

BIOGRAPHICAL SKETCH

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NAME Richard L. Wahl	POSITION TITLE: Professor of Radiology and Oncology, Henry N. Wagner, Jr. M.D. Professor, Nuclear Medicine, Director, Division of Nuclear Medicine /PET, Vice Chairman for Technology and Business Development		
eRA COMMONS USER NAME rwahl			
EDUCATION/TRAINING: <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Wartburg College, Waverly, IA	B.A.	1974	Chemistry
Washington University, School of Medicine	M.D.	1978	Medicine

A. Personal Statement

As Associate Director of the JHU ICMIC and Co-Director of the Administrative Resource, and the Imaging and Probes Resource, my long experience in nuclear medicine as it applies to cancer imaging and therapy will be useful across several aspects of the JHU ICMIC Program. I will be able to provide guidance and direction on the clinical nuclear imaging studies in the JHU ICMIC. Additionally, my expertise in FDG imaging not only from a clinical standpoint, but also regarding its molecular mechanism of action, will be useful for Research Component 3. My research interests in radiolabeled antibodies and antibody fragments in oncologic imaging and therapy will be useful for Research Component 1.

B. Positions and Honors**Positions and Employment**

1978-79	Internal Medicine Intern, University of California, San Diego, CA.
1979-82	Diagnostic Radiology Resident, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, MO.
1982-83	Nuclear Medicine Fellow, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, MO.
1981-83	Immunology Research Fellow, Division of Allergy and Clinical Immunology, Howard Hughes Medical Institute and Jewish Hospital, Department of Internal Medicine, Washington University School of Medicine.
1983-87	Assistant Professor of Internal Medicine, Co-Director, Nuclear Imaging, University of Michigan Medical Center, Ann Arbor, MI.
1987-90	Associate Professor of Internal Medicine and Radiology, Director, General Nuclear Imaging, University of Michigan Medical Center, Ann Arbor, MI.
1990-00	Professor of Internal Medicine and Radiology, Director, General Nuclear Imaging, University of Michigan Medical Center, Ann Arbor, MI.
1996-00	Director: Radiopharmaceutical Program, University of Michigan Comprehensive Cancer Center
2000-present	Professor of Radiology and Oncology, Henry N. Wagner Jr. M.D. Professor, Nuclear Medicine, Director, Division of Nuclear Medicine / PET of Radiology, Vice Chairman for Technology and Business Development, Johns Hopkins Medical Institutions, Baltimore, MD.

Honors and Awards

1973 Alpha Chi, 1973 Beta Beta Beta, 1974 Summa Cum Laude, Wartburg College; 1978 Alpha Omega Alpha, Washington University School of Medicine; certified: American Board of Radiology, 1982, special competency, Nuclear Radiology, 1983, American Board of Nuclear Medicine 1985; Tetalman Memorial Award (Society of Nuclear Medicine), 1986; J. Conn Research Award (Internal Medicine), 1987; American Society for Clinical Investigation, 1989-Present; Berson & Yalow Award (Society of Nuclear Medicine), 1992; Hounsfield Award; Society of Body Computed Tomography, 1992; Chair: NIH Consensus Panel of PET Research in Oncology, 1992; Member: American Board of Nuclear Medicine 1993-Present, (Chairman: American Board of Nuclear Medicine), 1998; Member: Experimental Immunology Study Section (NIH), 1990-1994; Listed, Best

Doctors in America, 1993-Present; Listed, Who's Who in America and the World 1995-Present; Wartburg College Distinguished Alumnus Award, 1995; President, Institute for Clinical PET, 1995-1996; James Quinn 3rd Memorial Lecture, Central Chapter Society of Nuclear Medicine, 1997; 16th Annual Philip M. Johnson Memorial Lecture, Columbia University, New York, NY, 1997; Marie Curie Plenary Lecturer, European Assoc. Nuclear Medicine, 1998; Eugene P. Pendergrass New Horizon's Lecture, Radiological Society of North America, 1999; Distinguished Scientist Award, Academy of Molecular Imaging, 2001. Most Influential Radiology Reseracher "Aunt Minnie Award", 2005.

Major Professional Societies

American Board of Nuclear Medicine - (Chair: Credentials Committee 1994-1997, Secretary 1997, Chairman for the Board 1998, Life member 1999); American Federation for Clinical Research; American Medical Association; American College of Nuclear Physicians (Fellow 1996); American College of Radiology (fellow 2001); American Association for Cancer Research; American Roentgen Ray Society; American Society for Clinical Investigation; Central Chapter, Society of Nuclear Medicine; Central Society for Clinical Research; Institute of Clinical PET - (President 1995-1996); Michigan Radiological Society; Radiological Society of North America; Society of Nuclear Medicine.

C. Selected Peer-reviewed Publications (Selected 2007 - 2009 Publications)

Most relevant to the current application

1. Lodge MA, Jacene HA, Pili R, Wahl RL. Reproducibility of tumor blood flow quantification with 150-water PET. *J Nucl Med.* 2008 Oct;49(10):1620-7 PMID2587033.
2. Terrovitis J, Kwok KF, Lautamäki R, Engles JM, Barth AS, Kizana E, Miake J, Leppo MK, Fox J, Seidel J, Pomper M, Wahl RL, Tsui B, Bengel F, Marbán E, Abraham MR. Ectopic expression of the sodium-iodide symporter enables imaging of transplanted cardiac stem cells in vivo by single-photon emission computed tomography or positron emission tomography. *J Am Coll Cardiol.* 2008 Nov 11; 52(20):1652-60 PMC Journal - In Process.
3. Jacene HA, Filice R, Kasecamp W, Wahl RL. 18F-FDG PET/CT for monitoring the response of lymphoma to radioimmunotherapy. *J Nucl Med.* 2009 Jan;50(1):8-17. Epub 2008 Dec 17. PMC Journal - In Process.
4. He B, Du Y, Segars WP, Wahl RL, Sgouros G, Jacene H, Frey EC. Evaluation of quantitative imaging methods for organ activity and residence time estimation using a population of phantoms having realistic variations in anatomy and uptake. *Med Phys.* 2009 Feb;36(2):612-9. PMID2848525.
5. Kasamon YL, Wahl RL, Ziessman HA, Blackford AL, Goodman SN, Fidyk CA, Rogers KM, Bolaños-Meade J, Borowitz MJ, Ambinder RF, Jones RJ, Swinnen LJ. Phase II study of risk-adapted therapy of newly diagnosed, aggressive non-Hodgkin lymphoma based on midtreatment FDG-PET scanning. *Biol Blood Marrow Transplant.* 2009 Feb;15(2):242-8. PMC Journal - In Process.
6. Buijs M, Vossen JA, Geschwind JF, Ishimori T, Engles JM, Acha-Ngwodo O, Wahl RL, Vali M. Specificity of the anti-glycolytic activity of 3-bromopyruvate confirmed by FDG uptake in a rat model of breast cancer. *Invest New Drugs.* 2009 Apr;27(2):120-3. PMC Journal - In Process.
7. He B, Wahl RL, Sgouros G, Du Y, Jacene H, Kasecamp WR, Flinn I, Hammes RJ, Bianco J, Kahl B, Frey EC. Comparison of organ residence time estimation methods for radioimmunotherapy dosimetry and treatment planning--patient studies. *Med Phys.* 2009 May;36(5):1595-601. PMID2851232.
8. Wahl RL, Jacene H, Kasamon Y, Lodge MA. From RECIST to PERCIST: Evolving Considerations for PET response criteria in solid tumors. *J Nucl Med.* 2009 May;50 Suppl 1:122S-50S PMID2755245.
9. Kratchman DL, Tatsumi M, Gilson WD, Ishimori T, Kedziored D, Walczak P, Segars WP, Chen HH, Fritzges D, Izbudak I, Young RG, Marcelino M, Pittenger MF, Solaiyappan M, Boston RC, Tsui BM, Wahl RL, Bulte JW. Dynamic imaging of allogeneic mesenchymal stem cells trafficking to myocardial infarction. *Circulation.* 2005 Sep 6;112(10):1451-61. Epub 2005 Aug 29. PMID1456731.
10. Terrovitis J, Lautamaki R, Bonios M, Fox J, Engles JM, Yu J, Leppo MK, Pomper MG, Wahl RL, Seidel J, Tsui BM, Bengel FM, Abraham MR, Marban E. Noninvasive quantification and optimization of acute cell retention by in vivo positron emission tomography after intramyocardial cardiac-derived stem cell delivery. *J Am Coll Cardiol.* 2009 Oct 20;54(17):1619-26. PMID2803039 [Available on 2010/10/20].
11. Hou P, Liu D, Ji M, Lui Z, Engles JM, Wahl RL, Xing M. Induction of thyroid gene expression and radioiodine uptake in melanoma cells: novel therapeutic implications. *PLoS One.* 2009 Jul 10;4(7):e6200. PMID2703805.
12. Lodge MA, Rahmim A, Wahl RL. A Practical, Automated Quality Assurance Method for Measuring Spatial Resolution in PET. *J Nucl Med.* 2009 July 17. PMC Journal - In Process.

13. Jacene HA, Wahl RL. The importance of brown adipose tissue. N Engl. J Med. 2009 Jul 23;361(4):417-8; author reply 419-20. PMC Journal - In Process.
14. Tatsumi M, Cohade C, Bristow RE, Wahl RL. Imaging uterine cervical cancer with FDG-PET/CT: direct comparison with PET. Mol Imaging Biol. 2009 Jul-Aug;11(4):229-35. PMC Journal - In Process.
15. Heston TF, Wahl RL. J Am Clinical significance of iodine-123 metaiodobenzylguanidine cardiac imaging. Coll Cardiol. 2009 Aug 4;54 PMC Journal - In Process.

D. Research Support

Ongoing Research Support

R01 CA109234 (Frey) 03/01/06-11/30/10

NIH/NCI

Quantitative SPECT for Targeted Radionuclide Therapy

The major goal of this grant is to study quantitative SPECT for targeted radionuclide therapy

Role: Co-PI

9 R01 EB 000168-20 (Tsui) 12/01/07-11/30/12

NIBIB

Corrective Image Reconstruction Methods for ECT

The major goal of this project is to develop methods to acquire simultaneous dual isotope SPECT data and compensate for crosstalk between the two isotopes.

Role: Co-Investigator

RO1CA116477 (Sgouros) 04/01/06-03/31/11

ES NIH/NCI

Dose Response Radionuclide Therapy

The major goal of this grant is to evaluate Dose Response Radionuclide Therapy

Role: Co-Investigator

R24CA092871-5 (Pomper) 08/27/01-02/29/12

NIH/NCI

Interdisciplinary Small Animal Imaging for Oncology

An important feature of our new molecular imaging center is the imaging of small animals with PET, MR and optical techniques, funded through this Small Animal Imaging Resource Program (SAIRP) grant.

Role: Co-PI

007066 (Jacene) 09/01/06-08/31/16

GSK

A Multi-Center, Randomized, Phase 3 Study of Iodine-131 Tositumomab Therapeutic Regimen Versus Ibritumomab Tiuxetan Therapeutic Regimen for Subjects with Relapsed or Transformed follicular NHL.

The goal of this study is to evaluate the study of iodine-i31 tositumomab therapeutic regimen versus ibritumomab tiuxetan therapeutic regimen for subjects with relapsed or transformed follicular NHL.

Role: Co-Investigator

Numoda Corporation (Wahl) 10/15/09-10/14/11

A Multi-Center Phase 2 Study Comparing 99m Tc-EC-DG

The goal of this study is to conduct a Phase 2 study involving a multi-center group to compare and evaluate the effects of 99m Tc ED-DG,

Role: PI

MIP (Wahl) 10/14/09-07/31/14

A Phase I-II Study Evaluating the Maximum Tolerated Dose, Dosimetry, Safety, And Efficacy Of Ultratrace™ Iobenguane I 131 In Patients With Malignant Pheochromocytoma/Paraganglioma.

The goal of this study to evaluate the tolerated dose, dosimetry, safety, and efficacy of ultratrace™ Iobenguane i 131 in patients with malignant pheochromocytoma/paraganglioma

Role: PI

Completed Projects Within Last Three Years

P50CA096888 (Ambinder) 09/20/02-06/30/09

NIH/NCI

Internal SPORE in Lymphoma

The major goal of this study is to evaluate the safety and efficacy of the combination regimens of (TRAIL/Apo2L with targeted delivery of ionizing radiation *via* radiolabeled anti-CD20 antibodies.

Role: Co-Investigator

N01-CM-27018 (Wahl) 09/30/02-09/29/10

NCI

Early Clinical Trials of Imaging Agents

The goal of this study is to study early clinical trials of imaging agents.

Role: PI

N01-CM-27018 (Wahl) 09/29/09-09/30/10

NCI-ARRA

WA#10 to expand WA#7 Clinical Trial Evaluating FLT

The goal of this study is to accelerate patient accrual and completion on the aforementioned study, so it can be completed within the next 24 months. To assure we successfully achieve this goal, we anticipate the need to extend the study from a single-center to a multi-center study involving up to 3 additional performance sites. Incremental costs are associated with this expansion.

Role: PI

P50 CA103175 (Bhujwalla) 08/10/03-07/31/10

NIH/NCI

The JHU ICMIC Center

The major goal of this study is to study the techniques of Anatomolecular Imaging.

Role: Co-Investigator

RO1 CA113797-01 (Sgouros) 12/09/05-11/30/09

NIH/NCI

Targeted Alpha-Particle Therapy of Metastases

The major goal of this study is to evaluate the strategy of targeting rapidly accessible breast cancer metastases using a short-lived alpha-particle emitter

Role: Co-Investigator

1556GHC754 (Hendrix) 08/01/06-07/31/10

UCLA

Clinically Relevant Pharmacokinetics and Acceptability of Uc781 in the Rectal Compartment

The goal of this grant is to clinically-relevant pharmacokinetics and acceptability of Uc781 in the rectal compartment.

Role: Co-Investigator