Physics Society, Pittsburgh, PA, July 13-17, 2008. [Supplement to *Health Phys* **94** (6) S98 (2008)].

174. L Padilla*, R Milner, and WE Bolch, "Image-based canine skeletal model for bone microdosimetry in the UF Dog Phantom", 2008 National Cancer Institute Summit on Eliminating Cancer Health Disparities Through Science, Training, and Community, Bethesda, MD, July 14-16, 2008.

175. J Hanlon, C Lee, W Bolch, E Chell, S Hansen, M Gertner, and RW Howell, "NURBS-based head and eye dosimetry for ocular radiosurgery", 2008 Annual Meeting of the American Association of Physicists in Medicine, Houston, TX, July 27-31, 2008. [Supplement to *Med Phys* **35** (6) 2946 (2008)].

176. J Sexton*, W Bolch, and C Jenkins, "Lung and systemic retention of Al and W nanoparticles following inhalation exposures," 2009 Annual Meeting of the Health Physics Society, Minneapolis, MN, July 12-16, 2009. [Supplement to *Health Physics* **97** (1) S22 (2009)].

177. B Juneja*, C Lee, and W Bolch, "Evaluation of radiation instrumentation for rapid screening of internal contamination following a radiological event," 2009 Annual Meeting of the Health Physics Society, Minneapolis, MN, July 12-16, 2009. [Supplement to *Health Physics* **97** (1) S105 (2009)].

178. C Lee, K Kim, and W Bolch, "Comprehensive CT dosimetry database for pediatric and adult reference males and females: A Monte Carlo study," 2009 Annual Meeting of the American Association of Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2446 (2009)].

179. L Sinclair, D Pafundi, and W Bolch, "A skeletal model for marrow dosimetry in the ICRP reference adult female", 2009 Annual Meeting of the American Association of Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2450 (2009)].

180. A Bahadori*, K Eckerman, D Jokisch, and W Bolch, "Skeletal neutron dose response functions development for use in proton therapy," 2009 Annual Meeting of the American Association of

Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2668 (2009)].

181. E Chell, M Firpo, W Bolch, C Lee, and J Hanlon*, "A novel stereotactic radiosurgical device for the treatment of age-related macular degeneration (AMD)," 2009 Annual Meeting of the American Association of Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2710 (2009)].

182. P Johnson*, B Juneja*, C Lee, and W Bolch, "Hybrid patient-dependent phantoms covering statistical distributions of body morphometry in the US adult and pediatric population: development and validation," 2009 Annual Meeting of the American Association of Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2747 (2009)].

183. J Hanlon*, C Lee, W Bolch, E Chell, M Gertner, and S Hansen, "Kilovoltage stereotactic radiosurgery for age-related macular degeneration: Assessment of patient effective dose and patient specific tissue doses," 2009 Annual Meeting of the American Association of Physicists in Medicine, Anaheim, CA, July 26-30, 2009. [Supplement to *Medical Physics* **36** (6) 2795 (2009)].

184. J Hanlon*, E Chell, WC Smith, WE Bolch, Computational Assessment of Dose for Stereotactic Radiosurgery of Age-Related Macular Degeneration", 2010 Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 2-6, 2010.

185. EC Frey, B He, M Wayson*, S Treves, WE Bolch, and G Sgouros, "Effect of body habitus on the relationship between administered activity and defect detectability in pediatric Tc-99m DMSA SPECT", 2010 Annual Meeting of the Society of Nuclear Medicine, Salt Lake City, Utah, June 5-9, 2010 [Supplement to *J Nucl Med* **51** 329P (2010)].

186. M Wayson* and WE Bolch, "Complete internal photon dosimetry characterization of the University of Florida newborn hybrid computational phantom," 2010 Annual Meeting of the Society of Nuclear Medicine, Salt Lake City, Utah, June 5-9, 2010 [Supplement to *J Nucl Med* **51** 414P (2010)].

187. C Lee, KP Kim, D Long*, R Fisher*, S Simon, and WE Bolch, "Organ doses in ICRP reference children exposed to computed tomography examinations: Monte Carlo simulation", 2010 Annual Meeting of the American Statistical Association, Annapolis, MD, June 13-16, 2010.

188. D Jokisch, A Bahadori*, D Rajon, and WE Bolch, "Specific absorbed fractions for protons in the human skeleton", 2010 Annual Meeting of the Health Physics Society, Salt Lake City, Utah, June 26 – July 1, 2010 [Supplement to *Health Phys* **99** S39 (2010)].

189. A Bahadori*, M Van Baalen, M Shavers, E Semones, C Dodge, and WE Bolch, "Effect of anatomical modeling on space radiation dose estimates: A comparison of doses for NASA dosimetry phantoms and the UF hybrid phantoms", 2010 Annual Meeting of the Health Physics Society, Salt Lake City, Utah, June 26 – July 1, 2010 [Supplement to *Health Phys* **99** S88 (2010)].

190. B Juneja*, WE Bolch, and C Lee, "Software for first responders allowing for interpretation of portable survey meter responses in radiological triage decisions", 2010 Annual Meeting of the Health Physics Society, Salt Lake City, Utah, June 26 – July 1, 2010 [Supplement to *Health Phys* **99** S106 (2010)].

191. P Johnson* and WE Bolch, "Can patient-phantom matching improve the accuracy of dose evaluation in interventional fluoroscopy?", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3099 (2010)].

192. C Lee, D Long*, R Fisher, K Kim, and WE Bolch, "Organ dose in the reference adult male and female exposed to computed tomography examinations: Monte Carlo simulations and experimental validation", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3099 (2010)].

193. M Maynard*, J Geyer*, J Aris, R Shifrin, and WE Bolch, "Hybrid computational phantoms of the developing human fetus", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3113 (2010)].

194. H Huang, G Sjoden, J Li, A Al-Basheer, and WE Bolch, "Validation of a novel dose calculation approach for heterogeneous voxelized phantoms in a parallel computation environment using electron dose kernels for radiotherapy", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3280 (2010)].

195. V Taranenko, H Paganetti, B Juneja*, and WE Bolch, "Comparing computational phantoms and whole-body CT patient images for secondary cancer risk estimation", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3282 (2010)].

196. J Hanlon*, E Chell, M Firpo, and WE Bolch, "Energy and spatial distribution of photon fluence emanating from the head during stereotactic radiosurgery for age-related macular degeneration", 2010 Annual Meeting of the American Association of Physicists in Medicine, Philadelphia, PA, July 18-22, 2010 [Supplement to *Med Phys* **37** 3313 (2010)].

197. A Abadia*, D Pawel, and WE Bolch, "BEIR VII models and updates for calculating radiogenic cancer incidence and mortality risk", 2011 Annual Meeting of the Health Physics Society, Palm Beach, FL, June 25-29, 2011 [Supplement to *Health Phys* **101** S58 (2011)].

198. A Dziadon*, A Geyer*, C Lee, P Johnson*, M Wayson*, and WE Bolch, "The UF family of pediatric patient-dependent phantoms for medical dose reconstruction", 2011 Annual Meeting of the Health Physics Society, Palm Beach, FL, June 25-29, 2011 [Supplement to *Health Phys* **101** S31 (2011)].

199. B Juneja*, S Kannan*, and WE Bolch, "PDA software for radiological triage of internal gamma-emitting radionuclide contamination using standard portal survey instrumentation", 2011 Annual Meeting of the Health Physics Society, Palm Beach, FL, June 25-29, 2011 [Supplement to *Health Phys* **101** S66 (2011)].

200. PB Johnson, D Borrego, and WE Bolch, "Cloud computing for interventional fluoroscopy dose assessment", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3406 (2011)].

201. M Maynard, J Geyer, J Aris, R Shifrin, and WE Bolch, "The UF family of hybrid phantoms of the developing fetus for computational fetal dosimetry", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3407 (2011)].

202. M Wayson, C Lee, G Sgouros, and WE Bolch, "Computational internal dosimetry methods as applied to the UF Series of Hybrid Phantom", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011, Vancouver, BC [Supplement to *Med Phys* **38** 3408 (2011)].

203. C Tien, J Cantley, D Hintenlang, WE Bolch, M Firpo, and E Chell, "Real-time monitoring of age-related macular degeneration radiosurgery using plastic scintillation dosimetry", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3533 (2011)].

204. J Hanlon, E Chell, M Firpo, and WE Bolch, "Kilovoltage stereotactic radiosurgery for AMD: A more complete evaluation of effective dose", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3654 (2011)].

205. A Bahadori, M Shavers, M Van Baalen, E Semones, and WE Bolch, "Comparison of organ dosimetry for astronaut phantoms: Earth-based versus microgravity-based anthropometry and

body positioning", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3721 (2011)].

206. C Lee and WE Bolch, "Development of computational lymph node models for pediatric hybrid phantoms for nuclear medicine dosimetry", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3729 (2011)].

207. M Moteabbed, A Geyer*, R Drenkhahn, WE Bolch, and H Paganetti, "Comparison of organ doses in pediatric phantoms for secondary cancer risk assessment in proton radiotherapy", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3869 (2011)].

208. C Lee, D Long*, K Kim, S Simon, and WE Bolch, "Estimation of organ doses in reference pediatric individuals undergoing computed tomography using Monte Carlo simulations", 2011 Annual Meeting of the American Association of Physicists in Medicine, Vancouver, BC, July 31 – August 4, 2011 [Supplement to *Med Phys* **38** 3876 (2011)].

209. L Padilla, M Wayson* and WE Bolch, "Dosimetry package with tumor insertion capabilities for nuclear medicine procedures", 2012 Annual Meeting of the Society of Nuclear Medicine, Miami, FL, June 9-13, 2012 [Supplement to *J Nucl Med* **xx xxxx** (2012)].

210. M Wayson,* R Leggett, and WE Bolch, "Age-dependent regional blood distribution model", 2012 Annual Meeting of the Society of Nuclear Medicine, Miami, FL, June 9-13, 2012 [Supplement to *J Nucl Med* **xx xxxx** (2012)].

211. D Long*, C lee, C Tien, R Fisher, D Hintenlang, and WE Bolch, "Monte Carlo simulations of adult and pediatric computed tomography exams – Validation studies of organ doses with physical phantoms," 2012 Annual Meeting of the Health Physics Society, Sacramento, CA, July 22 – 26, 2012 [Supplement to *Health Physics* **xx xxxx** (2012)].

212. N Long*, M Maynard*, R Shifrin, and WE Bolch, "Development of a series of reference pregnant female hybrid computational models," 2012 Annual Meeting of the Health Physics Society, Sacramento, CA, July 22 – 26, 2012 [Supplement to *Health Physics* **xx xxxx** (2012)].

213. C Lee, KP Kim, D Long*, and WE Bolch, "NCICT – a computer program for organ and effective dose calculation for pediatric and adult patients undergoing computed tomography scanning", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

214. S Lamart, KP Kim, WE Bolch, and C Lee, "Effect dose normalized to dose-length product for pediatric and adult reference phantoms in computed tomography examinations", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

215. EY Han, C Lee, and WE Bolch, "Patient specific assessment of external radiation exposure to bystanders interacting with patients following I-131 therapy", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

216. J Cantley*, E Chell, M Firpo, J Hanlon, C Lee, and WE Bolch, "Influence of eye size on radiation absorbed dose delivered to non-targeted tissues during stereotactic radiosurgery for age-related macular degeneration", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

217. J Cantley*, E Chell, M Firpo, J Hanlon, C Lee, and WE Bolch, "Influence of eye size on radiation absorbed dose delivered to non-targeted tissues during stereotactic radiosurgery for age-related macular degeneration", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

218. A Abadia*, D Pawel, and WE Bolch, "Alternatives to the effective dose for stochastic risk assessment in medical imaging", 2012 Annual Meeting of the American Association of Physicists in Medicine, Charlotte, NC, July 29 – August 2, 2012 [Supplement to *Med Phys* **xx xxxx** (2012)].

National and Regional Seminars and Lectures – *WE Bolch Presenter*

1. "The Role of Space Nuclear Power and Radiation Protection in NASA's Space Exploration Initiative", Francis Marion University, **Invited Speaker**, November 17, 1992.
2. "Microdosimetry and its Role in Radiation Protection", Department of Chemistry and Physics, Francis Marion University, November 18, 1992.
3. "The Role of Space Nuclear Power and Radiation Protection in NASA's Space Exploration Initiative", New England Chapter of the Health Physics Society, **Invited Speaker**, November 19, 1992.
4. "Current Status of Health Physics Academic Programs", New England Chapter of the Health Physics Society, **Invited Speaker**, June 5, 1995.
5. "New Advances in Medical Dosimetry", Georgia Institute of Technology, Department of Nuclear Engineering, November 20, 1998.
6. "Current Research in Health and Medical Physics at the University of Florida", Francis Marion University, Florence, South Carolina, November 30, 1999.
7. "Radiation Detection Fundamentals", **Invited Speaker**, 5th Annual Technical Meeting, Savannah River Chapter of the Health Physics Society, Aiken, South Carolina, April 27, 2001.
8. "Advances in Skeletal Dosimetry Through NMR Microscopy", **Invited Speaker**, 5th Annual Technical Meeting, Savannah River Chapter of the Health Physics Society, Aiken, South Carolina, April 27, 2001.
9. "Educational and Research Opportunities in Medical and Health Physics at UF", Francis Marion University, Florence, South Carolina, October 10, 2002.
10. "Educational and Research Opportunities in Medical and Health Physics at UF", Furman University, Greenville, South Carolina, November 19, 2002.
11. "Basic Radiological Health and Radiation Biology", Nuclear Incident Training, Escambia County Health Department, Pensacola, Florida, August 13, 2003.
12. "Basic Radiological Health and Radiation Biology", Nuclear Incident Training, Okeechobee County Health Department, Sarasota, Florida, January 21, 2003.
13. "Health Physics – careers in radiation protection", Science Teachers Workshop, Society of Health and Medical Physics Students, Department of Nuclear & Radiological Engineering, April 22, 2004.
14. "An Image-Based Skeletal Reference Male of the Adult Male Radionuclide Therapy Patient," **Invited Speaker**, Purdue University, West Lafayette , Indiana, November 30, 2004.
15. "Advances in Skeletal Dosimetry through Microimaging", **Invited Speaker**, Oak Ridge National Laboratory, August 2, 2005.
16. "Basics of Radiation Safety: Radiation Dose and Risk" **Invited Speaker,** U.S. Food and Drug Administration, Workshop on Imaging in Medicine, May 15, 2006.
17. "X-ray and CT Instruction" **Invited Speaker,** U.S. Food and Drug Administration, Workshop on Imaging in Medicine, May 15, 2006.
18. "Nuclear Medicine Instrumentation" **Invited Speaker,** U.S. Food and Drug Administration, Workshop on Imaging in Medicine, May 15, 2006.
19. "Research Activities at the University of Florida", **Invited Speaker**, Centers for Disease Control and Prevention, Workshop on the Use of Nuclear Medicine Equipment to Assess Internal Contamination, Atlanta, Georgia, June 20-21, 2006.

20. "Health Physics and Medical Physics at the University of Florida – Academic Programs and Research Activities", **Invited Speaker**, Science Seminar Series, Valdosta State University, Valdosta, Georgia, September 7, 2006.

21. "Customized Phantoms and Organ Models for Medical Dosimetry Studies – Stylized to Voxel to Hybrid", **Invited Speaker**, Atlanta Chapter of the Health Physics Society, Atlanta, Georgia, September 12, 2006.

22. "Patient Phantoms for Medical Dosimetry", **Invited Speaker**, Centers for Disease Control and Prevention, Workshop on the Medical Doses of Radiation, Atlanta, Georgia, November 8-9, 2006.

23. "Customized Phantoms and Organ Models for Medical Dosimetry Studies – Stylized to Voxel to Hybrid", **Invited Speaker**, Medical Physics Graduate Seminar, Duke University, Durham, North Carolina, March 20, 2007.

24. "Customized Phantoms and Organ Models for Medical Dosimetry Studies – Stylized to Voxel to Hybrid", **Invited Speaker**, Radiation Epidemiology Branch, National Cancer Institute, Bethesda, Maryland, April 12, 2007.

25. "UF Hybrid Phantom Series and their Applications to CT Organ Dosimetry, **Invited Speaker**, Radiation Epidemiology Branch, National Cancer Institute, Bethesda, Maryland, April 16, 2008.

26. "Hybrid Computational Phantoms and their Applications to Patient Dose Reconstruction", **Invited Speaker**, Graduate Programs in Medical Physics, University of Chicago, Chicago, IL, November 5, 2009.

27. "Use of Portable Radiation Instrumentation for Radiological Triage", **Invited Speaker**, Workshop on Internal Contamination Monitoring, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, February 10, 2010.

28. "Computational and Physical Phantoms for Establishing a CT Organ Dose Library", **Invited Speaker**, GE Healthcare, Waukesha, WI, February 5, 2011.

29. "NCRP Report No. 161 – Management of Persons Contaminated with Radionuclide", **Invited Speaker**, Advanced Rapid Response Workshop, State of Florida Bureau of Radiation Control, Orlando, FL, March 19, 2011.

30. "Guidance for radiological triage using handheld instrumentation following a terrorist event", **Invited Speaker**, Advanced Rapid Response Workshop, State of Florida Bureau of Radiation Control, Orlando, FL, March 19, 2011.

31. "Guidance for radiological triage using handheld instrumentation following a mass casualty event", **Invited Speaker**, Bioassay Roundtable, Radiation Studies Branch, US Centers for Disease Control and Prevention, Marriott Century Center, Atlanta, GA, August 30-31, 2011.

National Short Courses and Professional Enrichment Presentations – ***WE Bolch Presenter***

1. "Internal Dosimetry by MIRD and MIRDOSE: Theory and Applications", Health Physics Society Professional Enrichment Program, 1992 Annual Meeting, Columbus, Ohio, June 21, 1992.

2. "The MIRD Schema", Society of Nuclear Medicine Categorical Seminar Program, 1993 Annual Meeting, Toronto, Ontario, June 7, 1993.

3. "Internal Dosimetry by MIRD and MIRDOSE: Theory and Dose Calculations", Health Physics Society Professional Enrichment Program, 1993 Annual Meeting, Atlanta, Georgia, July 11, 1993.

4. "The MIRD Schema", Society of Nuclear Medicine Categorical Seminar Program, 1994 Annual Meeting, Orlando, Florida, June 4, 1994.

5. "Physical and Chemical Interactions of Radiation with Living Tissues", 1994 Health Physics Society Summer School, University of California at Davis, Davis, California, June 20-24, 1994.

6. "Internal Dosimetry by MIRD and MIRDOSE: Theory and Dose Calculations", Health Physics Society Professional Enrichment Program, 1994 Annual Meeting, San Francisco, California June 26, 1994.

7. "The MIRD Schema", Society of Nuclear Medicine Categorical Seminar Program, 1995 Annual Meeting, Minneapolis, Minnesota, June 11, 1995.
8. "Internal Dosimetry by MIRD and MIRDOSE: Theory and Dose Calculations", Health Physics Society Professional Enrichment Program, 1995 Annual Meeting, Boston, Massachusetts, July 23-27, 1995.
9. "Internal Dosimetry by MIRD and MIRDOSE: Theory and Dose Calculations", Health Physics Society Professional Enrichment Program, 1996 Annual Meeting, Seattle, Washington, July 21-25, 1996.
10. "Basics of External Dosimetry", 1996 Health Physics Society Summer School, University of Washington, Seattle, Washington, July 15, 1996.
11. "The MIRD Schema and Its Application to Suborgan Dosimetry", Society of Nuclear Medicine Categorical Seminar Program, 1997 Annual Meeting, San Antonio, Texas, June 1, 1997.
12. "Current Status of Health Physics Academic Programs in the U.S. and Abroad", Health Physics Society Continuing Education Program, 1997 Annual Meeting, San Antonio, Texas, June 29 - July 3, 1997.
13. "New MIRD Techniques for Medical Internal Dosimetry", Health Physics Society Professional Enrichment Program, 1997 Annual Meeting, San Antonio, Texas, June 29 - July 3, 1997.
14. "Utilization of the MIRD Schema: From Acquisition of Clinically Measurable Activity Distributions to Model Implementation", Continuing Education Session, 45th Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 7-11, 1998.
15. "Utilization of the MIRD Schema: From Acquisition of Clinically Measurable Activity Distributions to Model Implementation", Continuing Education Session, 47th Annual Meeting of the Society of Nuclear Medicine, St. Louis, Missouri, June 3-7, 2000.
16. "UF Skeletal Reference Model of the Adult Male Radionuclide Therapy Patient", 2005 Annual Meeting of the Society of Nuclear Medicine, Toronto, Canada, June 19-22, 2004.
17. "Advances in Customized Phantoms and Organ Models for Medical Dosimetry Studies – Stylized to Voxel to Hybrid", Health Physics Society Professional Enrichment Program, 2007 Annual Meeting, Portland, Oregon, July 8-11, 2007.
18. "Anatomical models and radionuclide S values" in Accuracy and Precision in Internal Dose Assessment: Dosimetry and Response, MIRD Continuing Education Session, 2008 Annual Meeting of the Society of Nuclear Medicine, New Orleans, LA, June 14-18, 2008.
19. "How are risks and toxicities associated with a particular absorbed dose expressed?" in Radiation Risk / Toxicity versus Benefits of Diagnostic and Therapeutic Nuclear Medicine Procedures: How to Best Put These in Perspective for Both Clinicians and Patients?, MIRD Continuing Education Session, 2010 Annual Meeting of the Society of Nuclear Medicine, Salt Lake City, Utah, June 6-9, 2010.
20. "NCRP Report No. 161 – Management of Persons Contaminated with Radionuclides", Health Physics Society Professional Enrichment Program, 2011 Annual Meeting, Palm Beach, Florida, July 28, 2011.

<u>Regional Professional Meeting Presentations</u> – *WE Bolch Presenter*

1. <u>Wesley E. Bolch</u>, "Neutron Dosimetry by Computer-Aided Design", Florida Chapter of the Health Physics Society, Sarasota, Florida, August, 1985.
2. <u>WE Bolch,</u> JK Thomas, KL Peddicord, SM Stevenson, AJ Willoughby, "A Radiological Assessment of Space Nuclear Power Operations Near Space Station Freedom", Fall Meeting of the South Texas Chapter - Health Physics Society, San Antonio, Texas, January 13, 1990.
3. <u>WE Bolch,</u> "The MIRD Technique", Joint Spring Meeting of the Florida Chapters of the Health Physics Society and American Nuclear Society, Gainesville, Florida, April 25, 1997.

4. WE Bolch, "Biomedical Engineering Research and Academic Program at the University of Florida", Spring Meeting of the Florida Chapter of the Health Physics Society, Gainesville, Florida, April 24, 1998.
5. WE Bolch, "NMR Microscopy of Trabecular Bone", **Invited Speaker**, Southeastern Microscopy Society, Gainesville, Florida, April 9, 1999.
6. WE Bolch, "Review of Basic Detector Theory", Savannah River Chapter of the Health Physics Society, Fifth Annual Technical Seminar, Friday April 27th, 2001.
7. WE Bolch, "Advances in Skeletal Dosimetry Through NMR Microscopy", **Invited Speaker**, Savannah River Chapter of the Health Physics Society, Fifth Annual Technical Seminar, Friday April 27th, 2001.
8. WE Bolch, "An Assessment of Anthropometric Parameters for Scaling Radiation Dose Estimates to Active Marrow", Florida Chapter of the Health Physics Society", St. Petersburg, Florida, April 24, 2002.
9. WE Bolch, "Creation of two tomographic models of pediatric patients in the first year of life", Florida Chapter of the Health Physics Society, St. Petersburg, Florida, April 24, 2002.
10. WE Bolch, "Hybrid phantoms for patient medical dosimetry – reference, patient-dependent, and patient-specific anatomic models", **Invited Speaker**, Florida Chapter of the American Association of Physicists in Medicine, Kissimmee, Florida, March 6-7, 2009.
11. WE Bolch, "Hybrid phantoms for patient medical dosimetry – reference, patient-dependent, and patient-specific anatomic models", **Invited Speaker**, Florida Chapter of the Health Physics Society, Orlando, Florida, April 6, 2009.
12. WE Bolch, "Patient-specific nuclear medicine dosimetry – Reducing imaging dose to children", **Invited Speaker**, Florida Chapter of the American Association of Physicists in Medicine, Orlando, Florida, March 2-4, 2010.
13. WE Bolch, "Guidance for radiological triage using handheld instrumentation following a terrorist event", **Invited Speaker**, Florida Chapter of the Health Physics Society, Clearwater, Florida, September 24, 2010.
14. WE Bolch, PB Johnson*, and D Borrego,* "Review of NCRP Report 168 and UF research on patient doses in fluoroscopically guided interventions", **Invited Speaker**, Florida Chapter of the American Association of Physicists in Medicine, Orlando, Florida, March 25, 2011.
15. WE Bolch, "Computational and physical phantoms for establishing a CT organ dose library", CT Vendors Summit, **Invited Speaker** , Hosted by the UF Department of Radiology, Gainesville, Florida, May 17, 2011.

Local Seminars and Lectures – ***WE Bolch Presenter***

1. "New Frontiers in Internal Radiation Dosimetry", Department of Nuclear Engineering Sciences, University of Florida, Gainesville, Florida, July 11, 1994.
2. "Recent Advances in Nuclear Medicine Dosimetry", Department of Nuclear Engineering Sciences, University of Florida, Gainesville, Florida, April 6, 1995.
3. "NMR Microscopy of Trabecular Bone", Biomedical Engineering Seminar Series, April 6, 1999.
4. "Research in Internal Dosimetry Biokinetic Models for the CDC", Department of Nuclear and Radiological Engineering, University of Florida, September 7, 2000.
5. "Radionuclide Therapies for Cancer – Need for Predictive Models of Marrow Toxicity", Seminar, Department of Nuclear & Radiological Engineering, October 16, 2003.
6. "Radionuclide Therapies for Cancer – Need for Predictive Models of Marrow Toxicity", Seminar, Department of Biomedical Engineering, January 27, 2004.
7. "Radionuclide Therapies for Cancer – Need for Predictive Models of Marrow Toxicity", Lecture, ABE 2062 – Biology for Engineers, April 2, 2004.

8. **"**An Image-Based Skeletal Canine Model for Pre-Clinical Evaluations of Osteosarcoma Molecular Radiotherapy" Seminar to the UF Department of Pediatrics, May 24, 2006.
9. "Skeletal Dosimetry and Whole-Body Phantoms for Molecular Radiotherapy", Seminar to the UF Department of Pediatrics, May 23, 2007.
10. "Advances in Computational Models of Bone Marrow Radiation Dosimetry Through Microimaging", Seminar to the UF Department of Biomedical Engineering, December 6, 2010.
11. "Thinking of Becoming an Engineer?", Society of Health and Medical Physics Students, Workshop presented to the Honors Physics Class, Apopka High School, November 21, 2011.
12. "Rapid Methods for In-Field Radiological Triage of Persons Contaminated Internally with Radionuclides", Seminar to the UF Department of Radiation Oncology, November 8, 2011.

SPONSORED RESEARCH ACTIVITIES

Current Research Grants and Contracts

1. *A 3D Canine Phantom for Applications in Skeletal Molecular Radiotherapy*, (F31 CA130165), National Cancer Institute, National Research Service Award (NRSA), $153,360 (direct), Wesley E. Bolch, **Principal Investigator and Research Advisor**, August 15, 2007 – August 14, 2012, Peer Review, 1 Student **(UF Project 67682)**
2. *VirtualDose™ Software for Diagnostic CT Doses to Adults and Children* (R42 EB010404), National Institute for Biomedical Imaging and Bioengineering (NIBIB), $270,547 (total), $205,000 (direct), Wesley E. Bolch, **Principal Investigator – RPI Subaward to UF,** 5% FTE, July 1, 2010 – June 30, 2013, Peer Review, 1 Student **(UF Project 80227)**
3. *Fetal and Pregnant Female Dosimetry Models for the Techa River Cohorts,* (FP7- 249675) European Union, $185,600 (total), $130,400 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, March 1, 2010 – February 28, 2013, Peer Review, 1 Student. **(UF Project 80521)**
4. *Preclinical Development of Polymer-Mediated Radionuclide Therapies in a Canine Model for Targeting Metastatic Cancer*, University of Florida – Division of Sponsored Research, $85,000 (direct), Wesley E. Bolch, **Principal Investigator**, 10% FTE, July 1, 2010 – June 30, 2012, Internal UF Review, 1 Student. **(UF Project 88271)**
5. *Real-Time Dosimetry for AMD Stereotactic Radiotherapy*, (Oraya-002-2010) Oraya Therapeutics, Inc., $248,953 (total), $184,233 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, August 1, 2010 – July 31, 2012, Internal Company Review, 1 Student. **(UF Project 89571)**
6. *Database of CT Imaging Organ Doses for Rapid and Electronic Medical Recording*, Biomedical Education and Research Foundation, $100,000 (direct), Wesley E. Bolch, **Principal Investigator**, 6% FTE, May 1, 2011 – April 30, 2012, Foundation Review, 2 Students. **(UF Project 94768)**
7. *Uncertainties in the age-dependent organ doses from pediatric CT imaging* (HHS-N2612-0110-0510P), National Cancer Institute, Radiation Epidemiology Branch, $82,262 (total), $62,146 (direct), Wesley E. Bolch, **Principal Investigator**, 6% FTE, September 27, 2011 – September 26, 2012, NCI Review, 1 Student. **(UF Project 97047)**
8. *In-Clinic Assessment of Organ Doses for Interventional Fluoroscopic Procedures* (F31 CA159464), National Cancer Institute, National Research Service Award (NRSA), $175,367, Wesley E. Bolch, **Principal Investigator and Research Advisor**, December 1, 2010 – November 30, 2015, Peer Review, 1 Student. **(UF Project 99474)**

Pending Research Grants and Contracts

1. *Dose Reduction in Pediatric Molecular Imaging - NURBS Phantoms and Organ Dosimetry*, (R01 EB013558), National Institute for Biomedical Imaging and Bioengineering, $277,948 (direct), $381,444 (total), Wesley E. Bolch, **Principal Investigator – JHMI Subaward to UF**, March 1, 2012 – February 28, 2016, Peer Review, 1 Student **(UF Project xxxxx)**
2. *Modeling Targeted Alpha Particle Therapy of Cancer: Image-Based Models of Bone and Kidney*, (R01 CA157542), National Cancer Institute, $300,000 (direct), $402,727 (total), Wesley E. Bolch, **Principal Investigator – JHMI Subaward to UF**, April 1, 2012 – March 31, 2016, Peer Review, 1 Student **(UF Project xxxxx)**
3. *nanoIMBA™ - A Computational Tool for Nanoparticle Inhalation Toxicity Assessment and Bioassay* (Grant Number), Air Force Research Laboratory, $56,813 (direct), $80,000 (total), Wesley E. Bolch, **Principal Investigator**, May 1, 2012 – April 30, 2013, Peer Review, 1 student **(UF Project xxxxx)**

Summary of Currently Active External Grants

Role	*Total*	*Direct Costs*	*Indirect Costs*
Principal Investigator	$887,362	$681,779	$205,583
Co-Principal Investigator	$0	$0	$0
Investigator	$0	$0	$0
Academic Sponsor	$328,727	$328,727	$0
Totals	**$1,216,089**	**$1,010,506**	**$205,583**

Summary of Currently Active Internal Grants

Role	*Total*	*Direct Costs*	*Indirect Costs*
Principal Investigator	$85,000	$85,000	$0
Co-Principal Investigator	$0	$0	$0
Investigator	$0	$0	$0
Academic Sponsor	$0	$0	$0
Totals	**$85,000**	**$85,000**	**$0**

Past Research Grants

1. *Molecular Radiation Effects and Microdosimetry Research*, Engineering Excellence Fund, College of Engineering, Texas A&M University, $31,000, **Principal Investigator**, 1998.
2. TEES 32525-26130 (NAG 3-944), *Radiological Impact of Space Nuclear Power Applications*, NASA Lewis Research Center, $75,000, **Co-Principal Investigator**, October 1988 - October 1989, 3 Students.
3. TEES 32525-27410 (NRA-89-OEXP-001), *Design of a General Purpose, Mobile, Multifunctional Radiation Shield for Space Exploration,* NASA - Office of Exploration, $29,830, **Principal Investigator**, September 1989 - March 1990, 1 Student.
4. TAMRF 32526-6081 (DE-FG05-88ER60707), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $289,680, **Principal Investigator** (September 1991 - Current), **Co-Investigator** (January 1989 - August 1991), July 1988 - March 1992, 18 Students (Total).
5. TAMRF 32526-6081 (DE-FG05-88ER60707), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $96,000, **Principal Investigator,** April 1992 - March 1993, 7 Students (Total).
6. TEES 32525-2613A (NAG 3-944), *Accommodations of Nuclear Components at the Space Station*, NASA Lewis Research Center, $75,000, **Principal Investigator**, January 1990 - October 1992, 3 Students.
7. TAMRF 32526-6081 (DE-FG05-88ER60707), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $96,000, **Principal Investigator,** April 1992 - March 1993, 7 Students (Total).
8. TEES 32525-41800 (DE-AC05-760R0003), *Design and Evaluation of Thermoluminescent Dosimeters Based Upon Mixtures of TL Materials*, U. S. Department of Energy, $50,000, **Principal Investigator**, September 1, 1992 - August 31, 1993, 1 Student.

9. TAMRF 32526-6081 (DE-FG05-88ER60707), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $100,000, **Principal Investigator,** April 1993 - March 1994, 7 Students (Total).

10. TEES 32525-4082 (NAG3-1326), *Investigation of Natural and Man-Made Radiation Effects on Crews on Long-Duration Space Missions*, $100,000, **Co-Principal Investigator**, June 1992 - December 1993, 2 Students.

11. TAMRF 32526-8744 (DE-FG03-94ER61846), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $95,000, **Principal Investigator**, April 1, 1994 - December 31, 1995, 4 Students.

12. TEES 32525-44750, *Health Physics Research Support to the Comanche Peak Steam Electric Station*, Texas Utilities Company, $50,000, **Principal Investigator**, April 15, 1994 - April 14, 1995, 2 Students.

13. TEES 32525-41800 (DE-AC05-760R0003), *Design and Evaluation of Thermoluminescent Dosimeters Based Upon Mixtures of TL Materials*, U. S. Department of Energy, $50,000, **Principal Investigator**, September 1, 1993 - August 31, 1994, 2 Students.

14. EIES 4910-45-08187-12 (DE-FG03-94ER61846), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $146,393, **Principal Investigator**, March 15, 1994 - April 14, 1996, 3 Students.

15. *Recommendations for the Improved Protection of Pediatric Patients undergoing Diagnostic X-ray Procedures*, 1995 Children's Miracle Network, Department of Pediatrics, University of Florida's Shands Clinic, $19,753, **Co-Principal Investigator**, June 1, 1995 - May 31, 1996.

16. *Development of an Untethered, Simulated Radiation Survey Meter*, Consultect Scientific, Inc., $144,125, **Co-Principal Investigator** with W. Emmett Bolch, PI, September 1, 1996 to August 31, 1998, 2 Students.

17. EIES 4910-45-08187-12 (DE-FG05-95ER62006), *Considerations of Beta and Electron Transport in Internal Dose Calculations*, U.S. DOE - Office of Health and Environmental Research, $100,000, **Principal Investigator**, April 15, 1996 - April 14, 1998, 3 Students.

18. *Radioactive Stents for the Treatment of Restenosis of the Coronary Arteries*, College of Medicine, University of Florida, $19,989, **Co-Investigator**, August 1, 1998 to July 31, 1999.

19. *Optic-Guided Ultrasound Localization for High-Precision Radiation Therapy*, Biomedical Engineering Program, University of Florida, $12,871, **Co-Investigator**, November 1, 1998 to October 31, 1999.

20. *Radiation Dosimetry and Associated Risks for Pediatric Radiology*, Children's Miracle Network, University of Florida, $14,762, **Co-Principal Investigator** , June 1, 1998 to May 31, 1999.

21. *Tomographic Dosimetry Phantoms for Use in Pediatric Radiology*, Biomedical Engineering Program, University of Florida, $14,915, **Principal Investigator** , November 1, 1998 to August 5, 1999.

22. *Development of a MRI-Based Bone Dosimetry Model and Its Applications to Probabilistic Dose Assessment*, U.S. Department of Energy - Health Physics Faculty Research Award, $150,000, **Principal Investigator**, September 1, 1996 - August 31, 1999, 2 Students.

23. *Quantifying Molecular Effects of Hypoxia in Radiotherapy*, American Cancer Society, Florida Division, Inc., Pilot Study Grant (F99UF-3), $13,542, **Principal Investigator,** April 1, 1999 to March 31, 2000.

24. *Molecular Effects of Hypoxia in Radiotherapy*, University of Florida, Division of Sponsored Research, Opportunity Fund (UF 1101799-10), $83,913, **Principal Investigator**, July 1, 1999 to December 31, 2000, 2 Students

25. *Endoscopic Ultrasound Characterization of the Subregions of the GI Tract*, Biomedical Engineering Program, University of Florida, $7,900, Manoop Bhutani, MD, Principal Investigator, Wesley E. Bolch, **Co-Investigator** , May 1, 2000 - April 30, 2001, Peer Review, 1 student.

26. *The Effects of Hematopoietic Stem Cell Irradiation on the Biomechanical Properties of Blood Cells,* Biomedical Engineering Program, University of Florida, $20,000, Wesley E. Bolch, **Principal Investigator**, Roger Trans-son-Tay and John R. Wingard, Co-Investigators, May 1, 2000 - August 31, 2001, Peer Review, 1 student**.**

27. *Advances in Photon and Neutron Skeletal Dosimetry through NMR Microscopy* (DOE NEER Grant DE-FG07-99ID13764) US DOE, Nuclear Engineering Education Research (NEER) Program, $452,927, **Principal Investigator**, 10% FTE, July 1, 1999 to June 30, 2002, 2 Students.

28. *Risk Assessment of Airborne Particulates to Workers in the Phosphate Industry* (FIPR #00-05-062R), Florida Institute for Phosphate Research, $99,530 (total), $94,790 (direct), Wesley E. Bolch, **Principal Investigator**, W. Emmett Bolch, Co-Principal Investigator, 15% FTE, September 15, 2001 – August 31, 2003, Peer Review, 1 student.

29. *A Probabilistic Dosimetry Model for Radionuclide DCF* (R32/CCR416743), Centers for Disease Control and Prevention, $375,672 (total), $259,084 (direct), W. Emmett Bolch – Principal Investigator, Wesley E. Bolch - **Co-Principal Investigator**, 15% FTE, August 1, 1999 to July 31, 2003, Peer Review, 3 Students.

30. *Monte Carlo Simulations of Radiation Damage to DNA: Impact of Variations in the Molecular Microenvironment*, The Whitaker Foundation, $27,582 (subcontract), $233,221 (total award), David T. Marshall, Principal Investigator, Wesley E. Bolch, **Co-Principal Investigator**, 9% FTE, May 1, 2001 – April 30, 2003, Peer Review.

31. *Tomographic Dosimetry Phantoms for Pediatric Radiology*, (R01 HD38932-01/02) National Institute for Child and Health Development (NICHD), (R01 EB00267-03) National Institute of Biomedical Imaging and Bioengineering (NIBIB), Bioengineering Research Grant, $663,702 (total), $472,500 (direct), **Principal Investigator**, 18% FTE, May 1, 2000 to April 30, 2004, Peer Review, 4 students.

32. *An Image-Based Computational System for the Design of Radionuclide Therapies of Skeletal Tumors*, (DE-FG07-02ID14327) US DOE, Nuclear Engineering Education Research (NEER) Program, $345,050 (total), $246,546 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, July 1, 2002 – June 31, 2005, Peer Review, 2 students **(UF Project 28423).**

33. *Assessment of Airborne Particulate Lung Solubility and Internal Dose to Phosphate Workers* (FIPR #03-05-064), Florida Institute for Phosphate Research, $92,331 (total), $87,934 (direct), Wesley E. Bolch, **Principal Investigator**, C.Y. Wu, Co-Principal Investigator, 10% FTE, October 1, 2003 – December 31, 2005, Peer Review, 1 student **(UF Project 28442).**

34. *Pediatric Organ and Effective Doses for Siemens CT Systems,* Siemens Medical Division, April 2004 (1 Year), $60,000 (total), Manuel Arreola, PI, Wesley E. Bolch, **Co-Investigator**, September 1, 2004 – December 31, 2005, Internal Review, 1 student.

35. *Techniques for Skeletal dosimetry in Radionuclide Therapy via Assessment of Patient-Specific Total and Regional Spongiosa Volumes* (F31 CA97522), National Cancer Institute, Pre-Doctoral Fellowship for Minorities, $113,304 (total / direct), Wesley E. Bolch, **Principal Investigator and Supervisor**, James Brindle, **Graduate Student**, August 9, 2002 – August 8, 2006, Peer Review, 1 student **(UF Project 28426).**

36. *Measurement-to-Activity Conversion Coefficients for Medical Emergency Response* (#ACDC-S-01), Sanford Cohen & Associates, Inc., $117,683 (total), $87,186 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, September 1, 2004 – September 1, 2006, Peer Review, 2 students **(UF Project 53240).**

37. *Spatial Mapping of the Hematopoietic Stem Cells in Human Bone Marrow* (3R01 CA96441), National Cancer Institute, Post-Doctoral Fellowship for Handicapped Individuals, $138,164 (total), $94,958 (direct), Wesley E. Bolch, **Principal Investigator and Supervisor**, Vince Bourke, PhD, **Post-Doctoral Research Associate**, February 1, 2005 to January 31, 2007, Peer Review, 1 student **(UF Project 56572).**

38. *Advances in Skeletal Dosimetry Through Microimaging,* (R01 CA96441), National Cancer Institute, $1,418,286 (total), $1,133,317 (direct), Wesley E. Bolch, **Principal Investigator**, 27% FTE, February 1, 2003 – January 31, 2008, Peer Review, 3 students **(UF Project 28432).**

39. *Voxel Phantoms for Evaluation of Rapid Screening Methods of Contaminated Persons* (TKC 30-06 16601 CDC Task 29), TKC Integration Services, LLC, $150,000 (total), $115,206 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, December 1, 2006 – November 30, 2007, CDC Review, 2 Students **(UF Project 64919).**

40. *Physical Voxel Phantoms Simulating Radioactively Contaminated Persons* (TKC 30-07 185-01 CDC Task 81), TKC Integration Services, LLC, $150,000 (total), $106,642 (direct), Wesley E. Bolch, **Co-Principal Investigator,** David E. Hintenlang, **Co-Principal Investigator,** 14% FTE, September 1, 2007 – August 31, 2008, CDC Review, 2 Students **(UF Project 69714)**

41. *Virtual Patients for Computing Radiation Dose* (RO1 CA116743), National Cancer Institute, $326,291 (total), $240,252 (direct), Wesley E. Bolch, **Principal Investigator – RPI Subcontract to UF**, 10% FTE, September 1, 2005 to December 31, 2008, Peer Review, 2 students **(UF Project 52293).**

42. *MicroCT-Based Skeletal Models for Use in Tomographic Voxel Phantoms for Radiological Protection,* (DE-FG07-06ID14773) US DOE, Nuclear Engineering Education Research (NEER) Program, $198,104 (total) $140,275 (direct), Wesley E. Bolch, **Principal Investigator**, 10% FTE, May 1, 2007 – December 31, 2009, Peer Review, 1 student **(UF Project 58656)**

43. *Skeletal Dosimetry Models for the Techa River Cohorts*, (FI6R-516478), European Union, $108,969 (total), $74,381 (direct), Wesley E. Bolch, **Principal Investigator**, 5% FTE, January 1, 2008 – December 31, 2009, Peer Review, 2 students **(UF Project 71553).**

44. *Software for First Responders, First Receivers, and Mortuary Staff* (TKC-2008-PW10), TKC Integration Services, LLC, $50,000 (total), $34,130 (direct), Wesley E. Bolch, **Principal Investigator,** 5% FTE, September 8, 2008 – September 7, 2009, CDC Review, 1 Post-Doc at 30% FTE. **(UF Project 76685)**

45. *Evaluation of Radiation Instrumentation for Rapid Screening of Internal Contamination Following a Radiological Event* (TKC-2008-PW7), TKC Integration Services, LLC, $105,000 (total), $73,910 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, September 8, 2008 – September 7, 2009, CDC Review, 1 Student. **(UF Project 76696)**

46. *Lung and Systemic Retention of Nanoparticles Following Inhalation and Wound Exposures*, (FA8651-08-1-0001), Air Force Research Laboratory, $167,830 (total), $119,682 (direct), Wesley E. Bolch, **Principal Investigator**, 10% FTE, January 1, 2008 – June 30, 2010, Peer Review, 1 student **(UF Project 72586)**

47. *Material Dissolution of Metals in Simulated Lung & Phagolysosomal Fluids*, (FA8651-08-1-0008), Air Force Research Laboratory, $75,000 (total), $53,416 (direct), Wesley E. Bolch, **Principal Investigator**, 6% FTE, March 31, 2008 – March 30, 2009, Peer Review, 1 student **(UF Project 72916)**

48. *Nuclear Education Fellowship Program*, (Grant), U.S. Nuclear Regulatory Commission, $400,000 (total), $370,370 (direct), Wesley E. Bolch, **Academic Co-Sponsor**, 0% FTE, September 1, 2008 – August 31, 2012, Peer Review, 12 Fellows. **(UF Project 73580)**

49. *Age-Dependent Organ Doses from Pediatric CT Imaging* (HHS-N2612-0090-0098P), National Cancer Institute, Radiation Epidemiology Branch, $97,000 (total), $68,450 (direct), Wesley E. Bolch, **Principal Investigator**, 5% FTE, March 10, 2009 – June 9, 2010, NCI Review, 2 Students. **(UF Project 77829)**

50. *NASA Astronaut Dosimetry: Implementation of Scalable Human Phantoms and Benchmark Comparisons of Deterministic versus Monte Carlo Radiation Transport* (NNX09AK14H), Graduate Student Research Program, National Aeronautics and Space Administration (NASA), $90,000 (direct), Wesley E. Bolch, **Principal Investigator and Research Advisor**, August 15, 2009 –

August 14, 2010, Peer Review, 1 Student *(Note – student was hired by NASA prior to Year 2 and 3 funding – continuing PhD research as NASA employee).* **(UF Project 79109)**

51. *NURBS-Based Head and Eye Dosimetry Models for AMD Radiotherapy* (ORAYA-001-2007), Oraya Therapeutics, Inc., $184,057 (total), $134,772 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, November 1, 2007 – October 30, 2010, Peer Review, 1 student **(UF Project 70899)**

52. *Software to Incorporate Portable Instrumentation Data for Triage of Individuals Internally Contaminated with Gamma-Emitting Radionuclides* (CDC-UF-Task 134 11-09-2009), TKC Global Solutions, LLC, $124,734 (total), $90,290 (direct), Wesley E. Bolch, **Principal Investigator**, 10% FTE, November 1, 2009 – October 31, 2010, CDC Review, 2 Students. **(UF Project 84109)**

53. *Material Dissolution of Metals in Simulated Lung & Phagolysosomal Fluids*, (FA8651-10-1-0005), Air Force Research Laboratory, $40,000 (total), $28,376 (direct), Wesley E. Bolch, **Principal Investigator**, 20% FTE, April 19, 2010 – December 31, 2010, Peer Review, 1 student **(UF Project 87921)**

54. *Bone-Specific Assessment of Marrow Cellularity via H-NMR Spectroscopy* (F31 CA134200), National Cancer Institute, National Research Service Award (NRSA), $120,000 (direct), Wesley E. Bolch, **Principal Investigator and Research Advisor**, September 29, 2008 – December 31, 2010, Peer Review, 1 Student. **(UF Project 90522)**

55. *Effects of Nonuniform Distributions of Radioactivity: MicroCT-Based Models for Cellular Dosimetry*, (R01 CA083838) National Cancer Institute, $100,000 (total), $72,000 (direct) Wesley E. Bolch, **Principal Investigator – UMNDJ Subcontract to UF**, 5% FTE, July 10, 2006 – June 30, 2011, Peer Review, no students **(UF Project 58554)**

56. *Secondary Cancer Risk Assessment in Pediatric Oncology Patients* (CO6 CA059267), Massachusetts General Hospital, $201,475 (total), $148,146 (direct), Wesley E. Bolch, **Principal Investigator,** 20% FTE, October 1, 2008 – September 30, 2011. **(UF Project 78874)**

57. *Uncertainties in the age-dependent organ doses from pediatric CT imaging* (HHS-N2612-0100-0692P), National Cancer Institute, Radiation Epidemiology Branch, $82,567 (total), $60,430 (direct), Wesley E. Bolch, **Principal Investigator**, 10% FTE, September 15, 2010 – September 14, 2011, NCI Review, 1 Student. **(UF Project 91489)**

58. *Updating the Gamma Emitter Contamination Assessment Tool (GECAT)* (DE-AC05-06OR23100), Oak Ridge Associated Universities, $99,306 (total), $72,867 (direct), Wesley E. Bolch, **Principal Investigator**, 6% FTE, December 1, 2010 – September 30, 2011, CDC Review, 1 Student. **(UF Project 92098)**

Summary of Cumulative External Grant Funding - 1995 to Present

Role	*Total*	*Direct Costs*	*Indirect Costs*
Principal Investigator	$5,709,777	$4,248,208	$1,461,569
Co-Principal Investigator	$697,379	$492,705	$204,674
Investigator	$60,000	$40,956	$19,044
Academic Sponsor	$861,468	$788,632	$72,836
Totals	**$7,328,624**	**$5,570,500**	**$1,758,124**

Summary of Cumulative Internal Grant Funding - 1995 to Present

Role	*Total*	*Direct Costs*	*Indirect Costs*
Principal Investigator	$118,828	$118,828	$0
Co-Principal Investigator	$54,504	$54,504	$0
Investigator	$20,771	$20,771	$0
Academic Sponsor	$0	$0	$0
Totals	**$194,103**	**$194,103**	**$0**

INTERNATIONAL ACTIVITIES

International Research / Professional Meetings Attended or Chaired

- **April 4-8, 2003**, Attended the 2003 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Annapolis, Maryland, USA.
- **March 21-27, 2004**, Attended the 2004 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Berchtesgaden, Germany.
- **April 4-8, 2005**, Attended the 2005 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Unicoi State Park, Georgia, USA.
- **March 27-31, 2006**, Chaired the 2006 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Chilton, UK.
- **October 2-5, 2006**, Presented invited talks and chaired sessions at the 6th International Workshop on Internal Dosimetry of Radionuclides, Montpellier, France.
- **October 7-11, 2006,** Attended the 2006 Meeting of Committee 2 of the International Commission on Radiological Protection in Cassis, France.
- **April 30 – May 4, 2007**, Organized and chaired the 2007 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Sanibel Island, Florida, USA.
- **October 21-25, 2007**, Attended the 2007 Meeting of Committee 2 of the International Commission on Radiological Protection in Berlin, Germany.
- **March 8-12, 2008**, Attended a meeting of the Subgroup on External Dosimetry of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on

Radiological Protection (ICRP) in Munich, Germany.

- **May 5-9, 2008**, Chaired the 2008 Meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Vienna, Austria
- **May 12, 2008**, Participated as a Foreign Member of the PhD dissertation committee of Mr. Arnaud Dieudonne, at the University of Rouen in Rouen, France.
- **August 24-28, 2008**, Attended the 2008 Meeting of Committee 2 of the International Commission on Radiological Protection in St. Petersburg, Russia
- **October 11-14, 2008**, Presented two podium presentations at the 2008 Annual Meeting of the European Association for Nuclear Medicine (EANM) in Munich, Germany.
- **December 14-17, 2008**, Attended a meeting of the Subgroup on External Dosimetry of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Munich, Germany.
- **March 25-27, 2009,** Invited reviewer of the Nuclear Safety Research Program at the Helmholtz Association national laboratories at Karlsruhe and Julich, Germany.
- **April 20-24, 2009**, Chaired a meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Ottawa, Canada.
- **May 4-6, 2009,** Invited presentation at the NCI Conference on the Late Health Effects of Ionizing Radiation, Washington, DC.
- **June 13-17, 2009,** Invited presentations at the 3rd International Symposium on Radionuclide Therapy and Radiopharmaceutical Dosimetry, Toronto, Canada.
- **November 7-13, 2009,** Attended the 2009 Meeting of Committee 2 of the International Commission on Radiological Protection in Porto, Portugal.
- **December 8-11, 2009**, Invited presentation at the Final Project Meeting of the European Union SOUL Project in Munich, Germany (Cancer risk research in the populations of the Southern Urals Region of the former USSR nuclear weapons programs).
- **April 26-30, 2010**, Invited presentation at the Kickoff Project Meeting of the European Union SOLO Project in Oxford, UK (Cancer risk research in the populations of the Southern Urals Region of the former USSR nuclear weapons programs).
- **May 13, 2010**, Invited lecture at the Department of Nuclear Engineering, Kyung Hee University, Seoul, Korea.
- **May 14, 2010**, Invited lecture at the Department of Nuclear Engineering, National Seoul University, Seoul, Korea.
- **May 17-21, 2010**, Chaired a meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Nara, Japan.
- **September 13-14, 2010**, Attended a meeting of the Subgroup on External Dosimetry of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Munich, Germany.
- **October 11-15, 2010,** Attended the 2010 Meeting of Committee 2 of the International Commission on Radiological Protection in Gatlinburg, Tennessee.
- **November 9-12, 2010**, Invited presentation at the Symposium on Standards, Applications, and Quality Assurance in Medical Radiation Dosimetry, International Atomic Energy Agency (IAEA), Vienna, Austria. Additional duties included chairing one session and lecturing in a short course.
- **March 14-17, 2011**, Chair meetings of Work Package 4.3 of the European Union SOLO Project (Cancer risk research in the populations of the Southern Urals Region of the former USSR nuclear weapons programs), International Agency for Research in Cancer (IARC), Lyon, France
- **April 9, 2011**, Invited Plenary Speaker, 14th Congresso Federazione Nazionale, Collegi

Professionali Tecnici di Radiologica Medica, Palazzo dei Congressi, Riccione, Italy.

- **April 12-15, 2011**, Chaired a meeting of the Task Group on Dose Calculations (DOCAL) under Committee 2 of the International Commission on Radiological Protection (ICRP) in Fontenay-aux-Roses, France.
- **August 8-9, 2011**, Session Chair for 3rd International Workshop on Computational Phantoms, Beijing, China, August 8-9, 2011
- **September 9, 2011**, Examiner, PhD Dissertation Defense, Ms. Lama Hadid, Université de Paris, Paris, France, September 9, 2011.
- **September 26-28, 2011**, Invited Consultant on Medical Internal Dosimetry, International Atomic Energy Agency, Vienna, Austria, September 26-28, 2011.
- **October 11-13, 2011**, Invited Lecturer, EURADOS School on Voxel Phantom Development and Implementation for Radiation Physics Calculations, Fontenay-aux-Roses, France
- **October 22-28, 2011,** Attended the 2011 Meeting of Committee 2 of the International Commission on Radiological Protection in Bethesda, MD.
- **March 26-29, 2012**, Chair meetings of Work Package 4.3 of the European Union SOLO Project (Cancer risk research in the populations of the Southern Urals Region of the former USSR nuclear weapons programs), Istituto Superiore di Sanità (ISS), Rome, Italy.

International Research Grants

- *Skeletal Dosimetry Models for the Techa River Cohorts*, (Contract), European Union, $108,969 (total), $74,381 (direct), Wesley E. Bolch, **Principal Investigator**, 5% FTE, November 1, 2007 – December 15, 2009, Peer Review, 2 students **(UF Project 71553).**
- *Fetal and Pregnant Female Dosimetry Models for the Techa River Cohorts, (Contract)* European Union, $185,600 (total), $130,400 (direct), Wesley E. Bolch, **Principal Investigator**, 15% FTE, March 1, 2010 – February 28, 2013, Peer Review, 1 Student. **(UF Project 80521)**
- *EPI-CT: International Pediatric CT Scan Study.* The EPI-CT study seeks to explore epidemiological links between pediatric radiation exposure during CT scanning and the occurrence of cancer. The project is coordinated by the International Agency for Research on Cancer (IARC), and financially supported from the Seventh Framework Program of the European Commission (FP7-Fission-2010-3.2.1). Results are expected in 2015. Wesley E. Bolch, **Consultant**

HONORS

Alpha Lambda Delta Freshman Honor Society (1979)
Phi Eta Sigma Freshman Honor Society (1979)
Tau Beta Pi Engineering Honor Society (1983)
Golden Key National Honor Society (1984)
Phi Kappa Phi National Honor Society (1984)
Epsilon Lambda Chi Engineering Leadership Honor Society (1984)
Sigma Xi National Research Honor Society (1990)

AWARDS - Professional

Smith & Gillespie Engineering Academic Scholarship, University of Florida (1983 - 1984)
Sigma Tau Senior Engineering Award, University of Florida (1984)
College of Engineering Service Award, University of Florida (1985)
Travel Award, Health Physics Society (1987)
Travel Award, Radiation Research Society (1987)
First Place Student Paper Competition, Health Physics Society (1987)
U. S. Department of Energy Health Physics Fellowship (1984 - 1988)

University of Florida Sigma Xi Graduate Student Research Award (1989)
Health Physics Faculty Research Award, U. S. Department of Energy (1992)
Elda E. Anderson Award, Health Physics Society (1993)
Health Physics Faculty Research Award, U. S. Department of Energy (1996)
Teaching Improvement Program (TIP) Award, University of Florida (1998)
Research Award, Department of Nuclear & Radiological Engineering, University of Florida (2003)
University of Florida Research Foundation Professor (2006 – 2009)
International Educator of the Year for the UF College of Engineering (2007)

AWARDS - Publications

Top 10 Articles for 2003 [*Phys Med Biol* **48** 805-820 (2003)]
Top 10 Articles for 2007 [*Phys Med Biol* **52** 3309-3333 (2007)]
Top 10 Articles for 2009 [*Phys Med Biol* **54** 3613–3629 (2009)]
Top 30 Articles for 2010 [*Phys Med Biol* **55** 1785–1814 (2010)]
Top 25 Articles for 2011 [*Phys Med Biol* **56** 2309-2356 (2011)]
Top 25 Articles for 2011 [*Phys Med Biol* **56** 3137–3161 (2011)]

TEACHING

Graduate Courses – University of Florida

Course	Title	Terms Taught
BME 6xxx	Radiation Physics, Measurement, and Dosimetry	Fall 2012 – Present
ENU 6623	Radiation Dosimetry	Spring 1996 – Present
Past Courses		
ENU 5615(L)	Nuclear Radiation Detection with Laboratory	Fall 1995 – Fall 2003
BME 5002	Introduction to Biomedical Engineering II	Spring 1998 – Spring 2001
BME 6400	Instrumentation for Medical Image Acquisition	Fall 1999 – Fall 2002

Undergraduate Courses – University of Florida

Course	Title	Terms Taught
ENU 4641	Applied Radiation Protection	Spring 1995 – Present
ENU 4630	Radiation Shielding	Fall 2004 – Present
Past Courses		
ENU 4612 (L)	Radiation Detection & Instrumentation with Lab	Fall 1995 – Fall 2003

SUPERVISION AND MENTORING

Listing by Name, Date, Current Position, and Project Title

HP - denotes Health Physics Program
MP - denotes Medical Physics Program
BME - denotes Biomedical Engineering Program

Post-Doctoral Research Associates

1. **Bouchet, Lionel, PhD** (January 1999 - December 1999)
   Doctoral Program: University of Florida, Department of Nuclear and Radiological Engineering
   Research Responsibilities: Development of skeletal bone dosimetry models and absorbed fraction data for both photons and electrons for use in nuclear medicine internal dosimetry
   Initial Position: Assistant Professor, Department of Neurosurgery, University of Florida (1999 – 2002)
   Present Position: Director of Research, Zmed, Inc., Boston, MA (2002 – present)
2. **Clairand, Isabelle, PhD** (April 1999 - April 2000)
   Doctoral Program: Institute Gustave-Roussy, Villejuif Cedex, France
   Research: Improved skeletal modeling in anthropomorphic computational models of internal dosimetry
   Present Position: Research Assistant, Institute Gustave-Roussy, Villejuif Cedex, France
3. **Lee, Choonsik, PhD** (January 2005 – April 2009)
   Doctoral Program: Department of Nuclear Engineering, Hanyang University, Korea
   Research Responsibilities: Tomographic anatomic models for pediatric CT and radiation therapy
   Present Position: Research Scientists, Radiation Epidemiology Branch, National Cancer Institute
4. **Bourke, Vince, PhD** (June 2005 – July 2007)
   Doctoral Program: UT Southwest Medical Center at Dallas, Radiological Sciences.
   Research Responsibilities: Spatial characterization of stem cells within human bone marrow for dosimetry applications to radionuclide therapy.

Present Position: Medical Physics Resident, University of Arizona, Department of Radiation Oncology (August 2007 – Present).

Graduate Research Interns

1. **Rajon, Didier, BS** (May 1997 - November 1997)
   BS Program: Ecole Nationale de Physique de Grenoble, Grenoble, France
2. **Hussain, Mariwan, MS** (September 2000 - May 2000)
   MS Program: Engineering Physics at KTH (Royal Institute of Technology) Stockholm, Sweden
3. **Becu, Stephane, BS** (June 2002 – September 2002)
   BS Program: Ecole Nationale de Physique de Grenoble, Grenoble, France
4. **Combette, Agnes, BS** (June 2002 – September 2002)
   BS Program: Ecole Nationale de Physique de Grenoble, Grenoble, France
5. **Dieudonné, Arnaud, PhD** (May 2006 – December 2006)
   PhD Program, University of Medecine and Pharmacology, Rouen, France
6. **Falchook, Aaron, MD** (Summer 2008)
   MD Program, University of Florida, Medical Student Research Program

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Undergraduate Research Advisees

1. **Kielar, Kayla** (University Scholars Program – Summer 2003)
   Project – *Advanced techniques of bone marrow dosimetry*
2. **Hasenauer, Deanna** (High Honors Project – July 2004)
   Project - *Spongiosa volume scaling in skeletal dosimetry*
3. **Lindsay, Sinclair** (University Scholars Program – Summer 2005)
   Project – *Reference skeletal model of the adult male*
4. **Hough, Matt** (High Honors Project – November 2005)
   Project – *Patient-specific radionuclide S values via skeletal spongiosa volume scaling*
5. **Padilla, Laura** (University Scholars Program – Summer 2006)
   Project – *3D anatomical phantom of the adult dog for pre-clinical molecular radiotherapy*
6. **Lodwick, Daniel** (University Scholars Program – Summer 2006)
   Project – High-resolution NURBS model of the newborn skeleton
7. **Padilla, Laura** (High Honors Project – November 2006)
   Project – *3D anatomical phantom of the adult dog for pre-clinical molecular radiotherapy*
8. **Lodwick, Daniel** (High Honors Project – November 2006)
   Project – *High-resolution NURBS model of the newborn skeleton*
9. **Goede, Timothy** (University Scholars Program – Summer 2007)
   Project – *NURBS-based models of the gastrointestinal tract for improved radiation dosimetry*
10. **Juneja, Badal** (University Scholars Program – Summer 2008)
    Project - *Guidance on the Use of Portal Survey Meters for Radiological Triage*
11. **Kaufman, Katie** (University Scholars Program – Summer 2008)
    Project - *Virtual Phantoms for Radionuclide Therapy Treatment of Non-Hodgkin's Lymphoma*
12. **Salazar, Jessica** (University Scholars Program – Summer 2008)
    Project – *Hybrid Phantoms of the Adult Pregnant Female for Radiological Dose Assessment*
13. **Sanchez-Monreal, Nelia** (University Scholars Program – Summer 2009)
    Project - *Canine Anatomic Phantom for Preclinical Dosimetry in Internal Emitter Therapy*
14. **Lambrou, Steven** (University Scholars Program – Summer 2009)
    Project - *Guidance on the Use of Portal Survey Meters for Radiological Triage*
15. **Ficarrotta, Kayla** (University Scholars Program – Summer 2010)

Project – *Skin dose reconstruction in fluoroscopically guided interventions*

16. **Stepusin, Elliott** (University Scholars Program – Summer 2011)
    Project – *Computer Simulation of Tube-Current Modulation for Dose Reduction in CT Imaging*
17. **Sands, Michelle** (University Scholars Program – Summer 2011)
    Project – *Pediatric Physical Phantoms for Dose Verification in CT Imaging*
18. **Olguin, Edmond** (University Scholars Program – Summer 2012)
    Project – *Determining tissue and bone buildup factors using MCNP for point-kernel calculations*
19. **Tran, Trung** (University Scholars Program – Summer 2012)
    Project – *Pediatric Patient-Phantom Matching for Organ Dosimetry in IFG Procedures*

Current Graduate Students *(PhD)*

1. **Bahadori, Amir**, **PhD** (Medical Physics), Alumni and NASA Research Fellow
   Dissertation Topic – *Advanced phantoms for astronaut space dosimetry*
2. **Cantley, Justin, PhD** (Medical Physics), Graduate School Fellow
   Dissertation Topic – *Real-time dosimetry in stereotactic radiosurgery for AMD*
3. **Long, Daniel, PhD** (Medical Physics), Graduate Research Assistant
   Dissertation Topic – *Computational algorithms for tube current modulation in CT dosimetry*
4. **Maynard, Matthew, PhD** (Medical Physics), Graduate Research Assistant
   Dissertation Topic – *NURBS phantoms of the adult pregnant female*
5. **Padilla, Laura, PhD** (Medical Physics), National Institutes of Health Fellow
   Dissertation Topic - *A 3D canine phantom for skeletal molecular radiotherapy*
6. **Wayson, Michael, PhD** (Medical Physics), Graduate Research Assistant
   Dissertation Topic – *Organ dosimetry in pediatric patients*

Current Graduate Students *(Master's)*

1. **Abadia, Andres, MS** (Medical Physics), Graduate Research Assistant
   Thesis Topic – *Alternatives to the effective dose in medical dosimetry*
2. **Borrego, David, MS** (Medical Physics), Graduate Research Assistant
   Thesis Topic – *Real-time mapping of skin dose in fluoroscopically guided interventions*
3. **Ficarrotta, Kayla, MS** (Medical Physics)
   Thesis Topic – *Real-time dose tracking in pediatric CT imaging*
4. **Geyer, Amy, MS** (Medical Physics), Graduate Research Assistant
   Thesis Topic – *Patient-dependent library of pediatric hybrid phantoms for medical dosimetry*
5. **Goodwin, William, MS** (Medical Physics), Graduate Research Assistant
   Thesis Topic - *Real-time mapping of skin dose in fluoroscopically guided interventions*
6. **Long, Nelia, MS** (Medical Physics), Graduate Research Assistant
   Thesis Topic – *Anatomic models of the adult pregnant female for CT dosimetry*
7. **O'Reilly, Shannon** (Medical Physics), Graduate Research Assistant
   Thesis Topic – *A skeletal dosimetry model for the ICRP reference adult female*
8. **Stepusin, Elliott, MS** (Medical Physics), Graduate School Fellow
   Thesis Topic – *Development of a source-term library for computed tomography dosimetry*

Alumni *(PhD)*

Texas A&M University

1. **How Mooi Lau, PhD** (Health Physics – August 1994)
   Initial Position – Research Engineer, Nuclear Energy Unit, Puspati Complex, Selangor, Malaysia
   Current Position – Same
   Dissertation – Mechanisms of Radiation Damage to Poly(U)
2. **John W. Poston, Jr., PhD** (Health Physics – December 1994)
   Initial Position – Senior Health Physicist, Idaho National Engineering Laboratory
   Current Position – Medical Health Physicist, Houston, Texas
   Dissertation – Improved Dosimetric Model of the Gastrointestinal Tract
3. **Eun-Hee Kim, PhD** (Health Physics – May 1995)
   Initial Position – Staff Physicist, Korean National Cancer Hospital
   Current Position – Associate Professor, Dept of Nuclear Engineering, Seoul National University
   Dissertation – Microdosimetric Cellular-Dose Calculations for Beta Emitters in Radioimmunotherapy
4. **Carson A. Riland, PhD** (Health Physics – August 1995)
   Initial Position – Health Physicists, Nevada Test Site
   Current Position – same
   Dissertation – Development of a TLD Dosimeter Based Upon Mixtures of TL Materials
5. **Kory A. Kodimer, PhD** (Health Physics – August 1995)
   Initial Position – Researcher, Radiation Safety Engineering of Chandler, Arizona
   Current Position – Radiation Safety Officer, Cardinal Health, Woodland Hills, California
   Dissertation – Monte Carlo Calculations of Absorbed Fractions and S Values for Anthropomorphic Pediatric Phantoms
6. **Ian S. Hamilton, PhD** (Health Physics – August 1995)
   Initial Position – Assistant Professor at Texas A&M University
   Current Position – Medical Physicist, Baylor College of Medicine, Houston, TX
   Dissertation – Design, Construction, Calibration, and Testing of a Novel Three-Dimensional Glow Curve Producing Thermoluminescent Dosimeter Reader

University of Florida

7. **Lionel Bouchet, PhD** (Health Physics – December 1998)
   Initial Position – Assistant Professor, University of Florida, Department of Neurosurgery
   Current Position – Director for Research, ZMed, Inc.
   Dissertation – Development of Improved Methods for Internal Dosimetry Calculations
8. **Bongsoo Lee, PhD** (Health Physics – August 1999), Co-Chair with Dr. James Walker
   Initial Position – Postdoctoral Research Associate, Nanoptics, Inc., Gainesville, Florida
   Current Position – unknown
   Dissertation – Development of a Novel Endoscopic Device
9. **Jokisch, Derek, PhD** (Health Physics – August 1999)
   Initial Position – Assistant Professor, Dept. of Physics and Astronomy, Francis Marion University
   Current Position – Associate Professor, Dept. of Physics and Astronomy, Francis Marion University
   Dissertation – Beta Particle Dosimetry of the Trabecular Region of a Thoracic Vertebra Utilizing NMR Microscopy
10. **Mohr, Cecile, PhD** (Medical Physics – May 2000), Co-Chair with Dr. Steve Blackband
    Initial Position – Sales Engineer, Siemens, Medical Engineering Division, Erlangen, Germany
    Current Position – same
    Dissertation – Neurological Applications of Quantitative Magnetic Resonance Imaging

11. **Wagner, Thomas, PhD** (Medical Physics – August 2000), Co-Chair with Dr. Frank Bova
    Initial Position – Medical Physicist, US Oncology, Jacksonville, Florida
    Current Position – Assistant Professor, MD Anderson Cancer Center, Orlando, FL
    Dissertation – Optimal Delivery Techniques for Intracranial Stereotactic Radiosurgery: Circular & Multileaf Collimators
12. **Patton, Phillip, PhD** (Health Physics – December 2000)
    Initial Position – Assistant Professor, Department of Health Physics, UNLV
    Current Position – Associate Professor, Department of Health Physics, UNLV
    Dissertation – NMR Microscopy for Skeletal Dosimetry: Investigation of Marrow Cellularity on Dose Estimates
13. **Aydogan, Bulent, PhD** (Medical Physics – August 2001),
    Initial Position – Medical Physicist, St. Peter's Univ. Hospital, New Brunswick, NJ
    Current Position – Associate Professor, Dept. of Radiation Oncology, University of Chicago
    Dissertation – A Computational Atomistic Model of Radiation Damage to DNA
14. **Sehgal, Varun, PhD** (Biomedical Engineering – August 2001),
    Initial Position – Resident in Therapy Physics, Mayo Clinic, Rochester, MN
    Current Position – Assistant Professor, UCLA, Department of Radiation Oncology
    Dissertation – Improved Dosimetry Techniques for Intravascular Brachytherapy
15. **Farfan, Eduardo, PhD** (Health Physics – August 2002),
    Initial Position – Assistant Professor, South Carolina State University, Nuclear Engineering
    Current Position – Research scientist, Oak Ridge National Laboratory
    Dissertation – Probabilistic Respiratory Tract Dosimetry Model with Application to Beta-Particle and Photon Emitters
16. **Rajon, Didier, PhD** (Health Physics – December 2002),
    Initial Position – Research Associate, Dept of Neurosurgery, UF
    Current Position – same
    Dissertation – Skeletal Dosimetry: A Hyperboloid Representation of the Bone-Marrow Interface to Reduce Voxel Effects in 3D Images of Trabecular Bone
17. **Huh, Chulhaeng, PhD** (Health Physics – August 2003)
    Initial Position – Medical Physicist, Huff, Ferras & Associates, Inc.
    Current Position – same
    Dissertation – A probabilistic gastrointestinal tract dosimetry model
18. **Shah, Amish, PhD** (Biomedical Engineering – December 2004)
    Initial Position – Resident in Therapy Physics, MD Anderson Cancer Center – Orlando, FL
    Current Position – Staff Physicists, MD Anderson Cancer Center – Orlando, FL
    Dissertation – Reference skeletal dosimetry model for an adult male radionuclide therapy patient based on 3D imaging and paired-image radiation transport.
19. **Padgett, Kyle, PhD** (Medical Physics – December 2005),(Co-Chair with Dr. Steve Blackband)
    Initial Position – Assistant Professor, Miami School of Medicine, Department of Radiology
    Current Position – same
    Dissertation – Optimizing high-field T_1 and DT MR structural imaging
20. **Han, Eun-Young, PhD** (Medical Physics – August 2005),
    Initial Position – Resident in Therapy Physics, University of Minnesota, Minneapolis, MN
    Current Position – Associate Professor, Radiation Oncology, University of Arkansas Medical School
    Dissertation – A revised series of stylized anthropometric models for internal and external radiation dose assessment.
21. **Watchman, Christopher, PhD** (Medical Physics – August 2005)
    Initial Position – Research Associate, Radiation Oncology, University of Arizona, Tucson, AZ
    Current Position – Assistant Professor, Radiation Oncology, University of Arizona, Tucson, AZ

Dissertation – Skeletal dosimetry models for alpha-particles for use in molecular radiotherapy

22. **Kim, Kwang-Pyo, PhD** (Health Physics – December 2005), (Health Physics – December 2005)
    Initial Position – Research Fellow, Radiation Epidemiology Branch, National Cancer Institute
    Current Position – Assistant Professor, Kyung Hee University, Department of Nuclear Engineering
    Dissertation – Inhalation dose assessment to workers in the Florida phosphate industry
23. **Staton, Robert, PhD** (Medical Physics – December 2005)
    Initial Position – Resident in Therapy Physics, MD Anderson Cancer Center – Orlando, FL
    Current Position – Medical physicist, MD Anderson Cancer Center – Orlando, FL
    Dissertation – Organ dose assessment in pediatric fluoroscopy and CT via a tomographic computational model of the newborn patient
24. **Brindle, James, PhD** (Medical Physics – May 2006)
    Initial Position – Research Associate, Department of Radiation Oncology, Case Western Reserve University – Cleveland, OH
    Current Position – same
    Dissertation – Techniques for skeletal dosimetry in radionuclide therapy via assessment of patient-specific total and regional spongiosa volumes
25. **Lee, Choonik, PhD** (Medical Physics – May 2006)
    Initial Position – Research Associate, MD Anderson Cancer Center, Orlando, FL
    Current Position – Clinical Instructor, Radiation Oncology, University of Michigan Medical School
    Dissertation – Development of voxel computational phantoms of pediatric patients and their application to organ dose assessment
26. **Kielar, Kayla PhD** (Health Physics – August 2009)
    Initial Position – Resident in Therapeutic Radiological Physics, Stanford University
    Current Position – same.
    Dissertation – Bone marrow dosimetry via microCT imaging and stem cell spatial mapping
27. **Pafundi, Deanna PhD** (Health Physics – August 2009)
    Initial Position – Resident in Therapeutic Radiological Physics, Mayo Clinic, Rochester, MN
    Current Position – same.
    Dissertation – Image-based skeletal tissue and electron dosimetry models for the ICRP reference pediatric age series
28. **Hanlon, Justin, PhD** (Medical Physics – August 2010)
    Initial Position – Seeking employment.
    Dissertation – NURBS-based models of the head and eye for AMD radiotherapy
29. **Pichardo, Carlos, PhD** (Medical Physics – December 2010),
    NRSA Fellow – National Cancer Institute
    Initial Position – Medical Physicist, Harrington Cancer Center, Amarillo, Texas
    Current Position – same.
    Dissertation– Adult patient-specific estimation of active bone marrow mass
30. **Johnson, Perry**, **PhD** (Medical Physics – August 2011)
    Initial Position – Therapy Physics Resident, MD Anderson – Orlando, Florida
    Current Position – same.
    Dissertation – Assessing patient dose in interventional fluoroscopy using patient-dependent hybrid phantoms.

Academic Faculty Positions – *PhD Alumni*

Name	*Position and University*
Eun Hee Kim	Associate Professor, Dept of Nuclear Engineering, Seoul National University
Derek Jokisch	Associate Professor, Dept of Physics and Astronomy, Francis Marion University
Phillip Patton	Associate Professor, Dept of Health Physics, University of Las Vegas, Nevada
Bulent Aydogan	Associate Professor, Dept of Radiation Oncology, University of Chicago Medical School
Varun Sehgal	Assistant Professor, Dept of Radiation Oncology, UCLA
Kyle Padgett	Assistant Professor, Dept of Radiology, Miami School of Medicine
EunYoung Han	Assistant Professor, Dept of Radiation Oncology, University of Arkansas Medical School
Chris Watchman	Assistant Professor, Dept of Radiation Oncology, University of Arizona
KwangPyo Kim	Assistant Professor, Dept of Nuclear Engineering, Kyung Hee University, Seoul, South Korea
Choonik Lee	Instructor, Dept of Radiation Oncology, University of Michigan

Alumni *(Master's)*

Texas A&M University

1. **Smith, Miles, MS** (Health Physics – May 1990)
   Initial Position – Health Physicist, Benchmark Environmental Corporation
   Thesis – Nearest-Neighbor Distributions of Free Radicals Produced within Charged-Particle Tracks in Liquid Water
2. **Felsher, Harry, MS** (Nuclear Engineering – May 1991)
   Initial Position – Technical Assistant, US Nuclear Regulatory Commission
   Thesis – Design of a Portable Shield for Space Applications
3. **Brown, Chad, MS** (Health Physics – December 1992)
   Initial Position – Health Physics Consultant, Oak Ridge, Tennessee
   Thesis – Characterization of Aluminum Oxide Thermoluminescent Dosimeter Response to Beta-Radiation
4. **Spence, Jody, MS** (Health Physics – May 1993)
   Initial Position – Assistant Radiation Safety Officer, UT Southwest Medical Center at Dallas
   Thesis – A Feasibility Study of a Gelatine-Based Tissue Substitute
5. **Hernandez, Oscar, MS** (Health Physics – August 1993)
   Initial Position – Chief Medical Physicists – Travis Air Force Base, California
   Thesis – A Linear Time-Varying Simulation Model of the Respiratory System
6. **Zuzarte de Mendonca, Anne, MS** (Nuclear Engineering – August 1993)
   Initial Position – Returned to France
   Thesis – Trabecular Bone Dosimetry Using a Monte Carlo Code
7. **Calvo, Sebastian, MS** (Health Physics – August 1994)
   Initial Position – Internal Dosimetrist at the Oak Ridge National Laboratory
   Thesis – Estimates of Electron Absorbed Fractions of Energy for the Upper Respiratory Tract
8. **Delisle, Christine, MS** (Health Physics – August 1994)
   Initial Position – Returned to France
   Thesis – Crew Cancer-Risk Reduction by Utilizing Nuclear Propulsion in Manned Space Missions
9. **Crady, Donald, MS** (Health Physics – August 1994)
   Current Employment – Radiation Protection Officer, U.S. Army
   Non-Thesis Project – An Improved Dosimetric Model of the Brain
10. **Bouchet, Lionel, MS** (Nuclear Engineering – December 1994)
    (Continued into UF PhD Program in HP)

Thesis – Electron Dosimetry Studies in the Brain

11. **Parry, Robert, MS** (Health Physics – May 1995)
    Initial Position – Assistant Radiation Safety Officer, Ben Taub Hospital, Houston, Texas, Baylor College of Medicine.
    Thesis – S-values for Bone-Seeking Radionuclides
12. **Walker, Scottie, MS** (Health Physics – May 1995)
    Initial Position – Health Physicist, Sandia National Laboratory
    Thesis – Experimental Verification of Monte Carlo Transport Calculations
13. **Charlton, Michael, MS** (Health Physics – August 1995)
    Initial Position – Assistant Radiation Safety Officer, Texas A&M University
    Thesis – Beta-Particle Response of TLDs Exposed to Radioactive Noble Gases

University of Florida

14. **Reyes, Ricardo, MS** (Health Physics – August 1996)
    Initial Position – Nuclear Medical Science Officer, Army Medical Corp, Belcamp, Maryland
    Thesis – Estimates of Organ Doses for Pediatric Patients Undergoing Diagnostic X-Ray Procedures
15. **Chohan, Talal, MS** (Health Physics – December 1996)
    Initial Position – Medical Physicist, OnCURE Medical Corporation, Jacksonville, Florida
    Thesis – A Survey of Plain Film X-Ray Examination Parameters for Pediatric Patients
16. **Mohr, Cecile, MS** (Medical Physics – May 1997)
    Initial Position – Sales Engineering, Siemens, Medical Engineering Division, Erlangen, Germany,
    Non-Thesis Project – ROC Analysis of Screen-Film versus CR Radiographs
17. **Thomsen, Loren, MS** (Health Physics – August 1997),
    Initial Position – Service Engineer, National Instruments, Inc., Austin, TX
    Thesis – Virtual Instrumentation to Replace Nuclear Instrumentation Modules in Radiation Measurement Education
18. **Jokisch, Derek, MS** (Health Physics – August 1997),
    (Continued into PhD Program in MHP)
    Thesis – NMR Imaging as a Tool for Studying Beta-Dosimetry in Trabecular Bone and Red Marrow Regions
19. **Wagner, Tom, MS** (Health Physics – August 1997)
    (Continued into PhD Program in MP)
    Non-Thesis Project – Design of an Improved Radiation Detection and Instrumentation Laboratory Course Curriculum
20. **Blanco, Pablo, MS** (Health Physics – August 1998),
    Initial Position – Commission for Atomic Energy (CEA), France
    Thesis – Revisions and Radiation Transport in Mathematical Models of Adult and Pediatric Patients
21. **Patton, Phillip, PhD** (Health Physics – August 1998)
    (Continued into PhD Program in MHP)
    Thesis – NMR Assessment of Chord Distributions for Trabecular Bone Dosimetry: Effects of Sample Freezing & Thawing
22. **Sun, Caijun, MS** (Medical Physics – May 1998)
    (Continued into PhD Program in ECE)
    Thesis – Computational Models of Radiation Dose Distribution Around Radioactive Stents
23. **Sehgal, Varun, MS** (Medical Physics)
    (Continued into PhD Program in BME)
    Thesis – Monte Carlo Characterization of the Dose Distribution Near P-32-Coated Stents

24. **Pomije, Brian, MS** (Medical Physics – August 1999),
    Initial Position – Navy Therapy Physicist stationed at San Diego
    Thesis – Radiation Dosimetry Of Newborn Patients From Diagnostic Fluoroscopic Examinations: Voiding Cystourethrograms (VCUGs)
25. **Farfan, Eduardo, MS** (Health Physics – May 1999)
    (Continued into PhD Program in HP)
    Thesis – Probabilistic Lung Dosimetry with Application to Uranium Dioxide and Octoxide Aerosols
26. **Rajon, Didier, MS** (Health Physics - August 1999)
    (Continued into PhD Program in HP)
    Thesis – Trabecular Bone Dosimetry: Assessment of Minimum Voxel Size for Nuclear Magnetic Resonance Imaging
27. **Bourke, Vincent, MS** (Health Physics – December 1999),
    Initial Position – Doctoral Program at University of Texas at Dallas
    Non-Thesis Project – A Visual Basic Teaching Module for Radiochemistry
28. **Wilson, Kathryn, MS** (Health Physics – December 2000),
    (Continued into PhD Program in MP)
    Thesis – A Comparison Study of Dosimeters: TLDS versus Double Strand Breaks in DNA Analyzed by Capillary Electrophoresis
29. **Sessions, Jennifer, MS** (Biomedical Engineering – August 2001),
    Initial Position – Biomedical Engineer, Zmed, Inc.
    Thesis – The Determination of Effective Doses for Pediatric Fluoroscopy Studies
30. **Shah, Amish, MS** (Biomedical Engineering – December 2001)
    (Continued into PhD Program in Biomedical Engineering)
    Thesis – Geometrical Distribution of Adipocytes within Normal Bone Marrow: Considerations for 3D Skeletal Dosimetry Models
26. **Nipper, Josh, MS** (Biomedical Engineering – May 2002),
    Initial Position – Biomedical Engineer, U.S. Food and Drug Administration
    Thesis – Two voxelized tomographic models of pediatric patients in the first year of life
27. **Kim, Tae-Hoon, MS** (Health Physics – August 2002),
    Initial Position – Officer, Republic of Korea Navy
    Thesis – Considerations of stochastic variability in the ICRP 30 retention equations
28. **Staton, Robert, MS** (Medical Physics – May 2003)
    (Continued into PhD Program in Medical Physics)
    Thesis – A tomographic computational model for radiation dosimetry in pediatric radiology
29. **Pazik, Frank, MS** (Medical Physics – August 2003),
    Initial Position – Medical Physicist, Charleston, South Carolina
    Thesis – Organ doses in pediatric fluoroscopy
30. **Nelly Volland, MS** (Biomedical Engineering – August 2003)
    (Continued into PhD Program in BME)
    Thesis – Organ volumes in pediatric patients assessed via computed tomography image segmentation
31. **Williams, Matt, MS** (Medical Physics – May 2005),
    Initial Position – Medical Physicist, Mobile Infirmary Medical Center, Mobile, AL
    Thesis – Computed tomography dose index and beam profile characterization studies for the siemens SOMATON Sensation 16 CT scanner for simulations of pediatric patient organ dose
32. **Hasenauer, Deanna, MS** (Health Physics – May 2006)
    (Continued into PhD Program in Health Physics)

Non-Thesis Project – An image-based beta-particle skeletal dosimetry model for the 9-month male

33. **Kielar, Kayla, MS** (Health Physics – May 2006)
    (Continued into PhD Program in Health Physics)
    Non-Thesis Project – A skeletal reference dosimetry model for the adult female
34. **Kresge, Wendy, MS** (Medical Physics – December 2006)
    (Continued into PhD Program in Medical Physics)
    Thesis – Correlations between volumetric BMD and marrow volume fractions in cancellous bone
35. **Ambrose, Robert, MS** (Medical Physics – December 2006)
    Initial Position – Tomotherapy, Inc., Madison, Wisconsin
    Thesis – Effective dose conversion coefficients for medical emergency management
36. **Hurtado, Jorge, MS** (Health Physics – December 2006)
    (Continued into PhD Program in Medical Physics)
    Thesis – Measurement-to-activity conversion coefficients for medical emergency management
37. **Hough, Matt, MS** (Health Physics – May 2007)
    (Continued into PhD Program in Health Physics)
    Non-Thesis Project – A skeletal reference dosimetry model for the 40-year male
38. **Padilla, Laura, MS** (Medical Physics – May 2008)
    (Continued into PhD Program in Medical Physics)
    Thesis – 3D canine hybrid phantom for radiopharmaceutical therapy dosimetry
39. **Lodwick, Daniel, MS** (Nuclear Engineering – May 2008)
    (Continued into MD Program at the University of Florida)
    Thesis – Hybrid computational phantoms of the 1, 5, and 10 year male and female reference individuals.
40. **Maynard, Matthew, MS** (Medical Physics – August 2009)
    (Continued into PhD Program in Medical Physics)
    Thesis – Skeletal dose estimates for radiostrontium and radioyttrium in the ICRP reference 10, 20, and 30 week fetus.
41. **Sexton, Jenna, MS** (Health Physics – December 2009)
    Non-Thesis Project – Lung & systemic retention of Al, Ta, Ti, and W nanoparticles following inhalation exposures.
42. **Sinclair, Lindsay, MS** (Medical Physics – December 2009)
    (Continued into PhD Program in Medical Physics)
    Non-Thesis Project – Image-based skeletal tissue model for the ICRP reference adult female
43. **Wayson, Michael, MS** (Medical Physics – December 2009)
    (Continued into PhD Program in Medical Physics)
    Thesis – Complete photon dosimetry characterization of the University of Florida newborn hybrid computational dosimetry phantoms.
44. **Bahadori, Amir MS** (Medical Physics – May 2010)
    (Continued into PhD Program in Medical Physics)
    Thesis – Skeletal neutron dose response functions – A new protocol for evaluating dose to active marrow and bone endosteum.
45. **Geyer, John, MS** (Medical Physics – August 2010)
    (Continued into MD Program at the University of Florida)
    Thesis – Skeletal dosimetry models of the 15 and 20 week fetus.
46. **Cieply, Alyson, MS** (Medical Physics – December 2010)
    Initial Position – seeking employment
    Non-Thesis Project – Measurement of lung fluid solubility of nanoparticle metals

47. **Juneja, Badal, MS** (Medical Physics – May 2011)
    (Continued into PhD Program in Medical Physics)
    Thesis – Software for First Responders Allowing for Interpretation of Portable Survey Meter Responses in Radiological Triage Decisions
48. **Long, Daniel, MS** (Medical Physics – August 2011)
    (Continued into PhD Program in Medical Physics)
    Thesis – Organ doses for patients undergoing computed tomography examinations: Validation of Monte Carlo calculations using anthropomorphic phantoms