BRIAN R. MOYER
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Education:

M.S. **Comparative Pharmacology and Toxicology**, 1986
Department of Pharmacology and Howard Hughes Medical Institute (HHMI)
University of California Medical Center (UCSF), San Francisco, CA 94143

M.S. **Occupational and Environmental Toxicology**, (GPA: 4.0/ 4.0), 1982
College of Professional Studies, Department of Biological Sciences
University of San Francisco, San Francisco, CA 94117
Thesis: Toxic manifestations elicited by parathion on cerebral and myocardial glucose metabolism as examined by the 2-deoxyglucose method

B.A. **Biology** (emphasis: Developmental Biology), 1968
Department of Biological Sciences
San Francisco State University, San Francisco, CA 94123

Board Certifications and Eligibilities:

Board Certified: Nuclear Medicine Technology, CNMT (1989); CNMT Emeritus (2017)
Board Eligible: American Board of Toxicology, DABT

FDA filings/approvals: a lead contributor to 10 drug/biologic approvals

Therapeutics: 3 BLA approvals
BLA **rhIL-2** (1992) – rh-Interleukin-2 (rhIL-2, Proleukin™) for kidney cancer; Cetus Corp. Diagnostics: 6 NDAs (6 approvals) /1 CTD (1 approval); **BARDA-associated Project Team Medical Countermeasure (MCM) approvals** (Project role: radiation injury SME; Pharmacologist/Animal Model Developer): G-CSF (Neupogen; March 2015), PEG-G-CSF (Neulasta, Nov 215) and GM-CSF (Leukine; April 2018)
Approved Drug Products: **TeslaScan™** (Mn-DPDP, liver imaging agent, Nycomed); **AcuTect™** (bibapcitide, Tc-99m imaging of DVT, IIb/IIIa receptor on activated platelets, Diatide, Inc, 1998); **NeoTect™** (depreotide; Tc-99m imaging of lung cancer SST receptors, Diatide, Inc, 1999); **VasoVist™** MS-325 (gadofosveset, MR contrast agent for vascular structures, CTD also approved in EU in 2006). Through BARDA: G-CSF approval for post nuclear event ARS (neutropenia)
Devices: Design, testing and filing of the Rb-82 generator (PET diagnostic); Lawrence Berkeley Lab (1980-85).
IND filings: BARDA Project Teams (5); Cetus Corporation (1): rh-M-CSF; Nycomed-Salutar (1): **S-095**: Mn-DPDP, **TeslaScan™**; Diatide, Inc. INDs (7): **P280** imaging acute deep vein thrombosis (FDA approved; **Acutect™**); **P322H** for imaging of occult infection - phase I-II; **P483H** for imaging of occult infection - phase I-II; **P773** somatostatin analog for imaging

atherosclerosis – Phase I; **P829** somatostatin analog for detection/imaging of lung cancer (FDA approved; **NeoTect™**); **P2045** Re-188 peptide radiotherapeutic for lung cancer – currently in Phase I with Berlex/Schering AG); **P424** for imaging pulmonary embolism – Phase I., EPIX Pharmaceuticals: **EP-2104R** an MRI contrast agent for thrombosis imaging; BARDA (2007-2016) part of a team with NIAID and the Univ. of Maryland for approval of G-CSF (Neupogen®) for neutropenia resulting from exposure to ionizing radiation (2015).

Employment History:

Current Status: Rehired by BARDA (HHS; Washington DC) as a Federal Employee (SGE) in the BARDA CBRN Division as a Subject Matter Expert in the area of Radiation and Chemical Injury Countermeasure Development **;** FDA/DOD/CDC/NIH interagency activities

Jan 2007 – Present: BRMoyer & Associates, LLC, President and Owner, 17 Trailside Dr, Amherst, NH 03031

Independent consulting company for pharmacokinetic/toxicokinetic (DMPK and PK/PD) studies (drugs and biologics/cell therapies), radiation biology, clinical sciences and trial management, multiple imaging platforms (MR, fMRI, SPECT, PET, CT, Optical, autoradiography), receptor-based technologies, non-clinical and clinical product development.

Subcontractor in imaging platform utility/applications, animal models, radiobiology, and pharmacokinetics/systems pharmacology; Subcontracted by Tunnell Consulting Inc., Government Services Div., Bethesda, MD; from Jan 2007 – July 2016 as Senior Science Advisor, Subject Matter Expert (SME)/Program Manager for Chemical Threats and Acute Radiation Syndrome (ARS) Diagnostics and Therapeutics, CBRN Medical Countermeasures, Biomedical Advanced Research and Development Authority (BARDA), Office of Assistant Secretary for Preparedness and Response (ASPR), Health and Human Services (HHS) Washington DC. Serving as a Science Advisor for multiple contracts covering the development of small molecule drug through cell based therapies as medical countermeasures intended for chemical or radiologic injury and isotope decorporation.

Retired from Government Service July 2016 as a SME contracted through Tunnell Government Services, Bethesda, MD

Key responsibilities within HHS/ASPR/BARDA (www.phe.gov; 2007-July 2016) included:

Tasks: Scientific oversight of advanced research and development of CBRN (chemical, biologic, radiologic and nuclear) medical countermeasures (MCMs), BARDA/FDA liaison for path to approval/licensure and acquisition for the Strategic National Stockpile (CDC/SNS) for chemical and radiation injury as well as thermal burns, in the event of a catastrophic chemical, nuclear or radiologic event. Integrated Project Team (IPT) member (Blood and Tissue Working Group and Rad-Nuc Working Group) with FDA (OCET and OCTEC; Offices of Counter Terrorism and Emergency Coordination), DoD (incl. CBMS and AFRRI), NIH/DAIT/NIAID. Proposal reviews (Technical Evaluation Panels) for NIH, BARDA, DoD, contract cost and budget analyses relative to the Independent Government Cost Estimates (IGCEs), product life cycle management costs and emergency acquisition for the CDC/SNS (Strategic National Stockpile) and Concept of Operations (CONOPs). Contract values total: >$500M.

Write Acquisition Strategies and Acquisition Plans, Requests for Proposals, Broad Agency Announcements and Requests for Information (RFI) /Sources Sought Notices (SSN), Request for Task Orders (RTORs) as well as content of evaluation factors for RFPs (Request for Proposals) and BAAs (Broad Agency Announcements) contracts, evaluate RFP/BAA responses, and create technical evaluations. Provide basis for statements of work (SOW), Project plans (GANTT charts) and develop cost estimate budgets (Independent Government Cost Estimates, IGCE) for proposed medical countermeasure advanced development studies/tasks and acquisitions.

Conduct scientific advisory committees and perform financial analyses to develop change orders and participate in their execution with sponsors. As one of the first to BARDA in the Rad-Nuc capacity I was responsible for the organization and lead of Project Coordination Teams (PCT) composed of other government agency representatives (incl., FDA, DoD, DHS, CDC, NIH (DAIT/NIAID), VA, others) for chemical/radiologic countermeasures and dosimetry and serve on other CBRN (chemical, biological, radiologic/nuclear) advisory panels within HHS.

During contract oversight, establish and maintain key deliverable timelines and report on status vs. timelines and budgets, maintain key systems to adequately track progress on budgets and timelines.

In collaboration with team members, continue to modify and refine the tools used for proposal development, including the metrics, bid development grid, contents of statement of work, contents of executive documents, and senior management communications.
(brian.moyer@hhs.gov; phone: Office: 202-260-1594).

2005-2007 **Director, Clinical Imaging Sciences, Certus International Inc. & Certus Imaging LLC**, 10 Corporate Dr., Bedford, NH 03110 (and offices in St. Louis, MO; a full service CRO)

Consultant services for contracted **clinical and non-clinical** projects, **pharmacokinetic study design and analysis** (DMPK), and **medical image mathematics and analysis** (PET/SPECT/MR/CT, etc). Responsible for the oversight of scientific detail, protocols and technical assurance for contracted pharma and biotech companies. Conduct audits of clinical imaging facilities (good imaging practices; GIP) and provide guidance on project goals & objectives with respect to FDA guidance, good clinical practice (GCP) and scientific rationale; business development of clinical and non-clinical services.

2001-2005 **Director, International Project Mgmt & Director, Clinical Pharmacology, EPIX Medical, Inc.** (now EPIX Pharmaceuticals), 71 Rogers St, Cambridge, MA 02142

In collaboration with Schering AG (Berlin, Germany) and their US subsidiary Berlex, Inc (Monteville, NJ; Schering AG-Berlex is now Bayer) perform the duties of **international project management**, i.e. coordinating the timely submission of an e-NDA for MS-325 and to organize the projects in the pipeline for timely IND submissions. Project management duties covering US, European and South American Phase 2-3 clinical trials; contact for CROs and internal coordination. In addition, responsible for the **clinical pharmacology** effort for MS-325 (e-NDA Item 6) and the analysis and report writing of seven pharmacokinetic studies and implications of drug interactions.

2000 – 2001 **Director, Human Pharmacology, Radiopharmaceuticals, Diatide, Inc.**
9 Delta Dr., Londonderry, NH; a subsidiary of Schering AG; Berlex, Inc, Monteville, NJ

Design and conduct Phase I clinical trials emphasizing pharmacokinetics and radio-dosimetry (Tc 99m P2045 and Re 188 P2045) and post-marketing Phase IV studies of AcuTect™ and NeoTect™ in normal, renal-impaired, geriatric, hepatic-impaired subjects. Oversight, image processing and design of the blinded read for a Phase III thrombosis imaging trials in Europe; clinical site managements in Germany, Poland, UK and Belgium) as well as conduct and oversight of clinical image readings at the DIGIMA Lab, Schering AG and Londonderry, NH facilities.

1998 - 2000 **Director, Imaging Technology Development, Diatide, Inc.**

9 Delta Dr., Londonderry, NH; a subsidiary of Schering AG; Berlex, Inc, Monteville, NJ
Management and IT coordinator of the Diatide Imaging Lab for digitized x-ray (chest/venograms, etc) and nuclear scans (SPECT and planar) for clinical trial evaluations of AcuTect™ and Neotect™; Coordination of clinical trial image data with contracted image analysis CRO (BioImaging Inc.); Development of image interpretive (reading criteria) techniques for AcuTect™ and NeoTect™; Phase I pharmacokineticist, in-house PK-PD/drug metabolism and biodistribution non-clinical program; Asst. RSO, 1998-2001.

1992 - 1998 **Director, Pharmacology and Toxicology, Diatide, Inc.**

Diatide, Inc. (*formerly Diatech, Inc*., 1990-1996), 9 Delta Drive, Londonderry, NH 03053
Lead pharmacologist for R&D program of peptide radiodiagnostics and therapeutics. Develop and execute contract research proposals with CROs. Fields of research programs included: cancer, infection, vascular diseases (thrombosis and atherosclerosis) and bone; Chairman, Institutional Animal Care and Use Committee (IACUC, 1994-1998); Radiation Safety Officer (RSO; 1994-1998)

1991 - 1992 **Group Leader, Pharmacology and Toxicology, Salutar, Inc.**

Salutar Inc., Sunnyvale, CA 94168; a subsidiary of Nycomed Inc
Directed the Pharm/Tox program for development of magnetic resonance (MR) contrast agents such as their liver imaging agent S-095 (Mn-DPDP; TeslaScan™).

1986 - 1992 **CETUS Corporation (*now Chiron, Corp*.), Emeryville, CA 94608**

Pharmacokinetics Group; Biodistribution and pharmacokinetics of recombinant proteins (rhIL-2, rhβ-INF, rhM-CSF), MAbs and peptides; whole body autoradiography and imaging; recombinant protein/peptide radiochemistry; developed *in-situ* PCR for histologic autoradiography.

1970 - 1985 **Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720**
Principal Research Associate, Research Medicine Group

1976-1985: Nuclear medicine drug and camera development – human and animal studies; animal imaging including canine cardiac models, SPECT methods, positron emission tomography (PET) with C-11 methionine and choline in cardiac PET, F-18 deoxyglucose in neurologic disorders (Alzheimer's disease, brain tumors, schizophrenia, and cardiology); heavy-ion accelerated particle beam cancer radiotherapy / dosimetry; magnetic field toxicology; hyperthermia treatment of spontaneous cancers in dogs; 1970-1976: Occupational medicine trace metal analysis for Medical Services and Industrial Hygiene Departments. Managed the environmental trace metals laboratory; developed analytical chemistry methods including AAS (designed and built the AAS unit) and isotope separation techniques. Clinical and animal nuclear medicine R&D; maintained radiologic decontamination unit for Medical Services program. Assistant Animal Colony Manager (1975-1982) for the Laboratory (primates, goats, dogs, rats, mice, other species)

1968 - 1970 **University of San Francisco. Institute of Chemical Biology, San Francisco, CA**

Laboratory technician responsible for operation and quality control of an atomic absorption spectrophotometer (AAS) for trace metal analysis of nickel, cadmium, magnesium and other heavy metal to evaluate the long term induction of cancer in rats**.**

1967 - 1968 **Cutter laboratories, Berkeley CA, Laboratory Technician, Plague vaccine manufacturing**

Laboratory services for the manufacture of Plague vaccine (Viet Nam war effort), autoclaving of large carts of Roux bottles with agar, slant the bottles, inoculate the bottles, harvest via excipient and glass beads for culture retrieval, maintenance of sterile operations and equipment,

Scientific Publications:

Budinger, T.F., B.R. Moyer, H.V. Michel, F. Asaro, and I. Perlman, Quantitative neutron activation analysis of human tissues, Nuclear Chemistry Annual Report, Lawrence Berkeley Laboratory, LBL-1666, 1973

Lee, J.S., B.D. Tebbens, and B.R. Moyer, Quantification of industrial cadmium exposure utilizing hair and other biological samples, Proc. Amer. Industr. Hygiene Conf., Miami, FL, May 1974

Moyer, B.R. and T.F. Budinger, Cadmium levels in the shoreline sediments of San Francisco Bay, in, Proc. VIII Trace Substances in Environmental Health, Conf., D.D. Hemphill, ed., Univ. Missouri, Columbia, MO, 1974, pp 127-135; also, LBL-2642, UC-11 Environmental and Earth Sciences, TID-4500-R61, 1974, 37 pp

Budinger, T.F., G.T. Gullberg, B.R. Moyer, J.L. Cahoon and R.H. Huesman, Transverse section imaging of the myocardium, J. Nucl. Med. 17(6): 552 (abst), 1976

McGinnis, J., R. Cassou, E.V. Benton, T.F. Budinger and B.R. Moyer, The effect of temperature on the latent track fading rate of AgCl (Cd doped) crystal detectors, LBL-2846, Feb. 1976

Budinger, T.F., J.L. Linfoot, B.R. Moyer, J.T. Lyman and J.L. Pelletier, Brain Research with Heavy Ions, in, Biological and Medical Research with Heavy Ions at the Bevalac, 1974-1977, Chapter 13, LBL-5610, 1977

Pelletier, J.L., B.R. Moyer and T.F. Budinger, Effects of hypothalamic radio-induced lesions in dogs by a 2mm heavy-ion cyclotron beam, LBL-7401, Lawrence Berkeley Laboratory, 1978

Pelletier, J.L., B.R. Moyer and T.F. Budinger, Technetium-99m labeled thyrotropin-releasing hormone (TRH) in dogs with and without anterior hypothalamic lesions, LBL-7402, Lawrence Berkeley Laboratory, 1978

Pelletier, J.L., F. Guignier, C. Touzery, B.R. Moyer and T.F. Budinger, Radioimmunoassay of thyrotropin-releasing hormone in serum and its application in dogs with hypothalamic lesions, in, World Fed. Nucl. Med., Proc., 2nd International Conf., Washington, D.C., 1978

Budinger, T.F., J.L. Cahoon, S.E. Derenzo, G.T. Gullberg, B.R. Moyer and Y. Yano, Three dimensional imaging of the myocardium with radionuclides, Radiology 125: 433-439, 1977

Budinger, T.F., Y. Yano, S.E. Derenzo, R.H. Huesman, C-K. Yen, B.R. Moyer and L.G. Sherman, Infarction sizing and myocardial perfusion measurements using ^{82}Rb and positron emission tomography, Amer. J. Cardiology 45: 399, 1981

Gaffey, C.T., T.S. Tenforde, T.F. Budinger, and B.R. Moyer, Electrocardiogram and blood pressure measurements on monkeys exposed to stationary magnetic fields, in, Proc. 3rd Ann. Mtg. Bioelectromagnetics Society, Washington, D.C., 1981

Pelletier, J.L. and B.R. Moyer, Thyrotropin-releasing hormone labeled with ^{99m}Tc: A potential agent for neuroendocrinological studies, Internl. J. Nucl. Med. Biol. 8: 122-127, 1981

Moyer, B.R., Toxic Manifestations elicited by parathion on cerebral and myocardial glucose metabolism as examined by the 2-Deoxyglucose method, M.S. Thesis, Toxicology, Univ. of San Francisco, 1982, 120 pages

Budinger, T.F., Y. Yano, B.R. Moyer, C.A. Mathis, E. Ganz, R.H. Huesman and S.E. Derenzo, Positron emission tomography of the heart, in, Nuclear Medicine and Biology, Vol. III, Proc. Third World Congress of Nuclear Medicine and Biology, Paris, 1982, pp. 2238-2341

Budinger, T.F., E. Ganz, D.C. Price, M. Lipton, B.R. Moyer, Y. Yano, Radionuclide and Nuclear Magnetic Resonance Methods of Evaluating Atherosclerosis, in, Clinical Diagnosis of Atherosclerosis, M.G. Bond, W. Insell, *et.al.*, eds, Springer-Verlag, New York, 1983, pp. 189-219

Budinger, T.F., Y. Yano, R.H. Huesman, S.E. Derenzo, B.R. Moyer, C.A. Mathis, E. Ganz, B. Knittel, Positron emission tomography of the heart, The Physiologist 26, 31-34, 1983

Tenforde, T.S., C.T. Gaffey, B.R. Moyer, T.F. Budinger, Cardiovascular alterations in Maccaca monkeys exposed to stationary magnetic fields: Experimental observations and theoretical analysis, Bioelectromagnetics 4: 1-9, 1983

Friedland, R.P., C.A. Mathis, T.F. Budinger, B.R. Moyer, Labeled choline and phosphorylcholine: Body distribution and brain autoradiography, J. Nucl. Med. 24: 812-815, 1983

Budinger, T.F., Y. Yano, C.A. Mathis, B.R. Moyer, R.H. Huesman and S.E. Derenzo, Positron emission tomography of the heart, in, Radioisotopes in Cardiology, M. Salvatore and E. Porta, eds., Plenum Press, N.Y., 1983, pp. 229-248

Budinger, T.F., Y. Yano, B.R. Moyer, J. Twitchell, R.H. Huesman, Myocardial extraction of ^{82}Rb vs. flow determined by positron emission tomography, Circulation 68: III-81 (abst), 324, 1983

Krohn, K.A., Y. Yano, T.F. Budinger, B.R. Moyer, Cryptate complexes of generator produced isotopes, in, Isotope generators in Nuclear Medicine, Amer. Chem. Soc., F.F. Knapp and T.F. Butler, eds., ACS Symposium Series No. 241, Chap. 14, 1984

Yano, Y., T.F. Budinger, S.N. Ebbe, C.A. Mathis, D.H. Moore, M. Singh, K. Brennan, B.R. Moyer, A.V. Nichols, Gallium-68 chemistry for labeling platelets, proteins and lipoproteins, LBL-18388, October 1984

Hasse, A.T., D. Gantz, H. Blum, L. Stowring, P. Ventura, A. Geballe, B.R. Moyer, M. Brahic, Combined macroscopic and microscopic detection of viral genes in tissues, Virology 140: 201-206, 1985

Yano, Y., K.M. Brennan, S.N. Ebbe, M. Singh, B.R. Moyer, D.A. Carpenter, E.M. Mazoyer, C.A. Mathis, T.F. Budinger, Platelet labeling and positron emission tomography in the detection of sites of vascular injury (abst.), J. Nucl. Med. 26: p. 21, 1985

Yano, Y., T.F. Budinger, S.N. Ebbe, C.A. Mathis, M. Singh, K.M. Brennan, B.R. Moyer, Gallium-68 lipophilic complexes for labeling platelets, J. Nucl. Med. 26: 1429-1437, 1985

Moyer, B.R., K. Kong, J.D. Young, D.P. Bell, Z-P. Luo, M. Konrad and A. Childs, Biodistribution of rIL-2 in the rat and mouse using autoradiography and protein fragment analysis, Pharmaceutical Res. 5(10): S-202 (Abst. PP1415) 1988

Bell, D.P., Z-P. Luo, B.R. Moyer, and J.D. Young, Pharmacokinetics of recombinant tumor necrosis factor (rhTNF) in rats and monkeys, Pharmaceutical Res. 5(10): S-193 (abst. pp. 1379), 1988

Johnson, C.W., B.R. Moyer, B. Bacher-Wetmore, H.L. Moon, J.P. Nachtman, Effects of Recombinant IL-2 on Proliferation and Lymphocyte Subsets in Mice, presented at the 40th Annual Mtg Amer. College Veterinary Pathologists and 24th Annual Mtg Amer. Soc. Veterinary Clinical Pathology, INFLAMMATION, October 1989, Baltimore MD.

Bauer, R.J., J. Winkelhake, S. Gauney, B.R. Moyer, R. Zimmerman, J.D. Young, Enhancement of cytokine (IL-2) therapeutic ratio by controlling plasma clearance profiles, 1990 ASBMB/AAI Annual meeting, FASEB, New Orleans, LA., June 1990

Moyer, B.R., J.D. Young, R. Bauer, D.P. Bell, P. Luo, M. Marian, Renal mechanisms for the clearance of recombinant human IL-2 in the rat, American Association of Pharmaceutical Scientists (AAPS) Annual Meeting, Pharmaceutical Res. 7(9):S-284 (abst PPDM-8314), 1990, Las Vegas, NV.

Moyer, B.R., K. Hubler, R. Didday, K. Hurley, PC-based 3-D Reconstruction of serial whole body autoradiographs with volume rendering algorithms for biodistribution applications, poster presentation at the Genetic and Environmental Toxicology Assn (GETA) Annual Meeting, June 1991

Vallabhajosula, S., K.S.M. Ali, S.J. Goldsmith, H. Lipszyc, D.A. Bastidas, J. Lister-James, S. Buttrum, B.R. Moyer, R.T. Dean, Evaluation of technetium-99m labeled peptides for imaging infection in a rabbit model, J. Nucl. Med. 34 (suppl. 5): (abst # 414), pg 104P, 1993

Lister-James, J., B.R. Moyer, S. Buttrum, L.C. Knight, S. Vallabhajosula, R.T. Dean, A structure-activity relationship (SAR) study of GPIIb/IIIa receptor-binding peptides radiolabeled with Tc-99m for imaging thromboembolism, J. Nucl. Med. 35 (suppl 5): Abst. 1056, pg. 257P, 1994

Lister-James, J., W.J. McBride, B.R. Moyer, S. Buttrum, S. Vallabhajosula, D.A. Bastidas, H. Lipszyc, H. Lee, R.T. Dean, A structure-activity relationship (SAR) study of somatostatin receptor-binding peptides radiolabeled with Tc-99m, J. Nucl. Med. 35 (suppl 5): Abst. 1057, pg. 257P, 1994

Ball, R.W., J.R. Mattinson and B.R. Moyer, Non-clinical toxicology study of P829, a synthetic peptide analog of somatostatin designed as a nuclear medicine diagnostic agent, International Congress of Toxicology-VII, July, 1995, Seattle, WA

Moyer, B.R., S. Vallabhajosula, J. Lister-James, J.E. Cyr, D.A. Snow, D. Bastidas, H. Lipszyc, L.R. Bush, R.T. Dean, Development of a white blood cell specific technetium-99m imaging agent from PF-4 for detecting infection, , J. Nucl Med. 36 (5): 1995

Lister-James, J., B.J. McBride, D.A. Pearson, M.A. DeRosch, B.R. Moyer, L.R. Bush, S. Vallabhajosula, R.T. Dean, Tc-99m P748: A receptor-binding Techtide™ for imaging activated platelets, , J. Nucl Med. 36 (5): 1995

Lister-James, J., B.J. McBride, D.A. Pearson, B.R. Moyer, S. Vallabhajosula, R.T. Dean, Tc-99m P829: A somatostatin receptor-binding Techtide™ for imaging somatostatin receptors ***in-vivo***, J. Nucl Med 36 (5): 1995

Wahl, R.L., S.J. Fisher, S. Crawford, B.R. Moyer, J. Lister-James, R.T. Dean, Localization of six Tc-99m Techtides™ reactive with somatostatin receptors to human small cell lung carcinoma in SCID mice, J. Nucl Med. 36 (5): 1995

Vallabhajosula, S., B.R. Moyer, J. Lister-James, H. Lipszyc, Q.H. Zhao, D.A. Bastidas, R.T. Dean, Tc-99m labeled chemotactic peptides: Kinetics of infection uptake and variation within rat and rabbit, , J. Nucl Med. 36 (5): 1995

Lu, P., P. Zanzonico, J. Lister-James, S.M. Goldfine, E. Herrold, R.S. Lees, A.M. Lees, R.T. Dean, B.R. Moyer, J.S. Borer, Biodistribution and autoradiographic localization of I-125 labeled synthetic peptide fragments in aortic atherosclerosis in cholesterol-fed rabbits, Amer. J. Therapeutics 3: 673-680, 1996

Lister-James, J., S. Vallabhajosusula, B.R. Moyer, D.M. Wilson, M.A. DeRosch, R.T. Dean, Techtide™ Tc-99m P748. A GPIIb/IIIa receptor-binding for imaging activated platelets, European Assoc. Nuclear Medicine (EANM) Annual Meeting, Aug 1995

Moyer, B.R., S. Vallabhajosula, J. Lister-James, J.E. Cyr, D.A. Snow, D. Bastidas, H. Lipszyc, L.R. Bush, R.T. Dean, Technetium-99m-white blood cell-specific imaging agent developed from platelet-factor 4 to detect infection, J. Nuclear Medicine 37: 673-679, 1996

Lister-James, J, LC Knight, A.H. Mauer, LR Bush, BR Moyer, RT Dean, Thrombus imaging with a Technetium-99m-labeled, activated platelet receptor-binding peptide, J. Nuclear Medicine, 37: 775-781, 1996

Vallabhajosula S, Moyer, B.R., J. Lister-James, B.J. McBride, H. Lipszyc , H. Lee, D. Bastidas,, R.T. Dean, Preclinical evaluation of Technetium-99m-labeled somatostatin receptor-binding peptides, J. Nuclear Medicine 37:1016-1022, 1996

Lister-James, J., S. Vallabhajosula, B.R. Moyer, D.A. Pearson, B.J. McBride, M. DeRosch, L.R. Bush, J.Machac, R.T. Dean, Thrombus imaging using technetium-99m-labeled platelet receptor-binding peptides: Pre-clinical evaluation of Tc-99m P748 J. Nuclear Medicine, 1996

Moyer, B.R., S. Vallabhajosula, LR Bush, Y-W. Chan, J Lister-James, R.T. Dean, Infection imaging with white blood cell specific Tc 99m PPG-glucan: Comparison with In 111 WBCs *In vitro* and *in vivo*, J. Nucl Med 37 (5): 204P, Abstract No. 932, June 1996

Lister-James, J., B.R. Moyer, R.T.Dean, Small Peptides Radiolabeled with Tc-99m, Quarterly Review of Nuclear Medicine, Jan 1997

Palestro, C.J., M.B. Tomas, D. Guttleber, K.K. Bhargava, E. Hilton, B.R. Moyer, Diagnosing musculoskeletal infection with Technetium 99m P483H. Initial results, J Nucl Med 38 (5): 132P, Abstract No. 496, June 1997

J. Lister-James, I. Virgolini, CA Nelson, DA Pearson, M. Leimer, BR Moyer, DM Wilson, RT Dean, Tc 99m P1666: Development of a technetium –99m – labeled VIP-receptor imaging agent, J. Nucl Med. 39(5): 225P, Abstract No. 998, 1998

Cyr, JE, DA Pearson, R. Manchanda, MA DeRosch, JV Rutkowski, CA Nelson, BR Moyer, J Lister-James, Characterization and radiolabeling of Tc 99m depreotide somatostatin receptor binding tumor imaging agent, J. Nucl Med 40 (5): 80P, Abstract No. 321), June 1999

Nelson, CA, BR Moyer, DA Pearson, JV Rutkowski, J. Lister-James, RT Dean, A peptide analog of calcitonin labeled with Tc 99m targets MCF-7 human breast cancer xenografts in nude mice, J. Nucl Med. 40(5): 103P, Abstract No. 417, 1999

Nelson, CA, BR Moyer, R Manchanda, DA Pearson, JV Rutkowski, MA DeRosch, C. Moyer, J. Lister-James, FITC and Tc 99m labeled P483H bind specifically to human monocytes and polymorphonuclear leukocytes with high capacity, J. Nucl Med. 40(5): 213P, Abstract No. 950, 1999

Moyer, B.R., R. Manchanda, MA DeRosch, JV Rutkowski, CA Nelson, MT Guaraldi, J. Lister-James, RT Dean, Effect of graded white blood cell depletion by mechlorethamine on infection uptake and pharmacokinetics of Tc 99m P483H in the E. coli infected rabbit. J. Nucl. Med. 40(5), 213P, Abstract No. 954, 1999

Nelson, CA, DA Pearson, DM Wilson, MT Guaraldi, BR Moyer, MT Azure, WB Jones, J Lister-James, RT Dean, Biodistribution of a novel somatostatin receptor-binding peptide in rat pancreatic and human lung tumor murine xenografts, J Nucl . Med. 41 (5), 260P, Abstract No. 1142, 2000

Bates, SM, Lister-James J, Julian JA, Taillefer R, Moyer BR, Ginsberg JS, Imaging characteristics of a novel technetium Tc 99m-labeled platelet glycoprotein IIb/IIIa receptor antagonist in patients with acute deep vein thrombosis or a history of deep vein thrombosis, Arch Intern Med. 163: 452-456, 2003

Moyer, BR, **In Memoriam: Judah Folkman (1933-2008)**, Cancer Biother Radiopharm 23(2): 135-136, 2008.

Moyer, BR and JA Barrett, **Biomarkers and Imaging: Physics and Chemistry for Non-Invasive Analysis**, Bioanalysis 1(2): 321-356, 2009

Grace MB, BR Moyer, JM Prasher, KD Cliffer, N. Ramakrishnan, J. Kaminski, CN Coleman, RG Manning, B. Maidment, and RJ Hatchett, **Rapid radiation dose assessment for radiological public health emergencies: Roles of NIAID and BARDA**, Health Physics 98(2): 172-178, 2010

Grace, MB, KD Cliffer, BR Moyer, CN Coleman, JM Prasher, RA Hatchett, J Mercier, RG Manning, JI Bader, GL Disbrow, GR Kovacs, **The US Government's Medical Countermeasure Management for nuclear and radiologic emergencies: Synergy from interagency cooperation**, Health Physics 101 (3): 238-247, 2011

Moyer, BR, NP Cheruvu, T C.-C. Hu, Eds., **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY, 2013 (author of five of the book's 13 chapters)

Moyer, BR, *Chapter 1, Imaging platforms and Drug development: An Introduction*, **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY 2013

Moyer, BR, *Chapter 5. The role of pharmacokinetics and allometrics in imaging: Practical issues and considerations*, **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY, 2013

EG Solon, Moyer, BR, *Chapter 6.* Quantitative imaging using autoradiographic techniques, **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY, 2013

Moyer, BR, T C-C Hu, S Williams, HD Morris, *Chapter 12. Magnetic resonance as a tool for pharmaco-imaging*, **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY, 2013

Moyer, BR, N Cheruvu, T C-C Hu, *Chapter 13. Regulatory consideration involved in imaging,* **Pharmaco-Imaging in Drug and Biologics Development: Fundamentals and Applications**, AAPS Advances in the Pharmaceutical Sciences Series, Vol 8, Springer Publ,, NY, 2013

Mould DR, BR Moyer, S Amur, A Mukherjee, The Impact of New Technologies on the Science of Clinical Care and Drug Development, (a CPTR Section contribution), AAPS J, Dec 2013 issue

Yoo S; T Jorgensen, A Kennedy; J Boice, Jr., A Shapiro, T Hu, BR Moyer, M Grace, G Kelloff, M Fenech, P Prasanna, C Coleman, Mitigating the risk of radiation-induced cancers: Limitations and paradigms in drug development, J Radiol Prot. 2014 Jun;34(2):R25-52.

Homer MJ, Raulli R, DiCarlo-Cohen AL, Esker J, Hrdina C, Maidment BW, Moyer BR, Rios C, Macchiarini F, Prasanna PG, Wathen L, UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES BIODOSIMETRY AND RADIOLOGICAL/NUCLEAR MEDICAL COUNTERMEASURE PROGRAMS, Radiat Prot Dosimetry. 2016 Sep;171(1):85-98.

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Major Meeting Presentations (1998- pres):

Moyer, B.R. , R Manchanda, DA Pearson, CA Nelson, MT Guaraldi, J Lister-James, RT Dean, *Clinical results of imaging occult infections with Tc 99m P483H*, **Intl. Society of Radiolabeled Blood Elements (ISORBE)**, Rome, May 1998

Moyer, B.R., J Lister-James, RT Dean, *Imaging acute deep vein thrombosis with Tc 99m Apcitide (AcuTect)*, Cambridge Healthcare Symposium, **Beyond Heparin**, San Diego, CA, May 1999

Baran, Y.M., BR Moyer, JE Cyr, JE Blum, H Handmaker, J Lister James, RT Dean, *Lung cancer imaging: Advances in peptide imaging diagnostics with NeoTect (Tc 99m P829)*, **Society of Nuclear Medicine** Meeting, St. Louis, MO, June 2000

Moyer, B.R., MT Guaraldi, MT Azure, M Rusckowski, JE Cyr, WB Jones, CA Nelson, MA DeRosch, J Lister-James, RT Dean, *The kinetics of Re 188 P2045, a new SSTR radiotherapeutic, in the SD rat, NZW rabbit and rhesus monkey*, **EANM Meeting** (European Association of Nuclear Medicine), September 2000

Moyer, B.R., *Imaging Pharmacology as a Tool in the Development of Therapeutic Biologics*, **2005 National Biotechnology Conference**, San Francisco, CA, June 2005

Moyer, B.R., *Imaging in Pharmacology: Solutions for Biotechnology Drug Development*, presented at **Discovery Day Symposium**, Massachusetts Biotechnology Council, Boston, MA, March 2006

Moyer, B.R., *Imaging Alternatives for Pharmacokinetic Studies in the Development of Therapeutic and Diagnostic Biologics*, **2006 National Biotechnology Conference**, Boston, MA, June 2006; also session chairman

Moyer, B.R., *Non-Clinical Imaging Technologies for Biologics*, **BIO2007 Biotechnology Conference**, Boston, MA, May 2007 (Session Chairman: "*Imaging Technologies for Biologics*"

Moyer, B.R., *Pharmacokinetics and Toxicokinetics in Development of Biologics*, **National Biotechnology Conference**, San Diego, CA, June 2007 (Session Chairman: "*Toxicokinetics and Biologics*")

Moyer, B.R. *Biomarkers and Imaging: A New Tool in Drug Development*, **National Biotechnology Conference**, Toronto, Canada, June 2008 (Session Chairman on "*Biomarkers and Regulatory Issues*")

Moyer, B.R. *Pharmacokinetics and Toxicokinetics in Development of Biologics*, **National Biotechnology Conference**, San Francisco, CA, June 2011 (Session Chairman: "*Toxicokinetics and Biologics*")

Moyer, B.R., *The role of the federal government in medical countermeasure development*, **National Biotechnology Conference**, Toronto, Canada, June 2012 (Session Chairman on "*The Animal Rule and Medical Countermeasure Development*")

Moyer, B.R., *Critical Links in MCM Drug Development: PK, Allometry and Power*, NIH/NIAID BARNCATS Meeting, NIH Campus, January 2013

Moyer, B.R., *Product Technology Readiness and BARDA Contracting*, **Radiation Research Annual Meeting**, New Orleans, LA, Sept 14-19, 2013

Moyer, B.R., *Emergency isotope detection methods using gamma cameras and conventional nuclear medicine clinic facilities*, **Health Effects of Ionizing Radiation (HEIR) Conference**, Berkeley, CA, Oct 13-17, 2013

Moyer, BR, *The Zika Crisis and the Role of the US Government and WHO*, Zika symposium, AAPS, National Biotechnology Conference, Boston, May 2016

Moyer, BR., *"What have we learned at the 2016 NBC?",* Chairman, Closing Presentation for the AAPS' National Biotechnology Conference, Boston, MA, May 2016

US Patents: **Technetium-99m Labeled Peptides for Imaging Inflammation**, Case No. 90,1104-D Serial No. 08/073,577, authors: R.T. Dean and B.R. Moyer; filed: June 7, 1993 - issued: October 1, 1996

Professional Organizations and Societies:

- Society of Nuclear Medicine (SNM), elected; active (manuscript reviewer: 1997-pres)
  (SNM and SMI are now merged)
- Radiation Research Society (RRS); elected; active
- International Society of Magnetic Resonance in Medicine; (ISMRM); elected; not currently active
- Society of Whole Body Autoradiography (Charter Member, not currently active)
- American Association of Pharmaceutical Scientists; AAPS; Sections: Biotechnology, Clinical and PPDM (Pharmacokinetics/Metabolism; Reviewer: AAPS Journal 2004-current
  - **Planning Committee Member (PPDM section rep) National Biotechnology Conferences 2007-'13** ('07 San Diego, '08 Toronto; '09, Seattle, '10-'11 San Francisco, '12 San Diego)
  - **Elected: Chairman, AAPS Pharmaco-Imaging Focus Group (PIFG) – 2011-2013**
  - **National Biotechnology Conference (AAPS), Chairman for Scientific Sessions**: "*Toxicology/Toxicokinetics of Biologics*" (2007), "*Biomarkers*" (2008); "*Aptamers as Therapeutic, Drug Delivery, and Diagnostic Agents*" (2009) and "*Utility of Biomarkers for Drug Development (Qxology)*" (2009); *Imaging in Drug Development* (2010); *Imaging in Drug Development* (2011); *Animal Rule Guidance with the FDA* (2012); *Advances in Drug Development through Imaging: non-Clinical and Clinical Examples* (2013); *Advances in burn therapies for mass casualty scenarios* (2013)
  - **Chair-Elect**, Programming Committee for 2015 National Biotechnology Conference, San Francisco CA
  - **Chairman of Conference and Programming Committee,** 2016 National Biotechnology Conference, Boston, MA
  - **Vice-Chair, Conference and Programming Committee,** 2017 Planning Committee, 2017 National Biotechnology Conf.
  - **Programming Committee member,** HEIR Conf, Fontenay-aux-Roses, France; Oct 2018
- **Reviewer:** Journal of Nuclear Medicine, Nuclear Medicine Technology (2005-present)
- **Reviewer:** Journal for the Health Physics Society (2009- present)
- **Reviewer:** AAPS Journal (2007 – present)
- **Reviewer:** Journal of Cancer Biotherapy and Radiopharmaceuticals (2007-present)
- **Reviewer:** Radiation Research (2012- present)
- **Reviewer:** PLOS-One (2015 – present)
- **Awarded CNMT Emeritus status, Nuclear Medicine Technology Certification Board**

Personal: **Honorary Rotarian**, Rotary Club of Bedford, NH Resigned Club membership in 2007 due to work in Washington DC but I have maintained a commitments to Club activities, was Club Webmaster and Race Director, Bedford Rotary Memorial Road Races; 1995-2015
Club Honors: ***Paul Harris Fellow*** recipient; elected 2006; elected 2012 "***Honorary Bedford Rotarian***" with permanent membership.