CURRICULUM VITAE

Henry F. VanBrocklin, Ph.D., FSNMMI, FSRS

Department of Radiology and Biomedical Imaging
University of California, San Francisco

Position: Professor in Residence Step 7
Radiology and Biomedical Imaging
School of Medicine

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EDUCATION

1980-1984	Rensselaer Polytechnic Institute, Troy, NY	B.S.	Chemistry
1984-1986	Rensselaer Polytechnic Institute, Troy, NY	M.S.	Nuclear Chemistry
1986-1988	Washington University, St. Louis, MO	M.A.	Nuclear Chemistry
1988-1990	Washington University, St. Louis, MO	Ph.D.	Radiopharmaceutical Chemistry

Postgraduate Training

1990-1992	University of Illinois, Urbana IL	DOE Alexander Hollaender Fellowship

EMPLOYMENT

1992-2005	Lawrence Berkeley National Laboratory Life Sciences Division Department of Functional Imaging	Staff Scientist Radiopharm. Chemistry Group Leader
2005-present	University of California, San Francisco Radiology and Biomedical Imaging	Professor In Residence Dir. of Radiopharmaceutical Research
2025-present	University of California, San Francisco	Co-Director, Center for Infectious Disease Molecular Imaging

Ancillary positions held concurrently

1992-2005	University of California, San Francisco	Asst. Adjunct Professor of Radiology, WOS
1998-present	UCSF Helen Diller Comprehensive Cancer Center	Member
2005-present	Lawrence Berkeley National Laboratory	Joint Faculty Appointment
2009-2012	Huazhong University of Science and Technology, Wuhan China	Visiting Professor

Johns Hopkins University EX2002
GE Healthcare v. Johns Hopkins
PGR2025-00059

HONORS AND AWARDS

1984	B.S., Cum Laude, Rensselaer Polytechnic Institute, Troy, NY
1986-1990	Louderman Fellowship, Washington University, St. Louis, MO
1989	Society of Nuclear Medicine Young Investigator Award- Runner up, Missouri Valley Chapter
1990-1992	DOE Alexander Hollaender Distinguished Postdoctoral Fellow
1993	Lawrence Berkeley National Laboratory Outstanding Performance Award
1994	Ninth Annual Award (Most Outstanding Scientific Poster) - Society of Nuclear Medicine - Western Regional Chapter
1997	Lawrence Berkeley National Laboratory Outstanding Performance Award
1998	Lawrence Berkeley National Laboratory Outstanding Performance Award
2000	Lawrence Berkeley National Laboratory Outstanding Performance Award
2006	Society of Nuclear Medicine President's Distinguished Service Award
2010	Society of Nuclear Medicine President's Distinguished Service Award
2018	Fellow, Society of Nuclear Medicine and Molecular Imaging
2018	Academy for Radiology & Biomedical Imaging Research Distinguished Investigator
2019	MSBI Outstanding Teacher Award 2018-19 (inaugural award)
2020	Michael J. Welch Award, Radiopharmaceutical Science Council, SNMMI
2021	MSBI Outstanding Teacher Award 2020-21
2021	Fellow, Society of Radiopharmaceutical Sciences
2022	Western Pioneer Award, WRSNM
2023	MSBI Outstanding Teacher Award 2022-23
2023	Paul C. Abersold Award, SNMMI

KEYWORDS/AREAS OF INTEREST

molecular imaging, radiopharmaceutical chemistry, positron emission tomography, single photon emission computed tomography, oncologic imaging agents, proteases, steroids, tyrosine kinase inhibitors, PSMA, antibody fragments, antibodies, proteins, peptides, cardiac imaging agents, rotenone, perfusion tracers, neurologic imaging agents, HIV reservoir, organophosphate exposure, Parkinson's Disease, Long COVID, fluorine-18, carbon-11, radioiodine, indium-111, copper-64, zirconium-89, cerium-134, radiometal, isotope production, cyclotron, automated radiochemistry, imaging in drug development, theranostics, FDA PET drug approval

PROFESSIONAL ACTIVITIES

PROFESSIONAL ORGANIZATIONS

MEMBERSHIPS IN SCIENTIFIC PROFESSIONAL ORGANIZATIONS:

1984	Phi Lambda Upsilon
1984	Sigma Xi
1984-present	American Chemical Society (ACS)
1986-present	Division of Nuclear Science and Technology, ACS
1987-present	Society of Nuclear Medicine and Molecular Imaging (SNMMI)
1988-present	Radiopharmaceutical Sciences Council, SNMMI
1992-1997	International Association of Radiopharmacology
1993-present	Division of Medicinal Chemistry, ACS
1994-present	Division of Organic Chemistry, ACS
1997-2001	Society of Noninvasive Imaging in Drug Development (SNIDD)
2001-2011	Academy of Molecular Imaging, SNIDD Council
2002-present	Society of Radiopharmaceutical Sciences
2005-present	Center for Molecular Imaging Innovation and Translation, SNMMI
2012-present	World Molecular Imaging Society (WMIS)

2016-present Korean Society of Radiopharmaceuticals and Molecular Probes (KSRAMP)

SERVICE FOR PROFESSIONAL ORGANIZATIONS:

Society of Nuclear Medicine and Molecular Imaging

1999-2001	Radiopharmaceutical Sciences Council	Board of Directors
2002-2004	Radiopharmaceutical Sciences Council	President-Elect
2002	Annual Mtg Scientific Program Committee	Subchair
2002-2005	Annual Mtg Scientific Program Committee	Co-Vice Chair
2002-2009	Committee on Councils	Chair (2006-07)
2003-2004	Basic Science Emerging Technologies Subcommittee	
2003-2004	Committee on Radiopharmaceuticals	
2004-2005	Task Force on Molecular Imaging	
2004-2006	Coding and Reimbursement Working Group	
2004-2005	Radiopharmaceutical Sciences Council	President
2004-2011	House of Delegates	
2005-2010	Committee on Awards	
2005-2008	Committee on Education	
2005-2006	Molecular Imaging Center of Excellence	Secretary/Treasurer
2005-2006	RPSC Nominating Committee	Chair
2005-2006	RPSC Awards Committee	Chair
2005	RDRC/EIND FDA Response Task Force	Chair
2005	CGMP FDA Response Task Force	Chair
2005	NRC Task Force	
2006-2008	Committee on Radiopharmaceuticals	
2006-2007	Membership Committee	
2006-2007	Molecular Imaging Clinical Translation Advisory Committee	
2006	SNM Strategic Planning Working Group	
2006-2008	Molecular Imaging Center of Excellence	Vice President
2007-2009	Radiopharmaceutical Chemistry Track Annual Meeting Abstract Reviewer	
2007-2009	Emerging Technologies Task Force	
2007-2009	International Task force	
2008-2011	Commission on Radiopharmaceuticals	
2008-2010	Molecular Imaging Center of Excellence	President
2008-2012	Future Tracers Task Force	
2009-2013	Clinical Trials Network, Strategic Planning Board	
2010	Nominee – SNM Vice President-elect	
2010-2012	Molecular Imaging Center of Excellence (CMIIT)	Immediate Past President
2010-2017	Outreach Task Force	Co-Chair
2010-2013	FDA Task Force	Co-Chair
2011	Annual Meeting Abstract Reviewer Molecular Imaging Track	
2011-2017	Patient Advocates Advisory Board	
2011-2024	Government Relations Committee	
2012-present	Committee on Publications	Vice-Chair (24-25)
2012-2017	Public Relations Committee	
2013-2021	FDA Task Force	
2014-2016	SNMMI Industry Forum	Co-Chair Ed. Subcommittee
2016-2019, 2021	Annual Meeting Abstract Reviewer	

Society of Radiopharmaceutical Sciences

2004-2009	Board of Directors

2007, 2009	Biannual ISRC Meeting Abstract Reviewer
2008-2011	International Organizing Committee for the 2011 ISRS meeting in Amsterdam
2012-2013	Education Committee Member
2013-2015	Education Committee Chair
2013-2015	Awards Committee Member
2012-2013	International Organizing Committee for the 2013 ISRS meeting in Jeju S. Korea
2013-2015	Vice President
2013-2015	International Organizing Committee for the 2015 ISRS meeting in Columbia MO, USA
2015-2017	President
2015-2017	International Organizing Committee for the 2017 ISRS meeting in Dresden, Germany
2017-2019	Immediate Past President
2017-2019	Nominating Committee Chair
2017-2019	Awards Committee
2019-2022	International Organizing Committee for the 2021 ISRS meeting in Nantes, France (postponed until 2022 due to COVID-19)
2019-2023	Chair, International Organizing Committee or the 2023 ISRS meeting in Honolulu, Hawaii
2020-present	SRS-Hot Atom Fund Lead
2024-present	Historian

Society of Noninvasive Imaging in Drug Discovery (SNIDD)–
An Institute of the Academy of Molecular Imaging (AMI)

1998-2002	Communications Committee	Chair
1999-2001	Board of Directors	
2001-2008	Governing Board	
2002-2004	Program Committee	Chair
2003-2004	Annual Meeting Program Committee	Chair
2004-2006	Annual Meeting Program Committee	
2005-2006	SNIDD Council	Chair-elect
2005-2007	AMI Board of Directors	
2006-2007	SNIDD Council	Chair
2007-2008	SNIDD Council	Immediate Past Chair
2007-2009	Ad hoc Bylaws Committee	Chair

Society of Molecular Imaging (SMI)

2004	Annual Meeting Program Committee	Session Co-Organizer
2005	Annual Meeting Program Committee	Session Co-Organizer
2006-2008	Annual Meeting Abstract Reviewer	
2008	Annual Meeting Program Committee	SNM Session Co-Organizer
2009	Annual Meeting Emphasis Co-Chair	Co-organizer w/ Sam Gambhir

World Molecular Imaging Society (AMI and SMI merged society)

2012, 2016	Annual Meeting Abstract Reviewer
2023	

Radiotracer Clearinghouse

2006-2011	Board of Trustees

World Congress on Ga-68 and Peptide Receptor Radionuclide Therapy

2011	First International Scientific Steering Committee
2011	Awards Committee Chair
2014	3rd WC Program Committee

2017-2019 5th WC Jeju South Korea Scientific Program Committee

Coalition for PET Drug Approval

2011-2015 Coalition Co-Chair

Coalition for PET Drugs/ Coalition of PET Drug Manufacturers (2021)

2015-present Coalition Co-Chair
2019-2020 FDA Workshop Coordination Committee
2023 FDA Workshop Coordination Committee

Int'l Symp. on Technetium and Other Radiometals in Chem and Med. (TERACHEM)

2013-2014 International Scientific Committee
2016-2020 International Scientific Committee/ SRS Rep to Organizing Committee

Education Research Foundation

2020-present Board of Trustees
2020-present Finance Committee
2020-present SRS Hot Atom Fund Lead

SERVICE TO PROFESSIONAL PUBLICATIONS

2001-2012 Editorial Board, Nuclear Medicine and Biology
2002-2015 Editorial Board, Letters in Drug Design and Discovery
2007-2010 Associate Editor, Cancer Research
2008-2015 Editorial Board, Reports in Medical Imaging
2009 Guest Editor Molecular Imaging volume 8 issue 2
2010-2018 Editorial Advisory Board, Current Medicinal Chemistry
2011-present Editor-in-Chief, Molecular Imaging
2012-present Editorial Advisory Board, Assay and Drug Development Technologies
2013-2016 Editorial Advisory Board, Current Molecular Imaging

Ad hoc Reviewer (1995 – present)

2006 Applied Radiation and Isotopes
2013 Angewente Chemie
2012 Assay and Drug Development Technologies
2012 Bioconjugate Chemistry
2002 Bioorganic and Medicinal Chemistry Letters
2005 Canadian Journal of Chemistry
2007 Cancer Research
2016 Chemistry European Journal
2008 Clinical Cancer Research
2010 Current Radiopharmaceuticals
2008 Expert Opinion on Drug Discovery
2010 European Journal of Nuclear Medicine and Molecular Imaging
2015 European Journal of Nuclear Medicine and Molecular Imaging Research
2021 Frontiers in Nuclear Medicine
2005 Inorganic Chemistry
1997 Journal of Organic Chemistry
1997 Journal of Medicinal Chemistry
1995 Journal of Nuclear Medicine
2004 Journal of Labelled Compounds and Radiopharmaceuticals
2005 Journal of the American Chemical Society

2002 Letters in Drug Design and Discovery
2017 Medicinal Chemistry Communications
2007 Molecular Imaging and Biology
2010 Molecular Imaging
2023 Nature Communications
2003 National Research Council, Institute for Laboratory Animal Research
1995 Nuclear Medicine and Biology
2006 Nuclear Medicine Communications
2012 Organometallics
2013 PLOS One
2013 Proceedings of the National Academy of Science
2006 Radiochemica Acta
2019 Science Advances
2019 Science
2002 Steroids
2013 Tetrahedron Letters

SUMMARY OF CLINICAL WORK AND NATIONAL PROFESSIONAL ACTIVITY

Dr. VanBrocklin is the Director of the Radiopharmaceutical Research program within the Department of Radiology and Biomedical Imaging. He prepares research radioactive imaging agents, radiopharmaceuticals, for the evaluation and interrogation of a variety of diseases as well as normal physiologic and metabolic processes. He develops new imaging agents radiolabeled with a variety of isotopes and studies their properties in vitro and in small animal models. He also translates successful radiopharmaceuticals for human research studies. He works closely with clinical colleagues to navigate the regulatory pathway, FDA, radiation safety committee and IRB, to fulfill the requirements to safely administer the radiopharmaceuticals to human subjects and patients. Since 2008 he has received approval for 9 investigational new drug (IND) applications submitted to the FDA in addition to assisting colleagues with their FDA submissions. During the period since the last review Dr. VanBrocklin obtained approval for one fluorine-18 radiotracer, ^{18}F-RP115, for first-in-human PET imaging at UCSF.

He has been a peer reviewer for several journals in the chemistry, nuclear medicine and molecular imaging fields since the mid 1990's. He is currently the Editor-in-Chief of the journal Molecular Imaging.

Dr. VanBrocklin actively participates in two professional service organizations, the SNMMI (Society of Nuclear Medicine and Molecular Imaging) and the Society of Radiopharmaceutical Sciences (SRS). He participates on leadership and governance committees at the National level within SNMMI. During the last three years he was a member of the Publications and Government Relations committees. In 2018, Dr. VanBrocklin was elected Fellow of the Society of Nuclear Medicine and Molecular Imaging, FSNMMI. Dr. VanBrocklin has been involved in the Society of Radiopharmaceutical Sciences (SRS) since 2004. The SRS is a radiopharmaceutical chemistry professional society with 400-600 members. He served as President of the society (2015-2017) and Immediate Past President (2017-2019) and as Chair of the Nominating Committee (2017-2019) and member of the awards committee (2017-2019). He was elected fellow of the SRS in 2020. In addition to the professional societies, he is the Co-Chair of the Coalition for PET Drug Manufacturing, a group that interfaces with the FDA regarding regulation PET tracers for human trials and clinical applications. He helped lead the formation of the Coalition as a non-profit organization in December 2021. Dr. VanBrocklin was invited to join the Board of Directors of the Education and Research Foundation for Nuclear Medicine and Molecular Imaging (ERF), a non-profit organization that raised funds to underwrite grants and awards to recognize and support physicians, scientists and technologists. Under the ERF he initiated the endowed SRS Hot Atom Fund to provide grants and awards to SRS scientists.

INVITED LECTURES

INVITED PROFESSOR

1999 "Nuclear Medicine Research: A Chemist's Perspective"
Texas A&M University, Career Diversity Seminar

1999 "Mitochondrial Probes"
Purdue University, Medicinal Chemistry and Molecular Pharmacology Dept. Seminar

2001 "Medical Imaging: A Chemical "Fantastic Voyage"
University of Alabama, Department of Chemistry

2002 "Imaging Agents for Parkinson's Disease: A Tale of Two Radiopharmaceuticals"
University of Western Ontario, Department of Chemistry

2002 "Imaging Agents for Parkinson's Disease: A Tale of Two Radiopharmaceuticals"
McMaster University, Department of Chemistry

2002 "Imaging Agents for Parkinson's Disease: A Tale of Two Radiopharmaceuticals"
State University of New York Buffalo, Division of Nuclear Medicine

2002 "Imaging Agents for Parkinson's Disease: A Tale of Two Radiopharmaceuticals"
Washington University St. Louis Division of Radiological Sciences

2002 "Is FDG *the* PET probe for tumor imaging and treatment planning?"
Stanford University, Department of Radiation Oncology

2003 "The Role of Neuroimaging in the Preclinical Development of Gene Therapy for Parkinson's Disease"
UC Davis Department of Bioengineering

2003 "The Role of Neuroimaging in the Preclinical Development of Gene Therapy for Parkinson's Disease"
UCSF Department of Radiology

2004 "A Tale of Two Tracers: New Myocardial Perfusion Agents & Monitoring Gene Therapy for PD"
Stanford Molecular Imaging Program

2005 "Molecular Probes: Evaluating Myocardial Perfusion and Monitoring Gene therapy for Parkinson's Disease"
Yale University, Department of Radiology

2005 "The ErbB Signaling Pathway: Targeted Therapeutics and Imaging"
Imaging and Cancer Symposium, Case Western Reserve University

2005 "ErbB Targeted Probes: Imaging and Drug Development"
City of Hope, Department of Radioimmunotherapy

2005 "Molecular Imaging: Shaping the Development of New Drugs"
University of Pacific, Department of Chemistry

2007 "New approaches for imaging cardiac perfusion and drug development for Parkinson's disease"
Columbia University/ Memorial Sloan Kettering Cancer Center, Department Nuclear Medicine

2009 "Developing Tools for Personalized Medicine"
Department of Nuclear Medicine, Union Hospital, Huazhong University of Science and Technology, Wuhan China

2010 "Molecular Imaging: Bringing Chemistry to Life"
San Francisco State University, Department of Chemistry

2010 "A Spectrum of New Molecular Probes for Oncologic Imaging"
Massachusetts General Hospital, Division of Nuclear Medicine and Molecular Imaging

2011 "UCSF Radiopharmaceutical Development Program Update", Bayer Schering Pharmaceuticals, Berlin Germany

2011 "From Nuclear Medicine to Molecular Imaging: A Spectrum of Isotopes and New

Molecular Probes" UC Berkeley Nuclear Engineering Dept.

2011 "Oh, the things you can do with a new cyclotron!"
Wake Forest University, Department of Radiology

2012 "Cancer Targeted Probes for Imaging and Therapy" University of Missouri-Columbia, Department of Chemistry

2012 "Of Mice and Men': Targeting Cancer Cell Surface Markers for Imaging and Therapy" Washington University St. Louis Alvin J. Siteman Cancer Center Oncologic Imaging Seminar Series

2013 "Molecular Biomarkers: Targeting the Cancer Cell Surface for Imaging and Therapy" University of Nebraska Lincoln Department of Chemistry Colloquium

2016 "From Photons to Positrons: Development of Targeted Imaging Agents for Prostate Cancer" Vanderbilt University Institute of Imaging Science
Nashville, TN

2016 "Imaging at the Crossroads of Precision Medicine and the Cancer Moonshot" Karmanos Cancer Institute. Molecular Imaging Program Annual Retreat – Keynote
Detroit, MI

2018 "Molecular Imaging and Therapy: Filling the Precision Medicine Toolbox"
Stony Brook University Department of Radiology
Stony Brook, NY

2019 "Making the Invisible Visible: Molecular Imaging of Infection and Cancer"
San Francisco State University Department of Chemistry
San Francisco CA

2019 "Making the Invisible Visible: Imaging Rheumatoid Arthritis Inflammation and HIV Persistence"
University of Missouri Department of Chemistry
Columbia, MO

2022 "Imaging HIV Infection: Searching for the reservoir"
UT Southwestern, Advanced Imaging Research Center, Department of Radiology
Virtual

2023 "Radiolabeled Nanocarriers: Imaging Patient-Based Drug Delivery"
Medicinal Chemistry Department,
University of Michigan, Ann Arbor, MI

2023 "Seeing is Believing: Molecular Imaging of Viral Infection"
Department of Radiology
University of Michigan, Ann Arbor, MI

2024 "Radiolabeled Nanocarriers: Developing Radioactive and Non-radioactive Theranostics"
Karmanos Cancer Center
Detroit, MI

2025 "Infectious Disease Molecular Imaging: Emerging Agents Targeting Infectious Diseases and Immune Response"
Stanford Radiology Grand Rounds
Palo Alto, CA

INTERNATIONAL

1995 "Development and Evaluation of Mitochondrial Imaging Agents"
International Chemical Congress of Pacific Basin Societies
Honolulu Hawaii

1996 "Cyclotron Production of [^{18}F]Fluoride Ion and [^{18}F]F_2 Gas and Their Medical Applications"

14th International Conference on the Application of Accelerators in Research and Industry, Denton Texas

2000 "Radioisotope Production and Operation of the ^{122}Xe/^{122}I Generator System"
16th International Conference on the Application of Accelerators in Research and Industry, Denton Texas

2002 "Strategies for Imaging Priority Targets"
National Cancer Institute International Workshop
Frankfurt Germany

2002 "Application of Imaging to Drug Development"
4SC AG.
Munich Germany

2004 "Radioiodines: Versatile Radionuclides for Molecular Medicine Applications"
Fifth International Symposium on Radiohalogens
Whistler, BC, Canada

2006 "Current Status of PET Radiopharmaceuticals for Clinical Applications"
World Federation of Nuclear Medicine and Biology
Seoul, South Korea

2006 "The Introduction of New Radiopharmaceuticals into Clinical Trials:
The European and North American Perspective"
World Federation of Nuclear Medicine and Biology
Seoul, South Korea

2006 "Neuroimaging of Alzheimer's Disease"
World Federation of Nuclear Medicine and Biology
Seoul, South Korea

2009 "Developing Tools for Personalized Medicine" 2nd Chinese National Symposium of Nuclear Medicine and Molecular Imaging,
Shengzhen, China

2009 "Efficient approaches to labeling radiopharmacueticals with fluorine-18" 4th Asian-Pacific Symposium on Radiochemistry, Speaker and Session Organizer,
Napa, CA.

2010 "Molecular Imaging Biomarkers: Chemical Approaches to Tracer Development" 93rd Canadian Chemistry Conference,
Toronto, Canada

2011 "Molecular Imaging: Bringing Chemistry to Life
A Spectrum of New Molecular Probes for Oncologic Imaging"
University of Turku, Turku PET Centre
Turku, Finland

2014 "Molecular imaging as developing tools for personalized medicine"
International Symposium on Molecular Imaging and Translational Medicine
Peking Union Medical Center Hospital
Beijing, China

2016 From Photons to Positrons: Development of Targeted Imaging Agents for Prostate Cancer"
Samsung Medical Center, Nuclear Medicine Department,
Seoul, South Korea

2016 Plenary Lecture "Molecular Imaging –Developing Tools for Precision Medicine" Korean Society of Radiopharmaceuticals and Molecular Probes,
Seoul National University Hospital,
Seoul, South Korea

2017 Plenary Lecture "Filing the Molecular Imaging Toolbox for Precision Medicine"
49th Annual Conference of the SNMI Association (SNMICON),

New Delhi, India

2018 “PET Chemistry: Fluorine-18 and Carbon-11”
Molecular Imaging Workshop
Sao Paulo Brazil

2018 “Development of Imaging Agents for Cancer, ALS and Rheumatoid Arthritis”
Molecular Imaging Workshop
Sao Paulo Brazil

2019 “Image-guided Therapy: Development of Oncologic and Non-oncologic Agents”
5th Theranostics World Congress,
Jeju, Korea

2019 “Emerging Radiopharmaceuticals for Clinical PET”
Kuwait Annual Nuclear Medicine Meeting,
Kuwait City, Kuwait

2019 “Radiometal PET Tracers: What’s New and Approved”
Kuwait Annual Nuclear Medicine Meeting,
Kuwait City, Kuwait

2019 “Bringing radiotracers from the lab to the clinic: Tracer translation tips”
WMIC
Montreal, Canada

2021 “Emerging Radiopharmaceuticals for Molecular Imaging and Therapy”
JMJ Retirement symposium
Seoul, South Korea, Virtual

2023 “Molecular Imaging of Viral Infection”
TUM
Munich, Germany

2024 “Imaging Viral Infection”
WMIC
Montreal, Canada

NATIONAL

1993 "High pressure $H_2{}^{18}O$ target for the production of [^{18}F]fluoride ion"
206th American Chemical Society National Meeting,
Chicago, IL

1995 "PET Radiopharmaceuticals for Tumor Imaging"
42nd Annual Meeting Society of Nuclear Medicine, Categorical Seminar,
Minneapolis, MN

1995 "Probing Neurodegeneration and Aging: A PET Approach"
210th American Chemical Society National Meeting,
Chicago, IL

1996 "PET Radiopharmaceuticals for Tumor Imaging"
43rd Annual Meeting Society of Nuclear Medicine, Categorical Seminar,
Denver, CO

1997 "Molecular Probes for Breast Cancer Imaging"
Federal Multi-Agency Consortium on Imaging Technologies to Improve Women's Health,
Technology Transfer Workshop on Breast Cancer Detection, Diagnosis, and Treatment,
Washington, DC

1997 "Developing Neuroreceptor Imaging for PET"
44th Annual Meeting Society of Nuclear Medicine, Categorical Seminar,
San Antonio, TX

2000 “PET Agents as Probes for Staging and Therapeutic Response”

National Cancer Institute (NCI), NIH, CTEP Spring Meeting,
Bethesda, MD

2003 “Imaging Modalities to Assess EGF Targeted Therapeutic Development”
American Association of Cancer Research Workshop,
Philadelphia, PA

2003 “The Role of Neuroimaging in the Preclinical Development of Gene Therapy for Parkinson’s Disease”
IBC Life Sciences Conference,
McLean, VA

2003 "Future of Diagnostic Imaging"
50th Society of Nuclear Medicine (SNM) Annual Meeting, Categorical Seminar,
New Orleans, LA

2003 “Monitoring Parkinson’s Therapy”
DOE/ SNM Modern Imaging Technology: Instrumentation and Molecular Imaging workshop,
New Orleans, LA

2003 “Radiotracer Development for Neuroscience Applications”
DOE OBER Medical Science Division Meeting,
Boston, MA

2003 “ErbB Targeted Imaging: Status Report”
NCI U54 Investigators Meeting,
Bethesda, MD

2004 “SPECT Perfusion Tracers - Present and Future”
SNM Mid-Winter Meeting,
Anaheim, CA

2004 “New Agents for the Evaluation of Myocardial Perfusion”
American Society of Nuclear Cardiology Invitational Conference,
Park City, UT

2005 “Radiopharmaceutical Probes to Detect and Quantitate Pathophysiological Processes in vivo.”
Alzheimer’s Research Consortium “Workshop on Translational Biomarkers in AD Drug Discovery: From Animal Models to Clinic”
Washington, DC

2006 “Molecular Imaging: It’s Not Just a Job, It’s an Adventure”
American Chemical Society, Division of Nuclear Chemistry and Technology;
232nd ACS National Meeting,
San Francisco, CA

2006 “Introduction to Grantsmanship: The Grant Review Process”
53rd Society of Nuclear Medicine Annual Meeting, Continuing Education,
San Diego, CA

2006 “New Radiotracer Requirements (SPECT and PET)”
American Society of Nuclear Cardiology Invitational Conference,
Park City, UT

2006 “Labeled Halorotenones: A New Class of Cardiac Perfusion Tracers”
232nd American Chemical Society National Meeting,
San Francisco, CA

2006 “PET Imaging of Gene Therapy for Parkinson's Disease: From Primates to Humans”
“Toxicology & Biotechnology at the Crossroads”
Post American College of Toxicology Symposium,
Palm Springs, CA

2006 “Functional Imaging Techniques: Nuclear Tracers and Applications”
Molecular Imaging in Translational Research Symposium,
Kalamazoo, MI

2006 “Imaging and the Critical Path Initiative”
Molecular Imaging in Translational Research Symposium,
Kalamazoo, MI

2007 “Nuclear Imaging (PET, SPECT, w/o CT): Past, Present and Future in PK/PD”
USC Biomedical Imaging Sciences Workshop on “Imaging-based tools for target Pharmacokinetics/Pharmacodynamics: Role in Drug Development and in Drug Monitoring” Los Angeles, CA

2007 “Imminently Emerging Receptor Tracers”
SNM Emerging Technologies Retreat
Reston VA

2007 “Academic-Industrial Partnerships: Prospects and Challenges in Radioprobe and Drug Development”
New Mexico Isotope Workshop,
Albuquerque, NM

2007 “Options to Facilitate the Drug Development Process”
American Association of Pharmaceutical Scientists National Meeting – Hot Topic Session, San Diego, CA

2008 “First in Man – The Exploratory IND”
Society of Nuclear Medicine Mid-Winter Meeting Newport Beach, CA

2008 “Radiotracer Clearinghouse”
RSNA Imaging Biomarkers Roundtable,
Chicago, IL

2008 "Filling the Gaps: Chemistry, Time and Space"
DOE Radiochemistry Workshop,
Bethesda, MD

2009 “Future Challenges and Opportunities for Radiotracer Imaging”
DOE Radiochemistry Grantee Workshop – Plenary Lecture,
Bethesda, MD

2009 “Radiotracers for Drug Development: Challenges and Prospects for First-in-Man Imaging Studies”
GTC Bio 4th Imaging in Preclinical and Clinical Drug Development,
San Francisco, CA

2009 “How to Take Advantage of the Grant Review Process”
NCI Symposium, SNM Annual Meeting
Toronto, Canada

2009 “Molecular Imaging Biomarkers: Chemistry and Regulatory Aspects”
SNM Molecular Imaging Categorical Seminar SNM Annual Meeting
Toronto, Canada

2009 “Molecular Imaging Biomarkers: Chemistry and Regulatory Aspects”
American Chemical Society Fall Annual Meeting,
Washington, DC

2010 “National Need for Advanced Radiochemistry Training”
DOE Radiochemistry Grantee Workshop – Plenary Lecture,
Bethesda, MD

2010 Molecular Imaging Basic Science Summary Session – summarized MI talks and posters presented at the SNM Annual Meeting
Salt Lake City, UT.

2011 “Research PET Drugs: Current Regulatory Requirements”
Clinical Trials Educational Program
Society of Nuclear Medicine Mid-Winter Meeting

Palm Springs, CA

2011 Molecular Imaging Basic Science Summary Session - summarized MI talks and posters presented at the SNM Annual Meeting
San Antonio, TX

2012 "Development of PET/SPECT Radiotracers for CV Imaging: Strategies, Challenges, Opportunities"
3rd Multimodality Cardiovascular Molecular Imaging Symposium
Bethesda, MD

2012 "You Submitted Your NDA/ANDA to the FDA; Now What?"
Clinical Trials Educational Program
Society of Nuclear Medicine Mid-Winter Meeting
Orlando, FL

2012 "What Happens After You File?"
GE Webinar

2012 "FDOPA Manufacturing"
SNM Continuing Education Program
Society of Nuclear Medicine Annual Meeting
Miami, FL

2012 "FDA Authorization for Qualifying Biomarkers for Clinical Advancement"
CBI's Bio/Pharmaceutical Imaging Forum
Philadelphia, PA

2013 OSA (Optical Society) Photons Across Medicine "Translating optical imaging agents from the bench to the clinic: Lessons learned from Nuclear Medicine"
Kona, HI

2013 Molecular Targeted Probes Basic Science Summary Session - summarized Radiopharmaceutical Track talks and posters presented at the 2013 SNM Annual Meeting
Vancouver, BC Canada

2014 Molecular Targeted Probes Basic Science Summary Session - summarized Radiopharmaceutical Track talks and posters presented at the 2014 SNMMI Annual Meeting
St. Louis, MO

2014 "Coalition for PET Drug Approval Update" SNMMI PET Coalition CE session
SNMMI Annual Meeting
St. Louis, MO

2014 "Lessons Learned from Nuclear Imaging Applied to Translation of Fluorescence Imaging" SNMMI Nuclear/ Optical CE session
SNMMI Annual Meeting
St. Louis, MO

2014 "Fluorine-18 Radiochemistry: Whence has it come and where is it going"
American Chemical Society Annual Meeting
San Francisco, CA

2014 "The future of molecular imaging: a radiochemist's perspective"
8th International Conference on Isotopes – Plenary Lecture
Chicago, IL

2015 "Development of a fluorine-18 PET prodrug targeting excitatory amino acid transporters: Nucleophilic and electrophilic approaches"
22nd Winter Fluorine Conference
St. Petersburg, FL

2015 "Getting Great Grants – DOE, DoD, SBIR"
SNMMI Mid-Winter Meeting
San Antonio, TX

2015 "Taking a New Radiotracer to Market: Technical and Regulatory Aspects"

SNMMI Annual Meeting, Patient Session, Patient Education Day
Baltimore, MD

2016 "Getting Great Grants – DOE, DoD, SBIR"
SNMMI Annual Meeting
San Diego, CA

2016 "Path to Better Treatment and Diagnosis"
SNMMI Annual Meeting, Patient Session, Patient Education Day
San Diego, CA

2016 "Education and Outreach in the US: SNMMI"
SNMMI Annual Meeting
San Diego, CA

2017 "Prostate Cancer: Which Tracer Is Best? The PSMA Agents Are Best!"
SNMMI Mid-Winter Meeting
Phoenix, AZ

2018 "PET Imaging and Therapy of Prostate Cancer Targeting PSMA"
High Country Nuclear Medicine Meeting
Sun Valley, ID

2018 "ImmunoPET and Theranostics: Promise and Challenges"
Pacific Basin Nuclear Conference
San Francisco, CA

2019 "Translational Molecular Imaging"
Pancreatic Cancer Workshop
Cold Spring Harbor Laboratory, NY

2020 "Microbiological Safety of Positron Emission Tomography Drugs"
PET Drugs: A workshop on inspections management and regulatory considerations
FDA White Oak Conference Center
Silver Spring, MD

2020 "See and treat: Opportunities and challenges for molecular imaging and therapy"
Radiation Research Society, Winter Workshop Program
Big Sky, MT

2020 "Life is like a Box of Chocolates: A Molecular Imaging Journey"
SNMMI Michael J. Welch Award Lecture
Virtual

2021 "Quality Control of Isotopes and Products"
Washington University PET-RTRC Workshop
Virtual

2021 "Imaging HIV infection: Searching for the reservoir"
NIH Symposium
"Expanding the Scope of Infection and Inflammation Imaging: Past lessons and future prospects"
Virtual

2021 "Molecular Imaging of HIV Persistence: Tools for a Cure?"
Seaborg Award Symposium in Honor of Sherry Yennello
ACS National Meeting
Atlanta, GA

2021 "Enzymatic Radiofluorination of Small Biomolecules"

Pacifichem
Virtual

2022 “Radiolabeled Nanocarriers: Imaging tools for patient based drug delivery”
Seaborg Award Symposium in Honor of Carolyn Anderson
ACS National Meeting
San Diego, CA

2022 “Imaging AraG”
Sanjiv Sam Gambhir Early Professionals Forum
WMIS
Virtual

2023 “PET imaging isotopes as surrogates for targeted alpha-emitting radiotherapeutics”
Seaborg Award Symposium in Honor of Jason Lewis
ACS Spring National Meeting
Indianapolis, IN

2023 “Do I have Useful Skills? How to find your fit with the job that is advertised” and panel discussion in the Young Investigators in Nuclear and Radiochemistry Session.
ACS Fall National Meeting
San Francisco, CA

2023 “Safety and Risk Management of PET Drugs”
Workshop “PET Drugs: Product quality, regulatory submissions, Facility Inspections and Benefit-risk Considerations
US Food and Drug Administration
Silver Spring, MD

2024 “Tools for Imaging: Immune imaging with Peptides/ Small Molecules”
PET Radiotracer Translation and Resource Center Workshop
Washington University
St. Louis, Missouri

2024 “From an NIH perspective: what should DOE IP keep in mind while conducting a basic science research effort?
DOE/NCI workshop: Computational Modeling to Advance Novel Medical Isotopes for Radiotheranostics
Washington, DC

2025 Zoltán Patay Scientific Symposium
Illuminating Insights: The Frontiers of Molecular Imaging Technology
“Exploring Viral Infections: Emerging PET Agents Targeting Infectious Diseases”
St. Jude Children’s Research Hospital, Memphis TN

REGIONAL

1994 "As the Protons Turn"
Society of Nuclear Medicine, Northern California Chapter,
Technologist Section Continuing Education Seminar, Healdsburg, CA

1995 "Trials and Triumphs of the 1st Year with DV1"
CTI, Inc.,
Knoxville TN

1995 "Radiopharmaceutical Research at Lawrence Berkeley Laboratory"
San Rafael High School,
San Rafael, CA

1998 "Radiopharmaceuticals for Cancer Imaging"
Engineering Industrial Liaison Program Conference,
UC Berkeley, Berkeley, CA

2000 “PET and its application in Drug Development”
Lehigh Educational Satellite Network,
Bethlehem, PA

2001 “PET Radiopharmaceuticals – Their Time Has Come”
Affymax, Inc
Palo Alto CA

2003 “The Role of Imaging in the Development of Receptor Tyrosine Kinase-based Therapeutics”
SUGEN, Inc.,
South San Francisco, CA

2004 “ErbB-Targeted Imaging: Approaches and Applications”
UCSF Joint Brain, Breast & Prostate SPORE,
San Francisco, CA

2005 “Molecular Imaging: Shaping the Development of New Drugs”
Lockheed Martin Advanced Technology Center Colloquium,
Palo Alto, CA

2005 “Molecular Imaging: Shaping the Development of New Drugs”
General Electric, Inc.,
Las Vegas, NV

2006 “Going With The Flow: Development Of New Cardiac Perfusion Tracers”
CMFI Imaging Symposium, Dept of Radiology,
San Francisco, CA

2007 “Molecular Imaging at China Basin Landing”
UCSF Medical Students Lecture and Tour,
San Francisco, CA

2007 “Molecular Imaging at China Basin Landing”
UCSF OEHS Emergency Response Training,
San Francisco, CA

2007 “Imaging Neurodegenerative Diseases: Prospects for Drug Development”
Veterans Administration Brain Imaging Research Seminar,
SF VA

2007 “Current Status of PET Radiopharmaceuticals for Clinical Applications”
Harvard Clinical Nuclear Medicine Course,
Boston, MA

2008 “Nuclear Optical Imaging Resource”
UCSD Isotopes and Imaging Consortium Workshop,
San Diego, CA

2008 "Current Status of PET Radiopharmaceuticals for Clinical Applications"
Northern California Chapter SNM,
Pleasanton, CA

2008 “Introduction to Nuclear Imaging”
UCSF Cancer Imaging Retreat,
San Francisco, CA

2010 “Radiopharmaceuticals for the Future”
Northern California Chapter SNM,
Pleasanton, CA

2010 “What is Molecular Imaging? Introduction to Targets and Probes”
Pacific Northwest Chapter SNM,
Portland, OR

2011 “Gallium-68: Back To the Future”
Western Regional SNM meeting
Seattle, WA

2012 "Molecular Imaging"
Nor Cal CarciNet NET Patient Conference
UCSF San Francisco

2012 "Imaging NET"
Nor Cal CarciNet, Patient Support/ Advocate Forum,
Walnut Creek CA

2014 "Emerging Radiopharmaceuticals: Coming Soon to a PET or SPECT Scanner Near You"
Northern California Chapter SNMMI,
Pleasanton, CA

2014 "Imag-N-ing the Future: Perspectives from Molecular Imaging"
University of Nebraska Lincoln Research Retreat
Invited by Prem Paul Vice Chancellor of Research and Economic Development
Lincoln, Nebraska

2014 "Molecular Imaging: Imaging in Drug Development"
Intermune
Brisbane, CA

2014 "Imaging Biomarkers for Prostate Cancer"
Prostate Cancer Research Retreat
UCSF
San Francisco, CA

2014 "Clinical Translation of Radiotracers: Regulatory and Technical Aspects"
Practical PET Imaging for Clinicians and Biologists for Research and Patient Management
University of Virginia School of Medicine, Molecular Imaging Core Laboratory

2014 "Clinical Translation of Radiotracers: Regulatory and Technical Aspects"
Western Regional Society of Nuclear Medicine Meeting
Seattle, WA

2016 "Therapeutic Radiopharmaceuticals: Developing Agents"
Northern California Chapter SNMMI
Pleasanton, CA

2016 "HIV Imaging: Past, Present and Future"
amfAR Institute for HIV Cure Research
Imaging the HIV Reservoir Symposium
UCSF, San Francisco CA

2019 "Update on PSMA Radiopharmaceuticals"
Northern California Chapter SNMMI
Pleasanton, CA

2022 "Lost and Found in Translation: Advancing Radiopharmaceuticals from the Lab to the Clinic"
Western Pioneer Award Lecture, Western Regional SNM
Olympic Village, CA

2023 "Medical Application of Isotopes: Production, Imaging and Therapy"
Glenn T. Seaborg Institute, Lawrence Livermore National Laboratory
Livermore, CA

2024 "Novel Radiopharmaceuticals: A tuneable TGFb theranostic for solid tumors such as GMB and Brain Metastases"
USCF Innovation Ventures Brain Tumor Symposium
San Francisco, CA

UCSF POSTGRADUATE COURSES

2004 "PET Chemistry"
PET and PET/CT Imaging, Department of Radiology Postgraduate Education Course

GRAND ROUNDS

1993	"Radiopharmaceutical Chemistry"	UCSF Nuclear Medicine Grand Rounds
2009	“Imag’in’ing the Future”	Stanford Nuclear Medicine Grand Rounds

CONTINUING EDUCATION ATTENDED

1994	Basic Hazardous Materials Workshop
1994	Hazardous Waste Module
1994	Basic Radioactive Materials Workshop
1994	Food and Drug Administration/ Institute for Clinical PET Joint Training Seminar on PET Radiopharmaceutical Production
1995	Zenger-Miller Frontline Leadership Training
1995	Managing Within the Law
1997	Dept. of Transportation Hazardous Materials Transport Regulations and Driver Safety Training
2001	Dept. of Transportation Hazardous Materials Transport Refresher Training
2004	Dept. of Transportation Hazardous Materials Transport Refresher Training

GOVERNMENT AND OTHER PROFESSIONAL SERVICE

1999-present	Department of Energy	Ad Hoc Reviewer SBIR/STTR Program
2000, 2004	Department of Energy	Grant Reviews
2000-2002	Phillip Morris Res. Program	Grant Reviews
2001-2003	National Institutes of Health	Ad Hoc Diagnostic Radiology Study Section
2003-2007	National Institutes of Health	Diag. Rad./MEDI Study Section Member
2002	Department of Veterans Affairs	Grant Reviews
2003	Department of Energy	Radiopharmaceutical Research Subcommittee
2003	Natl. Cancer Inst. (NCI)	Radionuclide Availability Workshop Participant
2004, 2005	Natl. Inst. Mental Health	Special Emphasis Study Section Member
2007	Natl. Cancer Inst. (NCI)	SBIR Topic #230 Study Section Member
2007, 2008	Natl. Cancer Inst. (NCI)	P01 SEP review – Discovery and Development
2006, 2007	NSERC (Canada)	External Grant Review
2008	Linnaeus (Sweden)	External Program Project Reviewer
2008	Cancer Research (UK)	External Equipment Grant Review
2008-2009	National Institutes of Health	Ad Hoc Reviewer MEDI A Study Section
2009, 2010	Natl. Cancer Inst. (NCI)	P01 SEP review – Discovery and Development
2009-2013	National Institutes of Health	CMIP Study Section Member
2010	Dutch Technology Foundation	External Program Grant Reviewer
2010	Michael J. Fox Foundation	Ad Hoc Grant Reviewer
2010	DoD PCRP PIM-1 Panel	Integration Group reviewer
2011	Royal Society	University Research Fellowship Reviewer
2011	Canadian Cancer Society	Ad Hoc Grant review
2011	DoD PCRP Pre-PIM Panel	Preproposal Reviewer
2012-2013	DoD PCRP EHD-PIM Panel	Integration Group Reviewer
2012	CPRIT Interfaces Review Comm	Review Panel Member
2013	NIH Image Guided Drug Delivery	Review Panel Member
2014	NIBIB P41 Remote Site Visit	Review Panel Member
2014	DOE	Review Panel Member
2014	NCI R21/R03	Review Panel Member
2015	NIH SBIB Conflict SS	Review Panel Member
2015	NIH Spec Emphasis Panel	Chair

2015	Canadian Institute for Health Research	External Mail-in Reviewer (1 proposal)
2015-2016	NIBIB P41 BTRC Site Visit	Review Panel Member
2015-2016	NIH SBIB DTSC-A81	Stage 1 Review Panel Member (Mail-in)
2016-2018	NIH SBIB IGDD in Cancer	Review Panel Member
2016-present	CPRIT Imaging Tech Panel	Review Panel Member
2017	RSNA Radiol Res Training	Review Panel Member
2017	NIBIB P41 BTRC Site Visit	Chair
2017	NIBIB P41 BTRC Site Visit	Review Panel Member
2017-2018	NCI R50 Research Specialist	Review Panel Member
2019	Canada Foundation for Innovation	External Reviewer (1 proposal)
2019	NIH SBIB Acad Ind Partnerships	Review Panel Member
2020	Chan Zuckerberg Initiative Deep Tissue Imaging	Review Panel Member
2020	NIH Rad Therapy and Biol SEP	Review Panel Member
2021-2023	NCI R50 Research Specialist	Review Panel Member
2021	DOE Traineeship in Isotope R&D and Production	Review Panel Member
2022-2024	DOE IP-RENEW (Reaching a New Energy Sciences Workforce)	Review Panel Member
2023	CDMRP PCRP Review Panel	Review Panel Member
2024	Swiss National Science Found.	External Reviewer (1 proposal)

UNIVERSITY AND PUBLIC SERVICE

Lawrence Berkeley National Laboratory-Wide

1992-present	Radioactive Drug Research Committee (member)
1993 - 1996	ALARA Working Committee (member)
1993, 1996	MESH Review Team - member
1992 - 1997	Life Sciences Division Environmental Safety and Health Committee (member)
1997 - 2005	Radiation Safety Committee (member/ Chair)
1999 - 2001	SHARES Policy Board (member)

UCSF Campus-Wide

2006- present 2018-	UCSF Radiation Safety Committee (member) Chair
2006- present 2018-	UCSF Radioactive Drug Research Committee (member) Chair
2013- present 2019-	UCSF Chemical and Environmental Safety Committee (Vice-Chair) Chair
2019- present	UCB-UCSF Sackler Faculty Exchange Program Review Committee (member)
2020-2021	Environmental Health and Safety Director Search Committee
2022	Parallel processing working group – streamline clinical trials reviews and initiation

Department

<u>Radiology and Biomedical Imaging Department</u>

2002	Molecular and Functional Imaging Task Force
2002-2006	China Basin Molecular Imaging Center Facilities/Construction Planning
2003	Nuclear Medicine Faculty Search Committee
2004-2006	Search Committee, Director of Molecular Imaging
2005-present	Cyclotron Facility Oversight

2007	Nuclear Medicine Faculty Search Committee
2007-present	MicroPET/CT Facility co-Manager
2007-2008	Nuclear Optical Imaging Specialized Resource Group Co-leader w/ B. Hasegawa
2007-2012	Executive Research Council
2008-2009	Nuclear Optical Imaging Specialized Resource Group Leader
2009-2012	Nuclear Optical Imaging Specialized Resource Group Co-leader w/ Dr. Carina Mari Aparici
2009	Neuroradiology Faculty Search Committee
2011	NOI Faculty Search Committee Chair
2012-2014	Biomarker Search Committee
2013-present	Clinical Nuclear Imaging Research (CNIR) Committee
2013-present	Safety and Compliance Committee
2013-2014	Research Task Force
2015-2017	CNIR Radiopharmaceutical Prioritization Subcommittee – Chair
2019-present	Seminars Committee
2021-present	Cyclotron Personnel Search Committees

UCSF School of Medicine

2004-present	Helen Diller Family Comprehensive Cancer Center Preclinical Therapeutics Core Steering Committee – member
2016-present	UCSF Global Health Sciences Affiliate - Faculty
2016-2020	amfAR Institute for HIV Cure Research – Module R research team member
2017-present	PREMIER (Precision Medicine in Rheumatology) member
2019	Cancer Center Strategic Planning Task Force – member
2019-present	Precision Imaging in Cancer & Therapy (PICT) Committee
2019-present	Molecular Imaging and Radionuclide Therapy Site Committee – Ad Hoc member

Service at Other Universities

2009-2012	External Advisory Board member – Emory Molecular and Translational Imaging Center (EMTIC), Emory University, Atlanta, GA
2010	Los Alamos National Laboratory Chemical Capabilities Review, Panel Member
2013	NIH Clinical Center Nuclear Medicine Strategic Review- Review Committee Member
2014	External Advisory Board member - University of Virginia Preclinical and Translational Imaging review, Departments of Radiology and Biomedical Engineering
2014-present	External Advisory Board Chair - Memorial Sloan Kettering Cancer Center Radiopharmaceutical and Molecular Imaging Probes Core
2017	Scientific Advisory Board Cancer UK program, Institute for Cancer Research, Royal Cancer Hospital, Sutton UK.
2019- present	External Advisory Committee Chair – Washington University PET Radiotracer Translation and Resource Center, St. Louis, MO
2019- present	NYU/ Langone Department of Radiology External Advisory Committee – New York, NY

CIVIC SERVICE

1994-present	Northbrae Community Church, member	
	Board of Directors	1994-2010
	Chair/President	1994-2001
	Vice President	2001-2004
1994-present	Berkeley Breakfast Club – member	
	Board of Governors	2000-2002
1996-2000	Albany-Berkeley-Emeryville Christmas in April, Board of Directors – member	
	Vice President	1998-2000
1998-2001	University Terrace Homeowners Association, Board of Directors – member	
2004-2010	Cub Scout Pack 464	
	Den Leader	2006-2010
	Pack Committee Chair	2007-2010
	Assistant Den Leader	2004-2008
	Asst. Pack Cmte Chair	2005-2007
	Unit Scouter of the Year Award 2009	
2010- 2014	Boy Scout Troop 832	
	Adult leader	

SERVICE ACTIVITIES SUMMARY

Dr. VanBrocklin continues to serve on three campus-wide committees, the Radiation Safety Committee (RSC), the Radioactive Drug Research Committee (RDRC) and the Chemical Environment and Safety Committee (CESC). The RSC abides by the state license for use of radioactive materials and radioactivity producing machines. The RSC authorizes individual PI laboratories and departments to use radioactivity in their research and clinical activities. Interaction with the RSC is also important for the safe operation of Dr. VanBrocklin's radiochemistry laboratories and the UCSF Cyclotron facility located at China Basin. The RDRC is a FDA sanctioned committee that authorizes the application of radiolabeled compounds (radiopharmaceuticals) in humans. Dr. VanBrocklin serves as the radiochemistry expert on the UCSF RDRC and brings many years of experience interacting with the FDA on the translation and application of radiopharmaceuticals in humans. The majority of UCSF RDRC applications involve facilities and faculty in the Department of Radiology and Biomedical Imaging. Dr. VanBrocklin has served as Chair of the RSC and RDRC since 2018 and has been a member since 2006. He is also a member of the LBNL RDRC.

Dr. VanBrocklin has been Chair of the CESC since 2019. He served as vice-Chair from 2013-2019. The committee is charged with overseeing the safe practices for ordering, storing, and handling chemicals at UCSF. As part of the settlement agreement for a deadly chemical incident at UCLA, the committee is responsible for implementing the policies and practices established to mitigate a repeat of this incident.

Within the school of Medicine, Dr. VanBrocklin continues to serve as a member of a UCSF Helen Diller Family Comprehensive Cancer Center Preclinical Therapeutics Core steering committee. The committee works with chair Dr. Veronica Steri to administer the utilization of animal facilities and proposed studies being to be conducted on cancer center related projects.

Dr. VanBrocklin has served the Department of Radiology and Biomedical Imaging for many years providing input and oversight for the cyclotron and small animal imaging facilities at China Basin. He serves on three committees within the Department, the Safety and Compliance committee (SCC) the Clinical Nuclear Imaging Research committee (CNIR) and the Seminars Committee. The SCC promotes safety within the department through implementation of safety policies and mitigation of hazards through review of laboratory space and practices by Faculty and Staff. The CNIR reviews and approves all nuclear imaging research studies, assuring that the study is fully approved by the IRBs, that the appropriate imaging equipment and imaging agents are available and that funds are available for the study. The seminars committee oversees the seminars programming across the entire department from grand rounds to research seminars and the annual

research symposium. He serves as needed on faculty and cyclotron personnel search committees. In 2020, I was appointed as the scientific liaison to the UCSF Radiopharmaceutical Facility. I interact with the facility Director frequently to address issues related to radiopharmaceutical production, quality testing and regulatory aspects.

Dr. VanBrocklin continues to serve the NIH, DOE and the Cancer Prevention Research Institute of Texas (CPRIT) as an ad-hoc grant reviewer.

Based on my molecular imaging, radiopharmaceutical preparation and translation/ regulatory experience, I have been asked to sit on strategic review panels and external advisory boards for research programs at other institutions. Over the last 3 years Dr. VanBrocklin has been the External Advisory Board chair of the Memorial Sloan Kettering Cancer Center Radiopharmaceutical and Molecular Imaging Probes Core annual review and a program reviewer for the NYU/Langone Department of Radiology Radiochemistry Program. In 2019 Dr. VanBrocklin started as Chair of the Washington University PET Radiotracer Translation and Resource Center (NIH P41) External Advisory Committee (EAC). The EAC meets annually to review the research progress and assist with programmatic growth and renewal.

CONTRIBUTIONS TO DIVERSITY

Diversity, equity and inclusion is the bedrock for a safe and stimulating working and learning environment. I strive in my personal and professional life to promote these core values and to demonstrate them through my actions. Herein I describe my contributions and commitments to DEI.

Teaching and Mentoring

As a member for the executive committee of the MSBI program we place a high value on the diversity of students that apply for the program. We have implemented outreach to minority serving institutions to encourage students to apply for this program. As a faculty member I strive to promote an inclusive learning environment where the students feel that they can share their views without repercussion. I have also accommodated student's special needs and created a supportive environment that fostered their ability to learn without feeling singled out.

Research and Creative Activities

In my research group I foster an environment in which all cultures and nationalities are celebrated and respected and I am proud that in the last several years my trainees and mentees have represented different ethnic, racial and religious backgrounds.

University and Public Service

In my role as Chair of the Chemical Environmental and Safety committee we reviewed and developed policies for accommodation of persons with special needs and disabilities. I joined in on an American Chemical Society webinar where inclusivity in the laboratory was discussed. It was an exceptional personal learning experience. On all the committees that I serve we strive to maintain a diverse and inclusive member roster and promote DEI values during our interactions at our meetings.

Professional Activities

Since 2021 I have had the opportunity to review grants for the Department of Energy Isotope program. These grants supported training and research opportunities for students from minority serving institutions to work with scientists at the DOE National Laboratories and academic institutions. I was proud to participate in this review and will encourage other funding organizations to consider similar programs.

I am committed to participate in the UCSF Diversity, Equity and Inclusion Training program to further enhance and improve my skills to provide, promote and uphold these values at UCSF and beyond.

DEI Courses Attended:

Equitable, Accessible and Inclusive Teaching Practices, Saili Kulkarni, PhD, San Jose State University, through the National Center for Faculty Development and Diversity.

TEACHING

FORMAL SCHEDULED CLASSES FOR UCSF STUDENTS:

Qtr	Academic Yr	Course No & Title	Teaching Contribution	Units	Class Size
S	2003-2004	BIOE 230B Physics of Medical Imaging	2 Lectures		15
S	2003-2004	BIOE 280 Clinical Aspects of Bioengineering	1 Lecture/Discussion		6
S	2005-2006	BIOE 230B Physics of Medical Imaging	4 Lectures Oral Final Exam		2
S	2005-2006	CHEM 243 Chemical Biology	2 Lectures 1 Discussion Session		15
S	2006-2007	CHEM 243 Chemical Biology	2 Lectures 1 Discussion Session		15
S	2006-2007	BIOE 297 Advanced Cardiovascular Imaging	1 lecture		20
S	2007-2008	BIOE 230B Physics of Medical Imaging	4 Lectures Oral Final Exam		3
S	2007-2008	BIOE 230C Introduction to Molecular Imaging	5 Lectures		12
S	2007-2008	CHEM 243 Chemical Biology	2 Lectures 1 Discussion Session		15
S	2007-2008	BIOE 297 Advanced Cardiovascular Imaging	1 lecture		15
S	2009-2010	BIOE 230C Introduction to Molecular Imaging	7 – 1.5h Lectures		10
W	2011-2012	BI 203 Imaging Probes for Nuclear and Optical Imaging	10 – 1.5h Lectures	4	15
S	2011-2012	BI 215 Supervised Research	Research Mentor		1
W	2012-2013	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	17
S	2012-2013	BI 215 Supervised Research	Research Mentor		2
W	2013-2014	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	15
S	2013-2014	BI 215 Supervised Research	Research Mentor		2
W	2014-2015	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	17
W	2015-2016	BI 203	15 – 1.5h Lectures	3	21

		Imaging Probes for Nuclear and Optical Imaging			
S	2015-2016	BI 215 Supervised Research	Research Mentor		1
W	2016-2017	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	17
S	2016-2017	BI 215 Supervised Research	Research Mentor		2
W	2017-2018	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	19
S	2017-2018	BI 215 Supervised Research	Research Mentor		1
W	2018-2019	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	14
	2018-2019	MI&T Fellows Educational Conference	1 – 2h Lecture		3
W	2019-2020	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	10
	2019-2020	MI&T Fellows Educational Conference	2 – 2h Lectures		3
W	2020-2021	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	10
S	2020-2021	BI 215 Supervised Research	Research Mentor		1
	2020-2021	MI&T Fellows Educational Conference	2 – 2h Lectures		3
	2020-2021	Radiation Oncology Advanced Physics Discussion Lecture Series	2 – 1h Guided Discussion		4
W	2021-2022	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	7
	2021-2022	Radiation Oncology Advanced Physics Discussion Lecture Series	1h Guided Discussion		4
	2021-2022	MI&T Fellows Educational Conference	2h Lecture		3
W	2022-2023	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	9
	2022-2023	Radiation Oncology Advanced Physics Discussion Lecture Series	1h Guided Discussion		4
W	2023-2024	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	9

	2023-2024	Radiation Oncology Advanced Physics Discussion Lecture Series	1h Guided Discussion		4
W	2024-2025	BI 203 Imaging Probes for Nuclear and Optical Imaging	15 – 1.5h Lectures	3	
	2024-2025	Radiation Oncology Advanced Physics Discussion Lecture Series	1h Guided Discussion		5

POSTGRADUATE AND OTHER COURSES

2004 PET and PET/CT Imaging, Dept. of Radiology Postgraduate CME
"PET Chemistry"

2005, 2007 2010 UC Davis BIM 287 Molecular Imaging Graduate Course

2006-2007 Society of Nuclear Medicine Continuing Education
"Introduction to Grantsmanship: The Grant Review Process"

2007 UCSF Radiology Research Symposium
"'Constructing' Probes for Clinical and Preclinical Imaging"

2007 FAIR UCSF Radiology – Cardiac Molecular Imaging

2009 Radiation Biophysics and Dosimetry Course UCB Nuclear Engineering NE162 (1.5h lecture; 8 students)

2010 Radiation Biology NE490, University of Tennessee Distance Learning course (1h lecture; 10 students)

2011 METiS Workshop Applications of in vivo Imaging in Pre-Clinical and Clinical Translational Research (1h lecture; 1h roundtable leader; 25 attendees) (*http://metis.bio-med.ch/cms/Default.aspx?Page=16746&Menu=429&backbar=0*)

2012 FAIR UCSF Radiology - Radiotracer Development for Abeta Plaque Imaging

2012 Radiation Biophysics and Dosimetry Course UCB Nuclear Engineering NE162 (1.5h lecture; 15 students)

2012 Introduction to Nuclear Engineering UCB Nuclear Engineering NE 92 (1.5h lecture; 30 students)

2016 UC Davis BIM 287 Molecular Imaging Graduate Course (2h lecture; 4 students)

2017 RadioEd – a series of lectures on the regulatory aspects of translating radiopharmaceuticals from the laboratory to clinical studies

2018 UC Davis BIM 287 Molecular Imaging Graduate Course (2h lecture; 4 students)

2018 TERACHEM 2018 – Radiochemistry Summer School – lecture on Preclinical Imaging and Kinetics. (20 Students)

2020 UC Davis BIM 287 Molecular Imaging Graduate Course (2h lecture; 9 students)

2022 UC Davis BIM 287 Molecular Imaging Graduate Course (2h lecture; 10 students)

2022 TERACHEM 2022 – Radiochemistry Summer School – lecture on Preclinical Imaging and Kinetics. (20 students)

2024 Stanford BIOE 224 "Probes and Applications for Molecular Imaging of Living Subjects (1.5h Lecture, 20 students)

2025 Stanford BIOE 224 "Probes and Applications for Molecular Imaging of Living Subjects (1.5h Lecture, 20 students)

INFORMAL TEACHING

2006 China Basin Landing Staff (Engineering, Facilities, Security, Janitorial)
Presented overview of the operations of the cyclotron and radiochemistry facilities. Discussed facility access procedures for janitorial and facility maintenance personnel. Addressed questions from the group.

2007 Medical Student – Center for Molecular and Functional Imaging (CMFI) open house
Presented overview of the facilities and research activities taking place in CMFI. Gave tour of the cyclotron and radiochemistry laboratories.

2007 UCSF Emergency Response Team
Described the activities related to the cyclotron and radiochemistry laboratories. Discussed emergency scenarios and their mitigation.

2007 SFSU Medical Physics – tour

2007-Present Nuclear Chemistry Summer School visit to UCSF Center for Molecular and Functional Imaging, 12h lecture, 24 contact hours.

Presented overview of the facilities and research activities taking place in CMFI. Gave tour of the cyclotron and radiochemistry laboratories.

2017 RadioEd – a series of lectures on the regulatory aspects of translating radiopharmaceuticals from the laboratory to clinical studies

TEACHING NARRATIVE

Since the submission of my packet in May 2022 for my last advancement which was effective on 01 July 2023, I have accomplished the following: I have mentored 3 postdoctoral fellows, 2 master's candidates, 3 Assistant Professional Researchers, the small animal imaging manager and the Cyclotron Facility Director.

In 2010 the Department of Radiology and Biomedical Imaging developed a Master's degree Program entitled “Master’s in Biomedical Imaging” (MSBI). I serve on the MSBI executive committee that oversees the administration of the entire course and reviews applications of potential students. I teach a 3 credit core course, BI203, entitled “Imaging Probes for Nuclear and Optical Imaging” in the Winter quarter. I am responsible for the course content and curriculum development. I have 30 contact hours with the students with weekly office hours. At the end of three quarters of study the students may choose to complete their Master’s Degree with a comprehensive exam or stay for one more quarter and undertake research applied to a Master’s thesis. I serve on the comprehensive exam committee. I have also provided research mentorship and support to 2 students for their Master’s thesis. The students are required to pass a qualifying exam based on their chosen research. I sit on 2-4 qualifying exam committees per year.

In addition to the master’s course, I provide lectures for courses offered at UCSF, Stanford and UC Davis. I have been affiliated with the American Chemical Society/ US Department of Energy sponsored Nuclear Chemistry Summer School (NCSS) since 1997. The NCSS provides an opportunity for undergraduate students to learn Nuclear Chemistry, a course not offered in most university chemistry departments. I teach 6 lectures over the course of two days, meeting with the students for 15-20 hours. The students also perform a laboratory where they prepare and analyze a radiopharmaceutical labeled with technetium-99m. The students also come to UCSF for a tour of the imaging and cyclotron facilities. In 2022, I was invited again as a faculty member for the second Radiochemistry Summer School in Bressanone Italy administered by the University of Padua.

I was the recipient of the MSBI Outstanding Teaching Award selected by the MSBI students for the third time (2019, 2021, and 2023).

MENTORING

PREDOCTORAL STUDENTS SUPERVISED OR MENTORED

Dates	Name	Program or School	Faculty Role	Current Position
9/98 – 12/99; 12/00 - 05/01	Arneh Babkahni	UCB Chemistry (Sr.)	Research Supervisor	West Point Medical School
09/03-05/04	Shivang Dave	UCB Chemistry (Sr.)	Research Supervisor	Medical School
03/06-03/10	Molly Darragh	UCSF Chem. Biology Graduate	Research Mentor Qual. Examiner Ph.D. Thesis Committee	University of Arkansas Postdoctoral
06/98-08/98	Hooman Dilmanian	undergraduate	Supervise summer work	
05/07-08/07	Kimberly (Erickson) King	UCSF Chem. Biology Graduate	Research Mentor	
01/02-06/02	Lindsy Farina	Univ. Alabama (Sr.)	Supervise semester work	
06/98-06/01	Darren Hom	UCB Chemistry	Research Supervisor	
06/97-08/97	Sabrina Hom	Northgate High School	Research Supervisor	
09/97-12/97 08/98-08/99	Denise Kenski	College of New Rochelle (Sr.)	Research Supervisor	SIMA/Merck
09/99-06/01	Julia Lohman	UCB Chemistry (Sr.)	Research Supervisor	
09/03-05/04	Thomas Ng	UCB Chemistry (Sr.)	Research Supervisor	MD, PhD program
02/04-12/04	Miriam Tibayan	Mills College (Sr.)	Research Supervisor	
06/99-08/99	Melodie Weller	University of Montana	Supervise summer work	
01/02-05/02	Linda Xiong	Fresno State	Supervise semester work	
06/99-08/99	Erin Zike	Contra Costa Community College	Supervise summer work	
05/00-09/00	Peter Dorff BS	University of Western Ontario	Research Supervisor	AstraZeneca , Inc.
10/02-01/04	Peter Dorff, MS	McMaster University	Research Supervisor	AstraZeneca , Inc.
06/95-08/95	Jeremy Fish		Supervise summer work	
06/96-08/96	James Harten		Supervise summer work	
05/01-08/02	Margaret MacSween	University of Western Ontario	Supervise summer work	Medical School
05/04-08/04	Eric McClendon	Jackson State University	Supervise summer work	Univ Miss Medical School
06/97-9/97	Xenia Protopopescu	Yale University	Supervise summer work	Psychiatry Resident NY Presbyterian Hospital
09/07-06/10	Shane Joseph	San Francisco State University Student	Research Supervisor	Naval Medical School
09/07- 06/12	Michael Pun	San Francisco State University Student	Research Supervisor	Lawrence Berkeley Nat. Lab.
01/08-03/08	XiuMing Wong	UCSF Chem. Biology Graduate	Research Mentor	UCSF Chem Biology

06/08-08/08	Kimberly Sung	Mount Holyoke College	Summer Research Training Mentor	
06/08-06/10	Leila Ranis	UC Berkeley	Research Supervisor	Notre Dame Graduate Student
08/08-03/10	Robin Cumming	Mills College	Research Supervisor	UC Davis Graduate Student
09/09-12/09	Shawn Pan	UC Berkeley	Research Supervisor	UC Berkeley Undergraduate
09/09-08/12	Lisa Wu	Washington State Univ	Research Supervisor	
01/10-04/10	Bertram Koelsch	UCB/UCSF Bioengineering	Research Mentor	Bioengineering Graduate Student
05/10-05/12	Cindy Lau	UC Berkeley	Research Supervisor	Pharmacy School
01/10-09/12	Sai Duriseti	UCSF Chem. Biology Graduate	Research Mentor	UCSF Medical Student
05/10-05/11	Bin Zang	UC Berkeley	Research Supervisor	Pharmacy School
05/11-05/12 01/13-05/13	Brian Ma	UC Berkeley	Research Supervisor	UC Berkeley Undergraduate
05/11-01/12	Alyssa Tao	UC Berkeley	Research Supervisor	UC Berkeley Undergraduate
05/12-05/15	Melody Lee	UCSF Chem. Biology Graduate	Research Mentor Ph.D. Thesis Committee	
04/12 - 07/13	Hendry Cahaya	UCSF MSBI	Research supervisor	Genentech
04/13 –08/13	Rupinder Chandi	UCSF MSBI	Research Mentor	
04/13 - 08/13	Madhav Aggrawal	UCSF MSBI	Research Mentor	
05/13 - 08/13	Irene Chang	UC Berkeley	Research Supervisor	UC Berkeley Undergraduate
01/14 - 09/16	Robin Ippisch	UC Davis Bioengineering	Research Mentor PhD	UCSF Interim Director Radiopharm Facility
04/14 - 08/14 06/15 - 08/15	Nabeel Al-Aziz	UCSF MSBI	Research Mentor	MD
04/14 - 08/14	Khaled Dostzada	UCSF MSBI	Research Mentor	
04/16 - 08/16	Catherine Fu	UCSF MSBI	Research Mentor	
05/16 - 06/17	Joshua Fisher	UCSF MSBI	Research Mentor	
04/17 - 09/17	Niecholle Roco	UCSF MSBI	Research Mentor	Philippine Medical School
04/17 - 01/18	Jessica Janneck	UCSF MSBI	Research Mentor	University of Queensland Medical School
03/18 - 09/18	Guillaume Trusz	UCSF MSBI	Research Mentor	Ph.D. Candidate MD Anderson
09/19 - 03/20	Jack Lin	UCSF MSBI	Research Mentor	
03/21 - 09/22	Cyril Fong	UCSF MSBI	Research Mentor	Ph.D. Candidate Univ. of Missouri
03/23-06/23	Alice Nguyen	UCSF MSBI	Research Mentor	

06/24-08/24	Katie Austin	Oberlin	Research Mentor	Ph.D. Candidate Michigan State

POSTDOCTORAL STUDENTS SUPERVISED OR MENTORED

Dates	Name	Fellow	Faculty Role	Current Position
4/01- 5/02	Fred Chin, PhD	Postdoctoral Fellow	Research Supervision	Stanford University
1/01–8/03	Nandanan Erathodiyil, PhD	Postdoctoral Fellow	Research Supervision	Inst. Bioeng. Nanotech. Singapore
7/98-7/99	Joseph Fuller, PhD	NSRA Fellow	Research Supervision	
12/91-9/94	Gabriel G. Garcia, PhD	Postdoctoral Fellow	Research Supervision	Teva Pharmaceuticals
11/98- 4/00	Andrew Gibbs, PhD	Postdoctoral Fellow	Research Supervision	Chevron, Inc.
9/98 –5/00	Alan Glabe, PhD	Postdoctoral Fellow	Research Supervision	State of California
1/95-6/97	Kitaw Negash, PhD	Postdoctoral Fellow	Research Supervision	American Cyanamide, Co.
6/94-6/95	Christopher W. Lange, PhD	Postdoctoral Fellow	Research Supervision	
8/97-8/99	John K. Lim, Ph.D.	NSRA Fellow	Research Supervision	Dionex
1/94 - 1/95	James P. O'Neil, Ph.D.	NSRA Fellow	Research Supervision	LBNL Staff Scientist
1/03 – 3/04	Neil Vasdev, PhD	NSERC Fellow	Research Supervision	Toronto PET Centre
6/92 - 6/93	Elizabeth Zippi, PhD	Postdoctoral Fellow	Research Supervision	Professor, LSU Shreeveport
08/03 - 10/05	Mustafa Janabi, PhD	Postdoctoral Fellow	Research Supervision	LBNL Research Scientist
06/07 - 01/08	Greg Watkins, PhD	Postdoctoral Fellow	Research Supervision	
07/07 - 07/08	Akhilesh Sista, MD	Resident Fellow	Research Supervision	Asst. Prof. Radiology Weill Cornell Medical College
07/07 - 06/08	Nick Costouros, MD	Resident Fellow	Research Supervision	
09/07 – 12/08	Suzanne Lapi, PhD	Postdoctoral Fellow	Research Supervision	Professor, U Alabama Birmingham
04/09 – 06/14	Aaron Lebeau, PhD	Postdoctoral Fellow	Research Supervision	Professor, U Wisconsin
06/09 - 09/10	David Wilson, MD, PhD	Resident	Proposal Review	Professor, UCSF
08/09 – 01/14	Shorouk Dannoon, PhD	Postdoctoral Fellow	Research Supervision	Kuwait University
06/11 – 06/13	Shelly James, PhD	Postdoctoral Fellow CARE	Research Supervision	Oakland School District
12/11 – 02/14	Chris Drake, PhD	Postdoctoral Fellow	Research Supervision	Telix Pharmaceuticals

03/11 – 06/12	David Pham, PhD	Postdoctoral Fellow Bayer Specialist	Research Supervision	AVID Radiopharmaceuticals
03/12 – 12/13	Christina Leggett, PhD	Postdoctoral Fellow CARE	Research Supervision	
08/13 – 07/14	Tanshuree Ganguly, PhD	Postdoctoral Fellow CARE	Research Supervision	UC Davis
06/14 – 06/15	Lisa Wu, PhD	Postdoctoral Fellow	Research Supervision	
05/15 – 02/17	Kiel Neumann, PhD	Postdoctoral Fellow	Research Supervision	St Jude Asst. Member
10/16 – 10/17	Denis Beckford Vera, PhD	Postdoctoral Fellow	Research Supervision	Actinium Pharmaceuticals
04/17 – 04/20	Thomas Hayes, Ph.D.	Postdoctoral Fellow	Research Supervision	
06/17 – 10/20	Matthew Parker, PhD	Postdoctoral Fellow	Mentor	Stonybrook University
03/19 – 06/21	Caroline Guglielmetti, PhD	Postdoctoral Fellow	Proposal Dev. Collaborator	Asst. Professor, Washington U.
10/23 -	Anthony Ku, PhD	Postdoctoral Fellow	Mentor	
01/25 -	Abhiram Panigrahi	Postdoctoral Fellow	Mentor	

FACULTY MENTORED:

Dates	Name	Position while Mentored	Mentoring Role	Current Position
2004-2007	Benjamin Franc, MD	Asst. Prof. In Residence	Proposal Review, Collaborator	Prof. UCSF
2005-2011	Jiang He, PhD	Asst. Adjunct Prof.	Proposal Review Section Chief	Prof. Univ. of VA
2005-2011	Ella Jones, PhD	Asst. Adjunct Prof.	Proposal Review Section Chief	Asst. Adjunct Prof. UCSF
2006-2007	Amy Lin, MD	Clinical Inst. Med. Urologic Oncology	Proposal Preparation	Clinical Inst. Med. Urologic Oncology
2007	Yanjun Fu, PhD	Asst. Research Scientist	Probe Chemistry	Asst. Research Scientist
2007-2012	Youngho Seo, PhD	Asst. Adjunct Prof.	Proposal Review Strategic Planning	Prof. in Res.
2008-2011	Carina Mari Aparici, MD	Asst. Prof. in Residence	Proposal Dev. and review	Faculty Stanford University
2009-2012	Miguel Pampaloni, MD, PhD	Asst. Prof. in Residence	Proposal Dev. and review	Prof. in Res.
2010-2012	David Wilson, MD, PhD	Resident Asst. Prof in Residence	Proposal Dev. Collaborator	Asst. Prof. in Res.
2013-2015	Michael Evans, PhD	Asst. Prof in Residence	Proposal Dev, Dept. Orientation	Prof. in Res.
2013-2015	Thomas Hope, MD	Asst. Prof in Residence	Proposal Dev. Collaborator	Asst. Prof. in Res.
2014-2016	Chris Drake, PhD	Asst. Researcher	Proposal Dev.	NIH
2017-2020	Denis Beckford Vera, PhD	Asst. Researcher	Proposal Dev. Collaborator	Actinium Pharmaceuticals

2020-2022	Matthew Parker, PhD	Asst. Researcher	Proposal Dev. Collaborator	Asst Prof. Stonybrook Univ.
2021- 2023	Caroline Guglielmetti, PhD	Asst. Researcher	Proposal Dev. Collaborator	Asst Researcher UCSF

STAFF MENTORED:

Dates	Name	Position while Mentored	Mentoring Role	Current Position
2005-2008	Mustafa Janabi, Ph.D.	Associate Specialist	Supervisor	LBNL Scientist
2005-2010	James Powell, Ph.D.	Specialist	Supervisor	UK Independent Consultant
2006-2012	JinJin Feng, M.S.	Associate Specialist	Supervisor	Self Employed
2006-2011	James Slater, Ph.D.	Radiopharmacist	Supervisor	UCSF Radiology
2007-present	Joseph Blecha, M.S.	Specialist	Supervisor	UCSF Radiology
2007-2010	Dongwei Gao, M.D.	Specialist	Co-Supervisor	UCSF Radiology
2008-2011	William Mannone	Cyclotron Engineer	Supervisor	UCSF Cyclotron Engineer
2009-2010	Hilla Wahnishe	Small Animal Imaging Manager	Co-Supervisor	
2010-2013	Stephanie Murphy	Small Animal Imaging Manager	Co-Supervisor	QUIPC - UCSF Radiology
2011-2013	Emily Verdin	NOI Clinical Research Coordinator	Co-Supervisor	UCSF Radiology
2013-2015	Melanie Regan	Small Animal Imaging Manager	Co-Supervisor	UCSF Radiology
2015-2020	Tony Huynh	Small Animal Imaging Manager	Co-Supervisor	UCSF Radiology
2017-2018	Jessica Janneck	SRA	Supervisor	University of Queensland Medical School
2021- 2022	Cyril Fong	SRA	Supervisor	University of Missouri PhD Candidate

OTHER VISITING FACULTY SUPERVISED:

1996-1997	Rikki Waterhouse	Columbia University
2002-2012	John Gerdes	University of Montana, Sabbatical 2011-12
2003-2004	Duncan Hunter	Sabbatical from University of Western Ontario
2003-2004	Julie Sutcliffe	UC Davis
2011	John Gerdes	Sabbatical from University of Montana
2013	Robert Hanson	Sabbatical from Northeastern University

MENTORING SUMMARY:

Since the submission of my packet in May 2019 for my last advancement which was effective on 01 July 2020, I have accomplished the following: I mentored 2 MSBI thesis students, 3 postdoctoral

fellows and 3 assistant professional researchers. I meet at least weekly with my research group to discuss current research projects, to prepare presentations, to review current literature and to plan future research activities.

I am co-mentor the Small Animal Imaging Manager. In 2020 I was appointed as the scientific liaison to the UCSF Radiopharmaceutical Facility. I work closely with the facility director to address radiopharmaceutical chemistry and regulatory issues as they arise.

RESEARCH AND CREATIVE ACTIVITIES

RESEARCH AWARDS AND GRANTS

CURRENT

R01 CA297601 (Barcellos-Hoff, VanBrocklin) MPI — 12/01/24-11/30/29
NIH – NCI — $3,965,163 Total
Development and Systematic Testing of a TGFβ Targeted Theranostic in Preclinical Cancer

R44 AI162202 (Elizarov, VanBrocklin) MPI — 01/15/24-12/31/26
NIH - NIAID — $606,728 Total
Improving availability of ImmunoPET via automation of radio-synthesis and quality control of antibody-based HIV imaging PET tracers on a single platform

HT94252410147 (Flavell) Co-I — 09/01/23–8/31/26
DoD PCRP — $1,453,500 Total
Targeted theranostic nanopolymers for imaging and alpha radiopharmaceutical therapy of prostate cancer

MJFF (Bradley, Wooley, UCSF; Holmes, Sanacora, Yale) — 01/01/25 -12/31/28
Michael J Fox Foundation — $7,675,877 Total
Psilocybin therapy for depression in Parkinson's disease

R01 CA279203 (Flavell) Co-I — 04/01/23 - 03/31/28
NIH Natl Cancer Institute (NIH-NCI) — $3,322,173 Total
Systematic evaluation of toxicity and therapeutic efficacy in CD46 directed radioligand therapy

R01 AI181378 (Wilson, Ohliger) — 07/01/24 – 06/30/29
NIH - NIAID — $3,818,318 Total
Chemoenzymatic radiosyntheses of [18F]FDG-derived oligosaccharides for S. aureus detection

Research Agreement (Seo) PI — 04/08/25 – 04/07/26
Utter Therapeutics, Inc — $166,278 Total
UtterTx 002 Cu Labeling Imaging BioD Study

R01 AG072743 (Wilson, VanBrocklin, Gerdes) MPI — 08/15/22 - 05/31/26
NIH Natl Inst Aging (NIH-NIA) — $3,246,669 Total
First-in-Human evaluation of an astrocytic glutamate transporter (EAAT2) PET tracer in healthy and Alzheimer's diseased brain

R01 CA266666 (VanBrocklin, Flavell, Aggarwal) MPI — 08/12/22–07/31/26
NIH Natl Cancer Institute (NIH-NCI) — $2,421,065 Total
Molecular imaging of novel PARP inhibitor nanomedicine delivery

PolyBio Research Foundation (Henrich, VanBrocklin) MPI — 01/01/23 – 12/31/25
Use of ImmunoPET-CT [18F]F-AraG imaging to identify T cell responses in patients with Long Covid/PASC — $1,524,410 total direct

PolyBio Research Foundation (Henrich, VanBrocklin) MPI — 03/01/23 – 02/28/26
Use of immunoPET-CT imaging using radiolabeled SARS-CoV-2-specific monoclonal antibodies (mAbs) to reveal the location of deep-tissue viral reservoirs in patients with Long Covid/PASC — $1,405,464 total direct

R21 EB032495 (Parker) Co-I — 09/01/23 – 08/30/26
NIH NIBIB — $151,576 direct year 1
Catch and Release Radiolabelled Peptides: A New Technology for Radiotracer Development

R01 CA271606 (Flavell) Co-I — 07/01/22 – 06/30/27
NIH Natl Cancer Institute (NIH-NCI) — $4,037,386 Total
Development of CD46 theranostics for imaging and treatment of multiple myeloma

R01 AI152932 (Henrich/Hsue/VanBrocklin) MPI — 08/01/20-07/31/25
NIH - NIAID — $3,679,026 Total
In Vivo PET Imaging of HIV infection

DOE DE-SC0023467 (Flavell) Co-I — 07/01/22–06/30/25
US Dept of Energy (US DOE) — $499,999 Total
Development of 134Ce/134La: A PET imaging surrogate for 225Ac radiotherapeutics

R01 CA258297 (Evans, Craik, Aggarwal, Fong) Co-I — 03/01/21–02/28/26
NIH Natl Cancer Institute (NIH-NCI) — $3,805,315 Total
Precision targeting of T cell cytotoxicity with PET

U19 NS110456 (Rabinovici, UCSF PI) Co-I — 09/24/19-06/30/29
NIH NINDS / Univ. of Pennsylvania — $1,134,133 Total
Center without Walls for Imaging Proteinopathies with PET (CW2IP2)

UM1 AI164560 (Deeks) Co-I — 08/16/21-04/30/26
NIH NIAID — $4,686,209 direct year 1
Delaney Aids Research Enterprise (DARE) to Cure HIV

Research Agreement (VanBrocklin) PI — 05/17/10-12/31/25
CellSight Technologies — $2,176,714 Total
Preclinical Molecular Imaging

CURRENTLY UNDER REVIEW

R01 (Okoye, Henrich, VanBrocklin) MPI — 07/01/25-06/30/30
NIH NIAID — $1,040,898 Total
Multimodal PET-CT imaging of SIVmac239 dynamics post-ART interruption

RM1 DA063218 (Lee, Henrich, VanBrocklin, Deitchman, Tseng) MPI 5/1/25-4/30/30
NIH NIDA $12,289,406 Total
In Vivo Imaging and Post-Mortem Study of Methamphetamine Use on Immune Dysfunction and HIV Reservoir Transcription among People with HIV on ART

VFDN (Flavell) Co-I 07/15/25 – 07/15/29
V Foundation $800,000 Total
CAIX targeted theranostics for imaging and treatment of renal cell cancer

R01 EB036603 (Hetts, VanBrocklin) MPI 5/1/25-4/30/30
NIH NIBIB $3,968,039 Total
Endovascular Filtration to Change Drug Biodistribution (ELOCUTION)

R21 Trailblazer (Mu) Co-I 04/01/25 - 03/31/28
NIH NIBIB $656,000 Total
Development of 18F-Labeled Zinc Biosensors and PET Imaging Techniques $656,000 total

UC MRPI (Seo) Co-I 01/01/25–12/31/28
UCOP $2,600,000 Total
California Alliance for Higher Education into Advanced moLecular THeranostics (CA-HEALTH).

R01 (Peluso, Kelly) Co-I 12/01/25-11/30/30
NIH $4,094,341 Total
Probing Epstein-Barr virus-driven immune dysfunction and autoimmunity as mechanisms of neuro-PASC

R21 (Mu) Co-I 12/1/25-11/30/27
NIH $451,000 Total
New Avenue for Pancreatic Cancer Therapy: Dual Chemo- and Radio-pharmaceutical Modalities for Highly Specific Tumor Cells and Stroma Targeting with "Smart" Enhanced Tumor-to-Background Delivery

COMPLETED

DOE DE-AC03-76SF00098 (investigator) 7/1/93 – 6/30/96
DOE $250,000 direct year 1
Imaging of Apolipoprotein E-Binding Receptors In Vivo $798,000 total direct

CA58207 (Co-PI) 3/1/94 – 2/28/95
NIH/NCI SPORE Development Research Grant
PET Estrogen Receptor Imaging of Breast Cancer $10,000 total direct

AG10129-04 (PI) 7/1/95-6/30/95
NIH/ NIA UC Davis Pilot Project
Mitochondrial Imaging agents for PET and SPECT $20,000 total direct

R01 HL58568 (Co-PI) 7/1/97-6/31/00
NIH/NHLBI $143,000 direct year 1
122I Generator and Radiotracers for Perfusion Studies $447,000 total direct

BC972822 (PI) 9/1/98-8/30/01
DOD BCRP $69,000 direct year 1

Development of Novel Epidermal Growth Factor Receptor-Based Radiopharmaceuticals: Imaging Agents for Breast Cancer — $206,000 total direct

4IB-0059 (PI) — 6/1/99-5/31/00
CA BCRP
Development of EGFR-Based Imaging Agents of Breast Cancer — $42,000 total direct

1PF0149 (PI) — 1/1/99-12/31/00
CA CRP — $50,000 direct year 1
Choline-Based Imaging Agents for Non-Invasive Tumor Detection — $131,000 total direct

R21 CA79823 (PI) — 2/1/99-1/31/01
NIH/ NCI — $100,000 direct year 1
Development of Tyrosine Kinase-Based Cancer Imaging Agents — $200,000 total direct

DE-AC03-76SF00098 (Co-PI) — 5/1/00-10/31/00
DOE — $60,000 total direct
Development of Radiolabeled Derivatives of Rotenone as Myocardial Blood Flow Tracers

P01 HL25840 (PI- project 4) — 5/1/97 - 12/31/02
NIH NHLBI
Radiopharmaceuticals for Metabolism and Flow

DE-AC03-76SF00098 (Co-PI) — 10/01/01-09/30/02
DOE — $121,000 total direct
Synthesis of Gene Expression Imaging Agents – Training Grant Supplement

DE-AC03-76SF00098 (Co-PI) — 10/01/01 – 9/30/03
DOE
Radioisotope Production Using Compact Laser Accelerators — $2,500,000 total direct

DE-AC03-76SF00098 (PI) — 9/15/02-09/30/03
DOE — $127,000 direct year 1
Experimental Medicine, Development of Radionuclides – Training Grant Supplement

R01 AG05890-15 (investigator) — 07/01/00-06/30/04
NIH NIA
Alzheimer's Disease as a Systemic Disorder — $875,000 total direct

DOE DE-AC03-76SF00098 (PI) — 10/1/92-9/30/05
DOE — $353,000 direct FY05
Experimental Medicine, Development of Radionuclides — ~4,500,000 direct since 1992

DOE DE-FG01-04ER04-17 (PI) — 1/1/05 – 12/31/05
DOE — $131,000 direct year 1
Specific Delivery of Radiotherapeutic Nuclides to Tumors — $250,000 total direct

Avigen Subcontract (PI) — 4/15/04-06/30/05
Avigen, Inc.
Human Brain Imaging with Fluoro-meta-tyrosine — $75,100 total direct

UCSF Subcontract — 06/01/02 – 12/31/05
Krys Bankewicz
PET Imaging of Gene Therapy — $100,000 total direct

Avigen Subcontract (VanBrocklin) PI — 01/01/05-3/31/06
Avigen, Inc.
Fluoro-meta-tyrosine for Phase I trial at UCSF — $85,000 total direct

NIH U54 CA90788 (Tempero) Dev. Project 2 Co-PI	9/26/01-12/30/05
NIH/ NCI	$50,000 direct year 1
Development of PET Agents for Imaging Apoptosis	$102,000 total direct
DOE DE-AC03-76SF00098 (VanBrocklin) PI	1/01/05-11/30/06
DOE CRADA/ Bristol-Meyers Squibb Medical Imaging	$75,000 direct year 1
Rotenone Analogs as PET Cardiac Blood Flow Imaging Agents	$150,000 total direct
Genzyme Subcontract (VanBrocklin) PI	05/01/06-4/30/07
Genzyme, Inc.	
Fluoro-meta-tyrosine for Phase I trial at UCSF	$43,823 total direct
Genentech Subcontract (VanBrocklin) PI	11/15/06-12/31/07
Genentech, Inc.	
FLT production and Imaging	$45,000 total direct
NIH R01 EB000482-01 (VanBrocklin) PI	3/01/03-2/28/08
NIH/ NIBIB	$278,000 direct year 1
Evaluation of Iodorotenone, A SPECT Perfusion Tracer	$1,156,000 total direct
NIH U54 CA90788 (Tempero) Project 3 Co-PI	9/26/01-12/31/08
NIH/ NCI	$88,000 direct year 1
Non-Invasive Imaging of ErbB Receptor-Ligand	$744,000 total direct
Interactions by Novel MRI and SPECT/PET Strategies	
NIH R01 CA94253-01 (VanBrocklin) PI	9/01/02-08/31/08
NIH/ NCI	$258,000 direct year 1
Targeted Molecular Probes for Tumor Imaging	$1,111,000 total direct
NIH R21 CA121108 (Moasser) Co-investigator	12/1/06-11/30/08
NIH/ NCI	$150,000 direct year 1
Pilot Studies to develop probes for in vivo	$275,000 total direct
Imaging of PI3K/Akt pathway activity	
Stewart Trust Cancer Research Award (VanBrocklin) PI	08/01/06-12/31/08
Stewart Trust	
Improving Paclitaxel Therapy: Molecular Imaging Approach	$50,000 total direct
Clinical Trial Contract (Weiner) Co-I	06/01/07-12/31/08
AVID Radiopharmaceuticals	$45,000 total direct
A Preliminary Evaluation of the Amyloid Imaging Agents	
NIH R21 HL084121 (Lee) consulting investigator	1/15/07-12/31/08
NIH/NHLBI	
The influence of ischemic microenvironment and stem cell differentiation	
UCSF CTSI Trans. Methods Catalyst (Craik)	05/01/08-04/30/09
UCSF CTSI	$30,000 total direct
Validation of Cell Surface Serine Protease Activity as a Novel Target	
for Cancer Imaging	
NIH S10 RR023051 (VanBrocklin) PI	6/01/07-5/31/09
NIH/ NCRR	$1,277,000 total direct
MicroPET/CT for Small Animal Imaging	

NIH R01 CA119414 (Hanahan) Co-PI	09/29/05-07/31/10
NIH/ NCI	$267,000 direct
Detecting Cancer Early with targeted nano-probes	$1,300,000 total direct
Subcontract (Julian - UCSF) Co-Investigator	3/1/07-7/31/10
Alliance for Lupus Research	
Memory impairment and depression in SLE: Role of NMDA receptors	$75,000 total direct
Contract (VanBrocklin) PI	6/1/09-11/17/10
Bayer Schering Pharmaceuticals	
Stability of L19SIP	$96,223 total direct
Contract (VanBrocklin) PI	9/08/08-9/07/10
Varian Medical Systems	
Development of an Automated System for the Production of Fuorine-18 Labeled Fluorine-gas and the Preparation of EF5	$139,672 total direct
NIH R01 CA135626 (Tlsty/Jones) Co-investigator	07/01/08 – 06/30/11
NIH/NCI	$450,000 direct year 1
In vivo Detection and Characterization of Premalignant Lesions in Breast Cancer	$1,381,113 total direct
Contract (Mari) Co-I	11/1/09-5/31/11
Neostim, Inc.	$118,888 direct total
O-15 Water PET Imaging of brain activity in pain: Effects of Multi-source Transcranial Magnetic Stimulation	
Subcontract (Gerdes – U Montana)	9/1/10-4/30/11
Robert Packard Center Johns Hopkins	
Cerebral PET Imaging Agents for Monitoring ALS Therapy	$37,652 total direct
NIH R41 AG030241 (Skovronsky - AVID) Co-I UCSF Subcontract	08/01/07- 7/31/11
NIH/ NIA	$150,000 direct year 1
Development of PET and SPECT Ligands for Brain Imaging	$300,000 total direct
NIH R01 AG025303 (Jagust; LBNL) UCSF Sub (Rugo) Co-I	7/1/09-6/30/11
NIH	$422,640 direct year 1
Effects of Chemotherapy on Brain Function	$867,114 total direct
DOE DE-FG02-08ER64699 (VanBrocklin) PI	9/15/08-8/31/11
DOE	$215,618 direct year 1
Elemental Fluorine-18 Gas: Enhanced Production and Availability	$505,351 total direct
Clinical Trial Contract (VanBrocklin) PI	04/01/08-08/30/11
AVID Radiopharmaceuticals	
Preparation of AV-45	$26,000 total direct
NIH R01 CA135358 (He) Co-investigator	7/1/08-12/31/11
NIH/NCI	$225,000 direct year 1
Targeted liposomal radiotherapy of malignant mesothelioma	$975,000 total direct
Contract (VanBrocklin) PI	11/1/08-7/31/11
MAP Pharmaceuticals	
Preparation of Carbon-11 Labeled Dihydroergotamine	$66,000 total direct

Contract (VanBrocklin) PI 11/1/11-2/01/12
Genentech
Preparation and Imaging of 11C-G1023 $21,797 total direct

Contract (VanBrocklin) PI 11/17/10-3/31/12
Bayer Schering Pharmaceuticals $320,233 direct year 1
UCSF Research Collaboration $495,970 total direct

Department Seed Grant (Mellon) Co-I 10/01/10-09/30/11
UCSF Radiology and Biomedical Imaging $4,956 direct year 1
Imaging neuroinflammation related to Niemann-Pick type C (NPC) disease

NIH R42 CA110222 (Hamilton; Molecular Express, Inc.) Sub PI 6/15/09-8/31/12
NIH/ Molecular Express, Inc. $65,747 direct year 1
Aptamers for Imaging and Therapy $134,502 total direct

Rogers Bridging the Gap Award (Craik, VanBrocklin) Co-PI 12/15/10-12/31/12
Rogers Foundation $100, 000 direct year 1
Targeting Active Proteases and Their Receptors for the
Non-Invasive Imaging of Cancer

UC Discovery (VanBrocklin) PI 11/2/09-10/31/12
UC $142,031 direct year 1
Imaging Hypoxia: Preparation and evaluation of EF5 $331,253 total direct

Department Seed Grant (Kishari) Co-I 10/01/11-09/30/12
UCSF Radiology and Biomedical Imaging $5,000 direct year 1
PET and MR-Compatible 3D Cell/Tissue Bioreactor for Development of
Imaging Biomarkers of Androgen-Independent Prostate Cancer

R44 CA153481 (Langton-Webster; CTT) PI 06/1/10-2/28/13
NIH $89,951 direct year 1
Development of a novel PET imaging agent for prostate cancer $255,643 total direct

R43 CA162845 (Fralish, iTi Health) UCSF Sub Co-PI 07/01/11-06/30/13
NIH $60,381 direct year 1
Developing a plectin-1 targeted imaging agent for the detection of Pancreatic Cancer

R21 NS072079 (Thompson, Gerdes, U Montana) UCSF Sub PI 10/1/10-9/30/13
NIH Countermeasures Against Chemical Threats (CounterACT) $112,234 direct year 1
In vivo pharmacokinetic and pharmacodynamic dispositions of $345,249 total direct
positron radiolabeled organophosphate chemical threats

DOE DE-SC002061 (Sutcliffe, J UC DAVIS) Subcontract PI 9/1/09-8/31/14
DOE $400,000 direct year 1
CARE - California Alliance for Radiotracer Education $1,600,000 total direct

R01 CA140617 (Berkman) Subcontract Co-I 4/5/10-01/31/15
NIH/NCI $159,249 direct year 1
Probe Optimization for Prostate Cancer Detection $671,624 total direct

R21 CA171766 (VanBrocklin/Kurhanewicz) 08/01/12 – 07/31/15
NIH $108,750 direct year 1
PET and MR-Compatible Bioreactor for Cross-Platform $239,250 total direct

Biomarker Development

Subcontract (Gerdes – U Montana) 08/01/11-6/30/15
Robert Packard Center Johns Hopkins $24,000 direct year 1
Cerebral PET Imaging Agents for Monitoring ALS Therapy $118,561 total direct

W81XWH-12-1-0440 (Craik) Co-Investigator 09/01/2012-8/31/15
DoD $125,000 direct year 1
Novel Imaging Biomarkers for Aggressive Prostate Cancer $375,000 total direct

PCF (LeBeau) VanBrocklin- Mentor 05/20/13 – 05/19/16
Prostate Cancer Foundation Young Investigator Award $75,000 direct year 1
Targeting Active Urokinase Plasminogen Activator for Therapy $225,000 total direct

RAP Shared Instrument Award (VanBrocklin) 07/01/15 – 06/30/16
UCSF $35,000 direct year 1
Gamma counter for Molecular Imaging Basic and translational research $35,000 direct

Contract (VanBrocklin/ Beattie) PI 01/09/15 – 01/08/17
GE Healthcare $54,685 direct year 1
Imaging TBI Neuroinflammation $54,685 total direct

Phelps Family Foundation (VanBrocklin) PI 10/01/15-09/30/16
$253,000 direct
Automated radiochemistry: New methodology development and reaction optimization $253,000 total direct

R01 CA154561 (PI: Seo, Youngho) Co-I 12/01/10-11/30/16
NIH/NIBIB $359,985 direct year 1
Pretherapy ^{124}I-MIBG Dosimetry for Planning ^{131}I-MIBG Neuroblastoma Therapy $2,121,797 total direct

R43 EB023782 (Moore, Sofie Biosciences) UCSF PI 09/01/16-04/05/17
NIBIB Sofie Biosciences $40,528 direct year 1
Fully automated enzymatic radiolabeling of biomolecules $40,528 total direct

RAP Award (Li, Franc) Co-I 07/01/15 – 06/30/17
UCSF $30,000 direct year 1
PET Radiopharmaceuticals for Tumor Necrosis Factor alpha (TNF-α) Imaging of Rheumatoid Arthritis $30,000 total direct

HHSN2612013000663C (Yaghoubi Cellsight Tech; VanBrocklin UCSF) 09/20/13-06/30/17
NIH/ Cellsight Technologies $94,606 direct year 1
Monitoring Anticancer Immune Response Non-invasively with [^{18}F]F-AraG PET Imaging $170,877 total direct

R01 CA116766 (Wilson) Co-Investigator 04/24/12-03/31/17
NCI $326,164 direct year 1
Ascorbate-based biomarkers for Predicting Radiation Responses in Prostate Cancer $1,304,000 total direct

R21 CA185689-01 (Craik) Co-Investigator 01/01/15 – 12/31/17
NIH $108,750 direct year 1
Non-invasive Differentiation of Benign Lesions from Aggressive $239,250 total direct

Pancreatic Cancer

NIH 4R00CA172695 (Evans) VanBrocklin – Mentor 01/01/13 - 08/31/17
NCI
Noninvasive measurement of oncogenic signaling pathways with 89Zr-transferrin

R21 AI114283 (Hamilton-Nilsen Iowa State, VanBrocklin MPI) 07/15/14-04/30/18
NIH $35,006 direct year 1
In Vivo reporters of gene expression $298,033 total direct

R44 CA192451-01 (Langton-Webster CTT; VanBrocklin UCSF) 3/15/15 -08/30/18
NIH/ CTT $154,427 direct year 1
Initial Clinical Evaluation of Prostate Cancer PET Diagnostic Agent $302,514 total direct

DoD W81XWH-14-1-0603 (VanBrocklin) 09/22/14 – 12/31/18
DoD $658,203 direct year 1
Development of a PET prostate specific membrane antigen $1,250,982 total direct
imaging agent: Preclinical translation for future clinical application

Contract (VanBrocklin) PI 01/15/17-10/14/18
Blade Therapeutics $69,670 direct year 1
Imaging approaches for fibrosis therapy development $69,670 total direct

Contract (McKnight/ VanBrocklin) 07/15/13 – 07/14/18
Valerian Pharmaceuticals, LLC $58,741 direct year 1
Imaging Analysis of Organ Distribution of Novel Antibody Constructs $117,398 total direct

RAP Award (Strigo) Co-I 02/01/17 – 01/31/19
UCSF $39,997 direct year 1
Mechanism of Opiodergic dysfunction underlying pain after mild TBI $39,997 total direct

W81XWH-17-1-0033 (Franc, Barcellos-Hoff) Co-I 02/01/17-01/31/19
DoD BCRP $ direct year 1
Dual benefit of TGF Inhibition on tumor control in the context of $ total direct
Radiotherapy for breast cancer brain metastases

U01 FD005517-01 (MPI Elizanov, Trace-Ability; VanBrocklin UCSF) 09/15/15-08/31/19
FDA $149,758 direct year 1
Mitigation of quality and compliance risks in radiopharmaceutical $256,116 total direct
production by implementation of an automated release testing technology

R44 CA192499 (Elizarov, Trace-Ability) UCSF PI 1/01/17-12/31/19
NIH SBIR $20,163 direct year 1
Analytical Methods for Automated Quality Control of Cancer PET $139,954 total direct
Imaging tracer – [F-18]FDG

RAP Award (VanBrocklin) PI 01/01/18–12/31/19
UCSF $50,000 direct year 1
First-in-human evaluation of tumor necrosis factor alpha molecular $50,000 total direct
imaging in patients with rheumatoid arthritis: advancing precision medicine

Contract (VanBrocklin) PI 11/05/15-11/04/18
BioLaurus, Inc. $62,044 direct year 1
Radiosynthesis and preclinical Imaging $62,044 total direct

I01-CX-001652-01 (Strigo) Co-I 04/01/18-03/31/22
VA CSR&D direct year 1
Examination of mu opioid mediated pain vulnerability in combat mild traumatic brain injury total direct

R43 CA235909 (MPI Elizanov, Trace-Ability; VanBrocklin UCSF) 09/18/19-08/31/20
NIH $46,438 direct year 1
Improving Availability of ImmunoPET Via Automation of Radiosynthesis and Quality Control of Antibody-Based Cancer Imaging PET Tracers on a Single Platform $299,987 total direct

109301-59-RGRL (Volberding) Co-I 01/01/16-3/31/20
American Foundation for AIDs Research $5,000,000 year 1
Institute for HIV Cure Research Module R $20,000,000 total

Contract (VanBrocklin) PI 10/01/14-04/30/20
Nektar $34,832 direct year 1
Radiosynthesis and biodistribution of Nektar compounds $34,832 total direct

Contract (VanBrocklin/ Deeks) PI 02/01/15 – 06/30/20
Merck $71,144 direct year 1
Quantification and anatomic localization of tissue penetration of Raltegravir using radiolabeling and PET/CT in HIV-infection $118,710 total direct

Contract (VanBrocklin) PI 03/01/19-2/20/20
Mantra Bio, Inc. $40,108 direct year 1
Imaging Exosomes $40,108 total direct

R01 CA194533-01 (Hetts) Co-I 06/01/15-05/31/20
NIH $489,326 direct year 1
Endovascular Chemofiltration: Optimizing Removal of Chemotherapeutics and Nanoparticles from the Blood to Reduce Toxicity

R41 NS105309 (Gerdes, Rio Pharmaceuticals; Rosi) UCSF PI 07/01/18-12/31/20
NIH SBIR $88,734 direct year 1
Astroglial EAAT2 Changes in Live TBI Brain Determined by PET Imaging $88,734 total direct

U01 NS092495 (MPI Thompson, Gerdes U Montana; VanBrocklin UCSF 07/01/15 – 07/31/21
NIH CounterACT $174,820 direct year 1
Molecular Imaging of Chemical Threats and Countermeasures $2,499,995 total direct

R44 EB023782 (Moore, Sofie Biosciences) UCSF PI 04/01/18-05/31/21
NIBIB/ Sofie Biosciences $250,000 direct year 1
Automated enzymatic radiolabeling of biomolecules $499,998 total direct

Contract (VanBrocklin) PI — 01/15/20-01/14/22
BioLaurus, Inc. — $36,106 direct year 1
Radiosynthesis and preclinical Imaging — $36,106 total direct

UM1AI126611-01 (Deeks) Co-I IRF2 — 07/14/16-6/30/22
NIH NIAID — $2,073,563 direct year 1
Delaney Aids Research Enterprise (DARE) to Cure HIV — $12,500,000 total direct
Assessment of the HIV reservoir in accessible lymphoid tissues from ART-suppressed HIV-infected subjects, focusing on the B cell follicle

Contract (VanBrocklin) PI — 10/1/20-9/30/22
RayzeBio, Inc. — $132,817 direct year 1
Peptide radiolabeling and pharmacokinetic evaluation — $132,817 total direct

R44 CA239461 (PI: Aggarwal) — 01/01/19-12/30/22
Cancer Targeted Technology, LLC
A Phase I Trial for Evaluation of the Safety, Pharmacokinetics, and 177Lu Radiation Dosimetry of CTT1403, a Small Molecule Inhibitor of Prostate Specific Membrane Antigen

R21 AI153749 (Chaumeil, Guglielmetti) Co-I — 07/01/20-06/30/23
NIH — $175,000 direct year 1
Imaging innate and adaptive immune response in MS using [18F]F-AraG PET and hyperpolarized 13C MRSI — $275,000 total direct

ADDF (Gerdes) UCSF-site PI — 08/01/19-12/31/22
ADDF — $88,583 direct year 1
Human PET Imaging Evaluations of the Astroglial L-Glutamate EAAT2 Tracer for Alzheimer's Disease and Related Dementias — $188,640 total direct

RAP Award (VanBrocklin, Aggarwal) PI — 06/05/22–06/05/23
UCSF — $50,000 direct year 1
Image guided nanomedicine delivery: Development of ^{89}Zr-Star-PEG-$(TLZ)_3$ — $50,000 total direct

TRDRP 25IR-0028 (St. Helen) Co-I — 10/01/16-03/31/23
UCOP/ Tobacco Research Program — $149,970 direct year 1
Effect of voltage on electronic cigarette aerosol deposition — $299,962 total direct

R21 AI152936 (VanBrocklin) PI — 01/12/21-12/31/23
NIH — $100,000 direct year 1
Molecular Imaging of persistent HIV: CD30 — $275,000 total direct

S10 OD034286 (Seo) Co-I — 02/01/23-01/31/24
NIH
High-throughput microPET/CT at UCSF Preclinical Imaging Core — $661,625 total direct

U01 NS112108 (Thompson) Collab. — 05/15/20 – 04/30/24
NIH CounterACT
Novel Antibody-Oxime Pairing to Reduce Circulating Organophosphate Levels — $900,000 total direct

Research Agreement (VanBrocklin) PI — 10/25/23 – 10/24/24
Enlaza Therapeutics, Inc — $24,917 Total
EnlazaTx Lu BioD Study

R01 EB029429 (Evans, Renslo) Co-I — 07/01/21 – 06/30/25
NIH NIBIB — $418,046 direct year 1
Developing a pretargeting strategy to detect Fe(II) for nuclear medicine applications

Research Agreement (VanBrocklin) PI — 06/13/24 – 04/01/25
Utter Therapeutics, Inc — $42,337 Total
UtterTx 001 Cu Labeling Imaging BioD Study

PEER REVIEWED MANUSCRIPTS

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2. Pomper, MG; Pinney, KG; Carlson, KE; Mathias, CJ; **VanBrocklin, HF**; Welch,MJ; Katzenellenbogen, JA. Target tissue uptake selectivity of three fluorine-substituted progestins: potential imaging agents for receptor-positive breast tumors. *Nucl Med Biol*, **17**: 309-314, 1990.
3. Pomper, MG; **VanBrocklin, HF**; Thieme, AM; Thomas, RD; Kiesewetter, DO; Carlson, KE; Mathias, CJ; Welch, MJ; Katzenellenbogen, JA. 11□-Methoxy-, 11□-ethyl, and 17□-ethynyl-substituted 16□-fluoroestradiols: receptor based imaging agents with enhanced uptake efficiency and selectivity. *J Med Chem,* **33**: 3143-3155, 1990.
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5. Pochapsky, SS; **VanBrocklin, HF**; Welch, MJ; Katzenellenbogen, JA. Synthesis and tissue distribution of fluorine-18 labelled trifluorohexadecanoic acids. Considerations in the development of metabolically blocked myocardial imaging agents. *Bioconjugate Chemistry,* **1**: 231-244, 1990.
6. **VanBrocklin, HF**. Synthesis and biological evaluation of fluorine-18 labelled estrogens and progestins as positron emission tomography imaging agents. Washington University, St. Louis (Ph.D. Thesis) August 1990.
7. Liu, A; Katzenellenbogen, JA; **VanBrocklin, HF**; Mathias, CJ; Welch, MJ. 20-[^{18}F]Fluoromibolorone, a Positron Emitting Radiotracer for Androgen Receptors: Synthesis and Tissue Distribution Studies. *J Nucl Med*, **32**: 81-88, 1991.
8. Dehdashti, F; McGuire, AH; **VanBrocklin, HF**; Siegel, BA; Andriole, DP; Pomper, MG; Katzenellenbogen, JA; Welch, MJ. Assessment of 21-[^{18}F]fluoro-16□-ethyl-19-norprogesterone as a positron-emitting radiopharmaceutical for the detection of progestin receptors in human breast carcinomas. *J Nucl Med*, **32**: 1532-1537, 1991.
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10. Pomper,MG; Kochanny, MJ; Thieme, AM; Carlson, KE; **VanBrocklin, HF**; Mathias, CJ; Welch, MJ; Katzenellenbogen, JA. Fluorine-substituted corticosteroids: Synthesis and evaluation as potential receptor-based imaging agents for positron emission tomography of the brain. *Nucl Med Biol*, **19**: 461-480, 1992.
11. French, AN; Napolitano, E; Welch, MJ; **VanBrocklin, HF**; Katzenellenbogen, JA. Synthesis, radiolabeling, and tissue distribution of 11□-fluoroalkyl- and 11□-fluoroalkoxy-substituted

estrogens: target tissue uptake selectivity and defluorination of a homologous series of fluorine-18-labelled estrogens. *Nucl Med Biol,* **20**: 31-47, 1993.

12. Katzenellenbogen, JA; Mathias, CJ; **VanBrocklin, HF**; Brodack, JW; Welch, MJ. Titration of the in vivo uptake of 16□-[^{18}F]fluoroestradiol by target tissues in the rat: competition by tamoxifen, and implications for quantitating estrogen receptors in vivo and the use of animal models in receptor-binding radiopharmaceutical development. *Nucl Med Biol,* **20**: 735-745, 1993.
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14. Kochanny, MJ; **VanBrocklin, HF**; Kym, PR; O'Neil, JP; Bonasera, TA; Welch, MJ; Katzenellenbogen, JA. Fluorine-18 labelled progestin ketals: Synthesis and target tissue uptake selectivity of potential imaging agents for receptor-positive breast tumors. *J Med Chem*, **36**: 1120-1127, 1993.
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2. CE Berkman, **HF VanBrocklin** "18F Labeled phosphoramidate peptidomimetic as prostate specific membrane antigen imaging agents." Provisional application filed November 12, 2010.

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5. **HF VanBrocklin**, JE Blecha, JM Gerdes, SK Ahmed "A High Specific Activity Fluorine-18 Labeling Chemical Route for an EAAT2 Tracer" Disclosed June 30, 2014 – not advanced

6. CR Drake, **HF VanBrocklin**, C Craik, N Sevillano "Site-specific radiofluorination of peptides with 8-[^{18}F]- fluorooctanoic acid catalyzed by lipoic acid ligase" U.S. Provisional Patent Application No. 62/261,015 filed November 30, 2015

7. DV Santi, GW Ashley, RR Flavell, **HF VanBrocklin**, N Meher "Prostate-specific membrane antigen targeted deep-tumor penetration of polymer nanodrugs and methods of use thereof" PCT/US23/73195 filed August 30, 2023 SF2022-152-2 PCT

8. **HF VanBrocklin**, JE Blecha, JM Gerdes "High Molar Activity Automated Radiosynthesis of an Excitatory Amino Acid Transporter-2 (EAAT2) Radiotracer" SF2024-013 submitted 07/19/2023; U.S. Provisional Patent Application No. 63/641,888 filed May 2, 2024

9. **HF VanBrocklin**, JE Blecha, ASY Ku "Method for direct radiometal/chelate tagging of biomolecules" SF2024-181 submitted 03/28/2024

10. MH Barcellos-Hoff, **HF VanBrocklin** "A TGFbeta Radiopharmaceutical and Theranostic" SF2024-230 submitted 06/11/2024 U.S. Provisional Patent Application No. 63/690,238 filed Sept 3, 2024

11. RR Flavell, R Sankaranarayanan, **HF VanBrocklin**, GW Ashley, D Santi "Microspheres bearing therapeutic radiopharamaceuticals for systemic and intratumoral therapy" SF2025-158

OTHER CREATIVE ACTIVITIES

2007 Chemistry Manufacturing and Control section for FDA Exploratory IND for AV157/AV51
2007 Standard Operating Procedures for [^{123}I]CNS1261, AV-157/AV-51
2008 Exploratory IND for [^{123}I]CNS1261 approved by FDA
2008 Chemistry Manufacturing and Control section for FDA Phase II IND AV-45
2008 Standard Operating Procedures for AV-45
2009 Standard Operating Procedures for FMISO
2009 Standard Operating Procedures for Methionine
2011 Exploratory IND for [^{11}C]DHE approved by FDA
2011 Exploratory IND for [^{124}I]MIBG approved by FDA
2014 IND for [^{68}Ga]DOTATOC approved by the FDA
2014 Exploratory IND for [^{18}F]FAraG approved by the FDA
2015 IND filed for [^{18}F]CTT1057 PSMA Imaging agent approved by FDA 08/16
2017 IND filed for [^{89}Zr]Certolizumab pegol approved by FDA 11/17
2018 IND filed for [^{89}Zr]VRC01 approved by FDA 06/18
2021 IND filed for [^{18}F]RP115 approved by FDA 05/21
2024 IND filed for [^{89}Zr]DFO-Star-PEG approved by FDA 02/25

ABSTRACTS

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285. Bidkar, AP; Wadhwa, A; Bobba, KN; Meher, N; Bidlingmaier, S; Egusa, E; Ali, U; Dhrona, S; Su, Y; he, J; Wilson, DM; Aggarwal, R; **VanBrocklin, HF**; Seo, Y; Chou, J; Flavell, RR. Alpha particle therapy for the treatment of metastatic tumors of prostate cancer. ISRS 2023, Honolulu, HI.

286. Wadhwa, A; Wang, S; Escobar, BP, Bidkar, AP; Bobba, KN; Meher, N; Dhrona, S; Wong, S; Wilson, DM; VanBrocklin, HF; Seo, Y; Liu, B; Witta, A; Flavell, RR. Molecular imaging and radiopharmaceutical therapy of Multiple Myeloma targeting CD46 using 89Zr and 225Ac-YS5. ISRS 2023, Honolulu, HI.

287. Meher, N; Ashley, GW; Wadhwa, A; Bobba, KN; Bidker, AP; Shuere, B; Wilson, DM; Seo, Y, Santi, DV, **VanBrocklin,HF**; Flavell, RR. StarPEG Nanocarriers for PSMA Targeted Radioligand Imaging and Therapy. ISRS 2023, Honolulu, HI.

288. Meher, N; Ashley, GW; Bidker, AP; Wadhwa, A; Bobba, KN; Dhrona, S.; Fountain, SD; Beckford-Vera, D; Fong, COY; Wilson, DM; Seo, Y, Santi, DV, **VanBrocklin,HF**; Flavell, RR. StarPEG Nanocarriers for Prostate Cancer Imaging and Drug Delivery. ISRS 2023, Honolulu, HI.

289. John M. Gerdes, PhD1, Chih-kai Chao, PhD1, Joseph Blecha, MS2, Ilona Polvoy, MD2, Ryan Nillo, BA2, Youngho Seo, PhD2, Henry F. VanBrocklin, PhD2, David M. Wilson, MD, PhD2, and John R. Forsayeth. First-in-human PET Imaging Biodistribution Studies of Methyl N4-(7-[18F]fluoro-9H-fluoren-2-yl)asparaginate Tracer RP-115 in Healthy Volunteers. Brain & Brain PET 2023, Brisbane Australia.

290. Uttam M. Shrestha, Jelena Levi, Heedon Chae, Joseph Blecha, **Henry VanBrocklin**, John Sunwoo, A. Dimitrios Colevas, Youngho Seo. A novel mitochondrial-targeted [^{18}F]F-AraG positron emission tomography (PET) biomarker for early diagnosis and monitoring of cardiotoxicity. SNMMI 2023 Chicago, IL. J. Nucl. Med. 2023.

291. Timothy Henrich, Michael Peluso, Lilian Cohn, Robert R. Flavell, , Amelia Deitchman, Wally Koch, Maya Aslam, Kofi Asare, Jessa Castillo, Hema Krishnan, Sadie Munter, Dylan Ryder, Steven Deeks, **Henry VanBrocklin**. ImmunoPET Imaging of Tissue HIV-1 Activity in People with HIV Participating in an Antiretroviral Therapy Interruption Study SNMMI 2023 Chicago, IL. J. Nucl. Med. 2023.

292. Henry F. VanBrocklin, Michael J. Peluso, Robert R. Flavell, Yingbing Wang, Dylan Ryder, Youngho Seo, Uttam Shrestha, Jelena Levi, Steven G. Deeks, Kofi Asare, Maya Aslam, Walter

Koch, Timothy J. Henrich. FAraG PET identifies T cell activation in patients with Long COVID, WMIC 2023 Prague, Czech Republic.

293. Demoin, DW; Delmau, L; Penchoff, D; Sanders, V; Slaton, J; **VanBrocklin, H**; Degraffenreid. Panel: Do I Have Useful Skills? – How to find your fit with the job that is advertised. ACS Fall National Meeting 2023, San Francisco, CA.

294. Caroline Guglielmetti, Jelena Levi, Rebecca Shuere, Joseph Blecha, **Henry F. VanBrocklin**, Myriam M. Chaumeil. [^{18}F]F-AraG PET imaging of activated T cells differentiates between acute and chronic lesions in a multiple sclerosis model EMIM March 2024 Porto, Protugal.

295. Jelena Levi[1*]**,** Juliet Packiasamy[1], Lyna Huynh[1], Hilda Cabrera[1], Marisa Ruzevich[1], Joseph Blecha[2], Tony Huynh[2], Sung-Min An[3], John Yoon[3], **Henry F. VanBrocklin[2],** Hee-Don Chae[1]. ^{18}F-AraG accumulates in metabolically active brown and bone marrow adipose tissue. EMIM March 2024 Porto, Protugal.

296. Timothy Henrich, Robert Flavell, Michael Peluso, Kofi Asare, Maya Aslam, Emily Fehrman, Meghann Williams, Viva Tai, Rebecca Hoh, Youngho Seo, Jelena Levi, Aruna Gambhir, Steven Deeks, **Henry VanBrocklin**. [18F]F-AraG PET Imaging Reveals Unique Tissue T Cell Activation Patterns Across HIV Infection States. CROI March 2024 Denver CO.

297. **Henry F. VanBrocklin**, Robert Flavell, Youngho Seo, Jelena Levi, Steven Deeks, Timothy Henrich. Imaging infectious diseases: Molecular imaging approaches to visualizing HIV and Long COVID ACS Spring National Meeting 2024 New Orleans, LA.

298. **VanBrocklin, HF**. Many flavors of radiopharmaceutical separations: Preparation of safe and effective molecular imaging radiotracers ACS Spring 2024 New Orleans, LA.

299. Bidkar, A; Wadhwa, A; **VanBrocklin, HF;** et al. CD46 targeted alpha particle therapy for the treatment of metastatic prostate cancer tumor models. SNMMI Toronto, CN. J. Nucl. Med. 2024

300. Zheng, Q-H; Wang, M; Blecha, J; Scarpelli, ML; **VanBrocklin, H**; Snyder, SE. Automated radiosynthesis of [18F]FAraG, a T-cell activation radiotracer, using an Elixys 18F-radiosynthesis module. SNMMI Toronto, CN. J. Nucl. Med. 2024

301. Levi, J; Guglielmetti, C; Henrich, TJ, Yoon, J; Gokale, P; **VanBrocklin, H**; Chae, H. Simultaneous imaging of activated lymphocytes and adipocytes with [18F]F-AraG reveals association between neuroinflammation and brown- and bone marrow adipose tissue. SNMMI Toronto, CN. J. Nucl. Med. 2024

302. Wadhwa, A; Bobba, KN; Mandal, K; Bidkar, A; **VanBrocklin, H**; Seo, Y; Adams, JJJ; Sidhu, S; Witta, A; Flavell, RR. Development of Theranostic for Acute Myeloid Leukemia (AML) targeting activated conformation of integrin 2. SNMMI Toronto, CN. J. Nucl. Med. 2024

303. Bobba, KN; Wadhwa, A; Bidkar, A; **VanBrocklin, H**; Liu, B; Flavell, RR. Evaluation of 225Ac/134Ce-Macropa-PEG4-YS5 as a novel theranostic pair for prostate cancer therapy. SNMMI Toronto, CN. J. Nucl. Med. 2024

304. Bobba, KN; Wadhwa, A; Bidkar, A; Cruz, LAG; Seo, Y; **VanBrocklin, H**; Flavell, RR. Development of ^{134}Ce-PSMA-617 for Auger electron therapy and PET imaging of prostate cancer. SNMMI Toronto, CN. J. Nucl. Med. 2024

305. Meher, N; Ashley, GW; Wadhwa, A; Bobba, KN; Bidkar, A; Seo, Y; Flavell, RR; **VanBrocklin, H**. StarPEG nanocarriers: A versatile nanoplatform for tumor imaging and therapy. SNMMI Toronto, CN. J. Nucl. Med. 2024

306. Anthony Ku, Joseph E Blecha, Youngho Seo, Timothy Henrich, **Henry VanBrocklin**. Imaging Long COVID viral reservoirs: Development of spike protein targeting immunoPET agents. WMIC 2024 Montreal, Canada.

307. **Henry VanBrocklin**, Robert Flavell, Michael Peluso, Kofi Asare, Maya Aslam, Emily Fehrman, Meghann Williams, Viva Tai, Rebecca Hoh, Jelena Levi, Youngho Seo, Steven Deeks, Timothy Henrich. T cell activation visualized with [^{18}F]F-AraG demonstrates distinct patterns relative to HIV infection states. WMIC 2024 Montreal, Canada.

308. Danny (Hoi Tsun) Chu, Lance Kuo-Esser, Denis R Beckford-Vera, Robert R Flavell, Youngho Seo, **Henry VanBrocklin**, Timothy J Henrich, Amelia N Deitchman. Imaging-based Anti-HIV Antibody Exposure in Anorectal Tissue Is More Closely Linked to Protective Efficacy During Clinical Prevention Trials. Am Coll. Clin. Pharmacol. Annual Meeting September 2024 Bethesda MD.

309. Caroline Guglielmetti, Madison Heady, Jelena Levi, Rebecca Shuere, Margaret Morton, Nikki Fettig, Dong Zhou, Joseph Blecha, **Henry F. VanBrocklin**, Myriam M. Chaumeil. Imaging T cell response during disease progression in the EAE model using whole-body [^{18}F]F-AraG PET imaging. ECTRIMS Copenhagen, Denmark 2024.

310. Timothy J. Henrich, Michael J. Peluso, Robert R. Flavell, Yingbing Wang, Dylan Ryder, Youngho Seo, Steven G. Deeks, Kofi Asare, **Henry F. VanBrocklin**. [18F]F-AraG PET Imaging Reveals Increased Gut T Cell Activation in People with Cardiopulmonary Long COVID. CROI San Francisco, 2025.

311. Madison Heady[1], Zhimin Xing[1], Joseph E. Blecha[2], Lin Qiu[1], Nicholas D. Vidas-Guscic[1], Myriam M. Chaumeil[2,3], Zhude Tu[1], **Henry F. VanBrocklin**, Caroline Guglielmetti. PET imaging of the astroglial excitatory amino acid transporter 2 (EAAT2) in a multiple sclerosis model EMIM Bilbao Spain 2025.

312. Dakanali, M; Scott, PHJ; **VanBrocklin, HF**; Zigler, SS. Assessment of PET Drug Adverse Events over the Last Half Century, SNMMI New Orleans, 2025.

313. Zigler, SS; Dakanali, M; Scott, PHJ; **VanBrocklin, HF**. Sterility Assurance of Manufactured PET Drugs, SNMMI New Orleans, 2025.

314. Anil P. Bidkar,[1] Scott Bidlingmaier,[2] Anju Wadhwa,[1] Kondapa N. Bobba,[1] Shubhankar Naik, [3] Athira Raveendran,[1] Tal Chamdi,[1] **Henry F. VanBrocklin**,[1] Youngho Seo,[1] Bin Liu,[1] Robert R. Flavell. Combination of CD46 Targeted Antibody Drug Conjugate and Radioimmunotherapy Agent for the Treatment of Prostate Cancer, SNMMI New Orleans, 2025.

315. Zhimin Xing [1], Lin Qiu [1], Caroline Guglielmetti [1], Joseph E. Blecha[2], **Henry F. VanBrocklin** [2], and Zhude Tu. Radiosynthesis optimization for [^{18}F]RP115, a promise excitatory amino acid transporter 2 radiotracer. ISRS Gold Coast AU, 2025.

316. Raissa Ainsworth[1], Melissa Latter[1], Stephen Tapper[1], Michael O'Sullivan[2], John M. Gerdes[3], John R. Forsayeth[3], Chih-Kai Chao[3], David M. Wilson[4], Robin Ippisch[4], Jessa Castillo[4], Scott Beck, **Henry F. VanBrocklin**, Joseph E. Blecha. Development of [18F]RP115 for clinical imaging of EAAT2 in neurodegenerative diseases. ISRS Gold Coast AU, 2025.

317. Anju Wadhwa, Haley Johnson, Kamal Mandal, Kondapa Naidu Bobba, Anil P. Bidkar, Ellis Mayne, Athira Raveendran, Sham Rampersaud, Amrik Kang, Megha Basak, Juwita Huebner, Marina Lopez Alvarez, Sanghee Lee, Veronica Steri, David M. Wilson, **Henry F. VanBrocklin**, Youngho Seo, Jarrett J. Adams, Sachdev S. Sidhu, Arun P. Wiita, Robert R. Flavell. Selective treatment of acute myeloid leukemia targeting the activated conformation of integrin beta2 with [225Ac]Macropa-PEG4-7065. ISRS Gold Coast AU, 2025.

RESEARCH PROGRAM

Since the submission of my packet in May 2022 for my last advancement which was effective on 01 July 2023, I have accomplished the following: 24 peer-reviewed manuscripts and 2 book chapters have been published and 24 abstracts presented. I received funding on 10 grants from NIH (8); Dept of Energy (1); Alzheimer's Drug Discovery Foundation (1) and American Foundation

for Aids Research (1). I initiated research under two (2) industry contracts. I completed research on 7 NIH grants, 1 DoD grant, and 4 industry contracts. I was honored with the 2022 Western Pioneer Award from the Western Regional Society of Nuclear Medicine in recognition of his decades of service and lifelong positive impact on Nuclear Medicine and the Western Region SNMMI. I was also honored with the 2023 Paul C. Abersold Award from the Society of Nuclear Medicine and Molecular Imaging in recognition of outstanding achievement in basic science applied to nuclear medicine or molecular imaging.

Herein I briefly highlight my current research directions.

Imaging HIV Latent Reservoirs (FAraG).

We have initiated a program in collaboration with UCSF HIV investigators to develop imaging agents to visualize the reservoirs of latent HIV. A major obstacle to HIV eradication is the presence of infected cells that persist despite suppressive antiretroviral therapy (ART). HIV largely resides outside of the peripheral circulation, and thus, numerous anatomical and lymphoid compartments that have the capacity to harbor HIV are inaccessible to routine sampling. As a result, there is a limited understanding of the tissue burden of HIV infection or anatomical distribution of HIV transcriptional and translational activity. Novel, non-invasive, in vivo methods are urgently needed to address this fundamental gap in knowledge. We have completed the pre-clinical development, animal testing, and first-in-human PET-magnetic resonance (MR) imaging studies of both [18F]F-AraG and 89Zr-VRC01 and have generated key preliminary data from 17 HIV uninfected and infected individuals, including those who are viremic or ART suppressed. Thus far, we are able to identify differences in both tissue-based regions of HIV gp120 expression along with residual T cell activation between low-level viremic and uninfected individuals (89Zr-VRC01) and between ART suppressed and uninfected participants ([18F]F-AraG). We continue to gather data on 89Zr-VRC01 in viremic and ART suppressed patients and image using the EXPLORER total-body PET at UC Davis. In the next phase of evaluation we will measure the temporal dynamics of persistent HIV infection in viremic and ART-suppressed individuals, and in participants enrolled in existing HIV clinical studies involving early ART initiation and analytical treatment interruption. We will also compare 89Zr-VRC01 and [18F]F-AraG uptake with blood and in situ tissue HIV burden and viral transcriptional activity to validate HIV-associated tracer uptake.

We recently labeled brentuximab-vedotin (BV), an antibody drug conjugate, that targets CD30, a non-viral marker overexpressed in HIV positive infected cells. Preclinical data has been collected to support an IND submission for ^{89}Zr-BV. We will be moving forward to translate this agent into humans.

Cancer Imaging and Radiotherapy (StarPEGs/ Theranostics with Rob)

There are an increasing number of nanomedicines that have been approved by the FDA for a broad range of clinical indications including cancer. The delivery and accumulation of these nanomedicines to solid tumors is largely driven by the enhanced permeability and retention (EPR) effect. In solid tumors a permeable vasculature allows nanomaterials ≥ 12 nm to extravasate into the tumor and dysfunctional lymphatic drainage reduces the efflux of the nanomaterials leading to tumor accumulation relative to surrounding normal tissue. With our collaborators at Prolynx, we developed zirconium-89 radiolabeled 40kDa, 20 nm, 4-arm star-PEG polymer analogs as surrogates for PLX-038/ PLX-038A, 4 arm star-PEGs with 4 conjugated SN-38 molecules, the active metabolite of the widely used cancer agent irinotecan. (Beckford-Vera et al., *Mol Cancer Ther.* 19:673-679, 2020) We have also developed a zirconium-89 labeled 4 arm star-PEG conjugated with the PARP inhibitor talizoparib. Preliminary studies have shown remarkable tumor uptake in different tumor models serving as a basis for the further development of image guided drug delivery applications. The star-PEGs may also serve as a platform for the delivery of therapeutic radioisotopes and the development of theranostics to image and treat cancer.

Excitatory Amino Acid Transporter 2 (EAAT2) (Human Imaging)

L-Glutamate (L-Glu) is the major neurotransmitter in the CNS and is responsible for excitatory synaptic-astrocyte tripartite cellular events. The excitatory amino acid transporter 2 (EAAT2, GLT-1) is expressed in the CNS primarily on astrocytic cell membranes and clears over 90% of synaptic L-Glu. Reduction of EAAT2 density (removal from cell membrane and/or loss of cell type) is thought to dysregulate L-Glu homeostatic concentrations, resulting in deleterious tripartite synaptic events that promote neuron death and astrocyte cell loss. We developed a novel [^{18}F]-labeled PET imaging tracer, RP-115, to evaluate changes in astrocytes in healthy versus cognitively impaired Alzheimer's Disease (AD) patients by quantitative PET imaging of the excitatory amino acid transporter 2 (EAAT2) that is significantly down-regulated in select cerebral regions of AD brain. We received approval of an FDA IND to evaluate this new agent in AD subjects and aged-matched healthy controls.

Rheumatoid Arthritis [remove for now?]

An important therapeutic goal in rheumatoid arthritis (RA) is to control inflammation, prevent joint deformities and subsequent disability. One class of RA biologic therapies targets tumor necrosis factor-alpha (TNF-α), thus inhibiting its pro-inflammatory actions. We radiolabeled, with zirconium-89, Certolizumab pegol (CZP; CIMZIA®), a therapeutic monoclonal antibody that binds to soluble and membrane-bound TNF-α. Evaluation of the agent in a mouse transgenic model of RA showed increasing uptake of the tracer in the mouse joints with age and correlated with the presence of TNF-α. An FDA IND was approved. We are currently engaged with colleagues at UC Davis to perform first-in-human ^{89}Zr-CZP imaging in rheumatoid arthritis patients using the total-body EXPLORER PET.

5 MOST SIGNIFICANT PUBLICATIONS.

LeBeau, AM; Murphy, ST; Hann, BC; Warren, RS; Delos Santos, R; Kurhanewicz, J; **VanBrocklin,' HF**; Craik, CS. Imaging Cancer-Associated Proteolytic Activity with Human Antibodies. *PNAS*, 110:93-98, 2013. PMCID: PMC3538269

I was co-mentor of Dr. Aaron Lebeau, a postdoctoral fellow shared between the Craik and VanBrocklin laboratories. I designed the labeling strategy for the preparation of the antibody tracers. I contributed to the experimental design for the evaluation of the labeled antibodies. Based on the imaging and cell data for this tracer I proposed the mechanism that defined which tumors are detected by the labeled antibody.

Dannoon, S; Ganguly, T; Cahaya, H; Geruntho, JG; Hopkins, MR; Regan, M; Blecha, JE; Drake, CR; Jivan, S; Barinka C; Berkman, CE; Jones, EF; **VanBrocklin, HF**. Structure-activity relationship of ^{18}F-labeled phosphoramidate peptidomimetic PSMA-targeted inhibitor analogues for PET imaging of prostate cancer. *J Med. Chem.*, 59:5684-94, 2016. 10.1021/acs.jmedchem.5b01850. PMCID PMC6016545

Dr. Dannoon was a postdoctoral fellow in my laboratory whom I mentored. I had an established collaboration with Dr. Clifford Berkman at Washington State University to develop imaging agents for prostate cancer imaging. I designed the radiolabeling approach that was used to prepare the series of compounds. I interpreted results of the radiochemistry, imaging and distribution studies with Dr. Dannoon. I assisted in preparation of the manuscript.

Ronald, JA; Kim, B-S; Gowrishankar, G; Namavari, M; Alam, IS; D'Souza, A; Nishikii, H; Chuang, H-Y; Illovich, O; Lin, C-F; Reeves, RE; Shuhendler, A; Hoehne, A; Chan, C; Baker, J; Yaghoubi, S; **VanBrocklin, HF**; Hawkins, RA; Franc, BL; Jivan, S; Slater, JB; Verdin, EF; Gao, KT; Benjamin, J; Negrin, RS; Gambhir, SS; A PET Imaging Strategy to Visualize Activated T Cells in Acute Graft-Versus-Host Disease Elicited by Allogenic Hematopoietic Cell Transplant. *Cancer Research*, 77(11):2893-2902, 2017. PMCID PMC5505323

Dr. Sam Gambhir, colleague from Stanford University, and Aruna Gambhir, CEO Cellsight Technologies, approached me to conduct the first-in-human imaging studies. I established the automated preparation of [^{18}F]FAraG at UCSF. I set the quality specifications for the quality control

testing of the [^{18}F]FAraG. I helped to prepare the Chemistry Manufacturing and Control section of the FDA IND. Addressed questions from the FDA and shepherded the protocols through IRB and RSC review. I oversaw the first-in-human imaging in healthy volunteers. I worked with Drs. Yaghoubi and Gambhir on the preparation of this manuscript.

Behr, SC; Aggarwal, R; **VanBrocklin, HF;** Flavell, RR; Gao, KT; Small, EJ; Blecha, JE; Jivan, S; Hope, TA; Simko, JP; Kurhanewicz, J; Noworolski, SM; Korn, NJ; Delos Santos, R; Cooperberg, MR; Carroll, PR; Nguyen, HG; Greene, KL; Langton-Webster B; Berkman; CE; Seo, Y. First-in-Human Phase 1 study of CTT1057, a Novel ^{18}F Labeled Imaging Agent with Phosphoramidate Core Targeting Prostate Specific Membrane Antigen in Prostate Cancer. *J Nucl. Med.,* 60(7):910-916, 2019; doi: 10.2967/jnumed.118.220715. [Epub 2018 Nov 21] PMCID PMC6604687

I assisted Drs. Behr and Aggarwal in the translation of the [^{18}F]fluoro-phosphoramidate PSMA imaging agent developed in my laboratory. I oversaw the automation of the radiochemistry. I prepared Chemistry Manufacturing and Control documentation and supported the submission of the FDA IND. Addressed FDA queries and supported IRB and RSC submissions. I worked with Drs. Behr and Aggarwal to prepare this manuscript. Featured translational science article in the July 2019 Journal of Nuclear Medicine.

Beckford-Vera, DR; Flavell, RR; Seo Y; Martinez-Ortiz, E; Aslam, M; Thanh, C; Fehrman, E; Pardons, M; Kumar, S; Deitchman, AN; Ravanfar, V; Schulte, B; Wu, IK; Pan, T; Reeves, JD; Nixon, CC; Iyer, NS; Torres, L; Munter, SE; Hyunh, T; Petropoulos, CJ; Hoh, R; Franc, BL; Gama, L; Koup, RA; Mascola, JR; Chomont, N; Deeks, SG; **VanBrocklin, HF**; Henrich, TJ. First-in-human ImmunoPET Imaging of HIV-1 Infection using ^{89}Zr-Labeled VRC01. *Nature Comm.* 13:1219, 2022 [Epub 2022 Mar 9]. PMCID PMC8907355

Dr. Tim Henrich and I established the UCSF HIV PET imaging program. I worked with Dr. Beckford-Vera, Asst. Professional Researcher in my laboratory, to radiolabel the VRC01, perform preclinical testing and gather data to support FDA IND. With Dr. Beckford-Vera we prepared the Chemistry Manufacturing and Control Documentation for the FDA IND application. I completed the FDA IND with Dr. Henrich, addressed FDA questions and supported IRB and RSC submissions. With Dr. Henrich and Beckford-Vera, I prepared and revised this manuscript.