

CURRICULUM VITAE

ALAN R. FRITZBERG

3307 Carrington Way
Bellingham, WA 98226
Home Telephone
Email: arfritz@comcast.net

Education

- 1977 Summer Institute in Radiopharmacy
School of Pharmacy
University of Southern California
- 1974-1976 Postdoctoral Research with Professors
D. Dolphin and D. Lyster in
Chemistry and Radiopharmacy
University of British Columbia
- 1973-1974 Postdoctoral Research with
Professor C.J. Sih in
Pharmaceutical Biochemistry
University of Wisconsin
- 1970-1972 Postdoctoral Research with
Professor H.C. Rilling in
Biochemistry
University of Utah
- 1968-1970 Ph.D.
Organic Chemistry
Wesleyan University
June 1970
- 1966-1968 M.S.
Chemistry
University of Wisconsin
January 1968
- 1962-1966 B.S.
Chemistry
Washington State University
June 1966

Employment

- 1992-2002 Chief Scientist and Chairman
of the Scientific Advisory Board
NeoRx Corporation
Seattle, Washington
- 1991-1992 Vice President and Chief
Scientific Officer
NeoRx Corporation
Seattle, Washington

1990-1991	Vice President and Director of Research and Development NeoRx Corporation Seattle, Washington
1984-1990	Vice President and Scientific Director of Chemistry NeoRx Corporation Seattle, Washington
1984-Present	Affiliate Associate Professor of Medicinal Chemistry University of Washington
1985-Present	Affiliate Associate Professor of Radiology University of Washington
1983-1984	Associate Professor of Radiology School of Medicine and Pharmacy Practice College of Pharmacy University of Utah
1981-1983	Associate Professor of Radiology and Pharmacy University of Colorado
1976-1981	Assistant Professor of Radiology and Pharmacy University of Colorado
1972-1973	Lecturer in Chemistry University of Maryland Munich Campus, Germany

Offices Held

1986-1987	Past President Radiopharmaceutical Science Council Society of Nuclear Medicine
1985-1986	President Radiopharmaceutical Science Council Society of Nuclear Medicine
1984-1985	President-elect Radiopharmaceutical Science Council Society of Nuclear Medicine
1982-1984	Member of Board of Directors Radiopharmaceutical Science Council Society of Nuclear Medicine
1983-1984	President Rocky Mountain Chapter Society of Nuclear Medicine

1982-1983	President-elect Rocky Mountain Chapter Society of Nuclear Medicine
1981-1982	Secretary-Treasurer Radiopharmaceutical Science Council Society of Nuclear Medicine
1981-1983	Scientific Program Chairman for Rocky Mountain Chapter Meeting Society of Nuclear Medicine

Publications

Journal Articles

- Wharton, P.S., Fritzberg, A.R.: Stereochemistry of Opening of Cyclopropanols, trans-2,3-Di-t-butylcyclopropanone Hemiketals. J. Org. Chem. 37:1899-1902, 1972.
- Kluender, H., Huang, F., Fritzberg, A.R., Schnoes, H., Sih, C.J., Fawcett, P., Abraham, E.P.: Studies of the Incorporation of (2S,3R)-4,4,4-D)-Valine and (2S,3S)-(4,4,4,-D)-Valine into B-Lactam Antibiotics. J. Am. Chem. Soc. 96:4054, 1974.
- Fritzberg, A.R., Lyster, D.M., Dolphin, D.H.: Tc-99m-Bioquin-7CA: A Potential New Hepatobiliary Scanning Agent. J. Nucl. Med. 17:907-910, 1976.
- Fritzberg, A.R., Lyster, D.M., Dolphin, D.H.: The Evaluation of Formamidine Sulfonic Acid and Other Reducing Agents for Use in the Preparation of Tc-99m-labeled Radiopharmaceuticals. J. Nucl. Med. 18:553-5570, 1977.
- Klingensmith, W.C., Fritzberg, A.R., Koep, L.J.: Demonstration of a Bile Leak into an hepatic Abscess with ^{99m}Tc-N, - (2,6-diethylacetanilide)-iminodiacetic Acid. Am. J. Roentgenol 131:889-891, 1978.
- Fritzberg, A.R., Lyster, D.M., Dolphin, D.H.: Tc-99m-Ethyl-thiomethylphosphonate: A Potential New Renal Screening Agent. Int. J. Nucl. and Biol. 4:113-118, 1977.
- Fritzberg, A.R., Lyster, D.M., Dolphin, D.H.: ^{99m}Tc-Glutathione: Role of Reducing Agent on Renal Retention. Int J. Nucl. Med. and Biol. 5:87-92, 1978.
- Klingensmith, W.C., Fritzberg, A.R., Koep, L.J., Ronai, P.M.: Clinical Comparison of ^{99m}Tc-diethyl-iminodiacetic Acid, ^{99m}Tc-pyridoxylidene-glutamate, and ¹³¹I-Rose Bengal in Liver Transplant Patients. Radiology 130:435-441, 1979.
- Fritzberg, A.R., Bloedow, D.C., Klingensmith, W.C., Whitney, W.: Comparative Study of ^{99m}Tc-labeled Hepatobiliary Agents Based on Naphthalene and Similar Ring Systems. Int. J. Nucl. Med. Biol. 9:1-11, 1982.
- Klingensmith, W.C., Fritzberg, A.R., Koep, L.J.: Comparison of ^{99m}Tc-diethylimino-diacetic Acid, ^{99m}Tc-pyridoxylidene-glutamate and ¹³¹I-Rose Bengal for Evaluation of the Hepatobiliary System in Liver Transplant Patients. J. Nucl. Med. 20:314-318, 1979.
- Fritzberg, A.R., Lyster, D.M., Dolphin, D.H.: Role of Reducing Agent on Tc-99-glutathione Biodistribution: Relationship to Chemical properties. Proceedings of 2nd Intl. Radiopharmaceutical Chemistry Symposium, Oxford, England, pp 190-191, 1978.

12. Klingensmith, W.C., Fritzberg, A.R., Spitzer, V.M., Koep, L.J.: Clinical Comparison of ^{99m}Tc-diethyl-IDA and ^{99m}Tc-PIPIDA for Evaluation of the Hepatobiliary System. Radiology **134**:195-199, 1980.
13. Klingensmith, W.C., Fritzberg, A.R., Zerbe, G.O., Koep, L.J.: Relative Role of ^{99m}Tc-Diethyl-IDA and ^{99m}Tc-Sulfur Colloid in the Evaluation of Liver Function. Clin. Nucl. Med. **5**: 349-351, 1980.
14. Kuni, C.C., Klingensmith, W.C., Fritzberg, A.R.: Evaluation of Intrahepatic Bile Leaks with Tc-99m-Diethyl-IDA, Clin. Nucl. Med. **5**:349-351, 1980.
15. Fritzberg, A.R., Lewis, D.: HPLC Analysis of Tc-99m-iminodiacetate Hepatobiliary Agents and a Question of Multiple Peaks. J. Nucl. Med. **21**:1180-1184, 1980.
16. Fritzberg, A.R., Klingensmith, W.C., Whitney, W.P., Kuni, C.C.: Chemical and Biological Studies of Tc-99m-N, N-bis-(mercaptoacetamido)ethylenediamine: A Potential Replacement for I-131-hippuran. J. Nucl. Med. **22**:258-263, 1981.
17. Klingensmith, W.C., Johnson, M.L., Kuni, C.C., Dunne, M.G., Fritzberg, A.R.: Complimentary Role of Tc-99m-Diethyl-IDA and Ultrasound in Large and Small Duct Biliary Tract Obstruction, Radiology **138**:177-184, 1981.
18. Klingensmith, W.C., Fritzberg, A.R., Spitzer, V.M., Kuni, C.C.: Clinical Comparison of Tc-99m-diisopropyl-IDA and Tc-99m-diethyl-IDA for Evaluation of the Hepatobiliary System. Radiology **140**:791-795, 1981.
19. Fritzberg, A.R., Eshima, D.: Iodophenylsulfonamide Fatty Acid Analogs as Potential Myocardial Imaging Agents. Int. J. Appl. Rad. Isot. **33**:451-453, 1982.
20. Fritzberg, A.R., Whitney, W.P. Kuni, C.C., Klingensmith, W.C.: Studies on the Mechanism of Renal Transport of Tc-99m-N,N'-bis(mercaptoacetamidoethylenediamine). Int. J. Nucl. Med. Biol. **9**:79-82, 1982.
21. Fritzberg, A.R., Klingensmith, W.C.: Teaching Editorial: Quest for the Perfect Hepatobiliary Radiopharmaceutical. J. Nucl. Med. **23**:543-546, 1982.
22. Klingensmith, W.C., Spitzer, V.M., Fritzberg, A.R., Kuni, C.C.: The Normal Fasting and Post-prandial Tc-99m-diisopropyl-IDA Hepatobiliary Study. Radiology **141**:771-776, 1981.
23. Klingensmith, W.C., Gerhold, J.P., Fritzberg, A.R., Spitzer, V.M., Kuni, C.C., Singer, C.J., Weil, R.: Clinical Comparison of Tc-99m-N,N'-bis(mercaptoacetyl)-ethylene-diamine and I-131 Hippuran for Evaluation of Renal Tubular Function. J. Nucl. Med. **23**:377-380, 1982.
24. Fritzberg, A.R., Kuni, C.C., Klingensmith, W.C. Stevens, J., Whitney, W.P.: Synthesis and Biological Evaluation of Tc-99m-N,N'-bis(mercaptoacetyl)-2,3-diaminopropanoate: A Potential Replacement for (¹³¹I)-o-iodohippurate. J. Nucl. Med. **23**:5920598, 1982.
25. Gerhold, J.P., Klingensmith, W.C., Kuni, C.C., Lilly, J.R., Silverman, A., Fritzberg, A.R., Nixt, T.: Diagnosis of Biliary Atresia with Radionuclide Hepatobiliary Imaging. Radiology **145**:499-504, 1983.
26. Klingensmith, W.C., Fritzberg, A.R., Spitzer, V.M., Kuni, C.C., Williamson, M.R., Gerhold, J.P.: Clinical Evaluation of Tc-99m-trimethylbromo-IDA and Comparison with Tc-99m-diisopropyl-IDA for Hepatobiliary Imaging. Radiology **146**:499-504, 1983.
27. Klingensmith, W.C., Fritzberg, A.R., Kuni, C.C., Lilly, J.R.: Comparison of [^{99m}Tc]parabutyl-IDA and [^{99m}Tc]diethyl-IDA for Imaging the Hepatobiliary System in Patients with Hyperbilirubinemia. Int. J. Nucl. Med. Biol. **9**:189-194, 1982.

28. Klingensmith, W.C., Spitzer, V.M., Fritzberg, A.R., Kuni, C.C.: Normal Appearance and Reproducibility of Tc-99m-sulfur Colloid and Tc-99m-microalbumin Colloid Liver-spleen Studies. J. Nucl. Med. 24:81-113, 1983.
29. Klingensmith, W.C., Kuni, C.C., Fritzberg, A.R.: Cholescintigraphy in Extra Hepatic Biliary Obstruction. Am. J. Roentgenol. 139:65-70, 1982.
30. Costello, C.E., Brodack, J.W., Jones, A.G., Davison, A., Johnson, D.L., Kasina, S., Fritzberg, A.R.: The Investigation of Radiopharmaceutical Components by Fast Atom Bombardment Mass Spectrometry: The Identification of Tc-HIDA and the Epimers of Tc-CO₂DADS. J. Nucl. Med. 24:353-355, 1983.
31. Fritzberg, A.R., Bloedow, D.C., Eshima, D., Johnson, D.L.: Comparison of Tc-99m N-pyridoxyl-5-methyltryptophan and Tc-99m N-(3-bromo-2,4,6-trimethylacetanilide)iminodiacetate in Rats. J. Pharm. Sci. 73:1861-1863, 1984.
32. Fritzberg, A.R., Reichen, J.: Extraction Efficiency and Biliary Excretion of Hepatobiliary Imaging Agents in the Rat Perfused Liver. J. Pharm. Pharmacol. 37:919-922, 1985.
33. Fritzberg, A.R., Kasina, S., Eshima, D., Johnson, D.L.: Tissue Distribution Properties of Tc-99m Diamide Dimercaptide Complexes and Potential use as Renal Radiopharmaceuticals. J. Med. Chem. 19:1933-1940, 1986.
34. Johnson, D.L., Fritzberg, A.R., Hawkins, B.L., Kasina, S., Eshima, D.: Stereochemical Studies in the Development of Technetium Radiopharmaceuticals I, Fluxional Racemization of Technetium and Rhenium Penicillamine Complexes. Inorg. Chem. 23:4204-4207, 1984.
35. Fritzberg, A.R., Kasina, S., Eshima, D., Johnson, D.L., Jones, A.G., Lister-James, J., Davison, A., Brodack, J.W.: Biological Evaluation of Tc-99m Diamide Disulfur (DADS)-complexes as Renal Tubular Function Radiopharmaceuticals. J. Nucl. Med., submitted.
36. Fritzberg, A.R., Kasina, S., Eshima, D., Johnson, D.L.: Synthesis and Evaluation of Tc-99m Meracптоacetyl-glycylglycylglycine (MAG₃) as a Renal tubular Function Radiopharmaceutical. J. Nucl. Med. 27:111-116, 1986.
37. Fritzberg, A.R.: Current Status of Renal Radiopharmaceuticals. J. Nucl. Med. Tech. 12:177-188, 1984.
38. Taylor, A.T., Jr., Eshima, D., Fritzberg, A.R., Christian, P.E., Kasina, S.: Comparison of Iodine-131 OIH and Technetium-99 MAG₃ Renal Imaging in Volunteers. J. Nucl. Med. 27:795-803, 1986.
39. Eshima, D., Taylor, A., Jr., Fritzberg, A.R., Kasina, S., Hanson, L., Sorenson, J.F.: Animal Evaluation of Tc-99m Triamide Mercaptide Complexes as Potential Renal Imaging Agents. J. Nucl. Med., Accepted for Publication.
40. Fritzberg, A.R.: Advances in Tc-99m Labeling of Antibodies. Nucl. Med. 26:7-12, 1987.
41. Klingensmith, W.C., Tyler, H.N., Jr., Marsh, W.C., Hanna, G.M., Fritzberg, A.R., Holt, S.A.: Effect of Hydration and Dehydration on Technetium-99m CO₂DADS Renal Studies in Normal Volunteers. J. Nucl. Med. 26:875-879, 1985.
42. Taylor, A., Jr., Eshima, D., Fritzberg, A.R., Kasina, S., Christian, P.E.: Preliminary Evaluation of ^{99m}Tc Mercapтоacetyltriglycine as a Replacement for ¹³¹I OIH. Contr. Nephrol. 56:1-6, 1986.
43. Kuni, C.C., Klingensmith, W.C., Fritzberg, A.R., Spitzer, V.M., Latteier, J.L.: Clinical Comparison of Tc-99m N,N'-bis(mercapтоacetyl)-2,3-diaminopropanoate with Tc-99m DTPA for Renal Imaging. Clin. Nucl. Med. 10:810-813, 1985.

44. Taylor, A., Eshima, D., Fritzberg, A.R.: Comparison of I-131 OIH and Tc-99m MAG₃ Renal Imaging in Volunteers. J. Nucl. Med. 27:795-803, 1986.
45. Ambruso, D.R., Hawkins, B., Johnson, D.L., Fritzberg, A.R., Klingensmith, W.C., McCabe, E.R.: Measurement of Adenosine Triphosphate and 2,3-diphosphoglycerate in Stored Blood with ³¹P Nuclear Magnetic Resonance Spectroscopy. J. Med. Chem., 29:1933-40, 1986.
46. Eshima, D., Taylor, A., Fritzberg, A.R., Kasina, S., Hansen, L., Sorenson, J.: Animal Evaluation of Technetium-99m Triamide Mercaptide Complexes as Potential Renal Imaging Agents. J. Nucl. Med. 28:1180-1186, 1987.
47. Taylor, A., Jr., Eshima, D., Fritzberg, A.R., Kasina, S., Christian, P.E. Preliminary Evaluation of ^{99m}Tc Mercaptoacetyltryglycine as a Replacement. Contrib Nephrol, 56:38-43, 1987.
48. Fritzberg, A.R., Berninger, R.W., Hadley, S.W., Wester, D.W.: Approaches to Radiolabeling of Antibodies for Diagnosis and Therapy of Cancer. Pharmaceutical Research 5:325-334, 1988.
49. Fritzberg, A.R., Abrams, P.G., Beaumier, P.L., Kasina, S., Morgan, A.C., Rao, T.N., Reno, J.M., Sanderson, J.A., Srinivasan, A., Wilbur, D.S., Vanderheyden, J.L.: Specific and Stable Labeling of Antibodies with Technetium 99m Using a Diamide Dimercaptide (N₂S₂) Chelating Agent. Proc. Natl. Acad. Sci. 85:4025-4029, 1988.
50. Wilbur, D.S., Hylarides, M.D., Fritzberg, A.R. Reactions of Organometallic Compounds with Astatine-211. Application to Protein Labeling, 1988.
51. Wilbur, D.S., Hadley, S.W., Hylarides, M.D., Abrams, P.G., Beaumier, P.A., Morgan, A.C., Reno, J.M., Fritzberg, A.R. Development of a Stable Radioiodinating Reagent to Label Monoclonal Antibodies for Radiotherapy of Cancer. J. Nuc. Med. 30:216-226, 1989.
52. Hylarides, M.D., Wilbur, S.D., Hadley, S.W., and Fritzberg, A.R. Synthesis and Iodination of Methyl 4-Tri-N-Butyl-stannylbenzoate, P-(Methoxycarbonyl) Phenylmercuric chloride and P-(Methoxycarbonyl) Phenylboronic Acid. J. Organomet Chem. (In Press) 1988.
53. Eary, J.R., Schroff, R.W., Abrams, P.G., Fritzberg, A.R., Morgan, A.C., Kasina, S., Reno, J.M., Srinivasan, A., Woodhouse, C.S., Wilbur, D.S., Natale, R.B., Collins, C., Stehlin, J.S., Mitchell, M., and Nelp, W.B. Successful Imaging of Malignant Melanoma with Technetium-99m-Labeled Monoclonal Antibodies. J. Nuc. Med. 30:25-32, 1989.
54. Jones, D.S., Srinivasan, A., Kasina, S., Fritzberg, A.R. and Wilkening, D.W. A Convenient Synthesis of Vicinal Diamines. J. Org. Chem. 54:1940-1942, 1989.
55. Eshima, D., Fritzberg, A.R., and Taylor, Jr. ^{99m}Tc Renal Tubular Function Agents: Current Status. Seminars in Nuclear Medicine, Vol. XX, No. 1. (January), 1990:pp 28-40.
56. Rao, T.N., Adhikesavalu, D., Camerman, A., and Fritzberg, A.R. Technetium (V) and Rhenium (V) Complexes of 2,3-Bis(mercaptoacetamido) propanoate Chelate Ring Stereochemistry: Influence on Chemical and Biological Properties. J. Am. Chem. Soc., 112:5798-5804, 1990.
57. Schroff, R.W., Weiden, P.L., Appelbaum, J., Fer, M.F., Breitz, H., Vanderheyden, J-L., Ratliff, B.A., Fisher, D., Foisie, D., Hanelin, L.G., Morgan, A.C., Jr., Fritzberg, A.R., Abrams, P.G. Rhenium-186 Labeled Antibody in Patients with Cancer: Report of a Pilot Phase I Study. Antibody, Immunoconjugates, Radiopharmaceuticals Journal, Vol. 3, 2:99-111, 1990.
58. Badger, A.C., Wilbur, D.S., Hadley, S.W., Fritzberg, A.R., Bernstein, I.D.: Biodistribution of p-Iodobenzoyl (PIP)labeled antibodies in a murine lymphoma model. Nucl. Med. Biol. 17: 381-387, 1990.

59. Abrams, P.G., Morgan, A.C., Fritzberg, A.R. Specific Targeting of Cancer with Monoclonal Antibodies: Diagnostic and Therapeutic Applications. Cancer Invest., 8:287-8, 1990.
60. Goldrosen, M.H., Biddle, W.C., Pancook, J., Bakshi, S., Vanderheyden, J-L., Fritzberg, A.R., Morgan, A.C., Jr., and Foon, K.A. Biodistribution Pharmacokinetic and Imaging Studies with Re-186 Labeled NR-LU-10 Whole Antibody in LS174T Colonic Tumor-Bearing Mice. Cancer Res., 50:7973-7978, 1990.
61. Beaumier, P.L., Venkatesan, P., Vanderheyden, J-L., Burgua, W.D., Kunz, L.L., Fritzberg, A.R., Abrams, P.G., Morgan, A.C., Jr., Rhenium-186 Radioimmunotherapy of Small Cell Lung Carcinoma Xenografts in Nude Mice. Cancer Res. 51:676-681, January 15, 1991.
62. Rao, T.N., Adhikesavalu, D., Camerman, A., Fritzberg, A.R. Synthesis and Characterization of Monooxorhenium (V) Complexes of Mercaptoacetylglycylglycylglycine. Crystal Structure of Tetrabutylammonium Oxo (mercaptoacetylglycylglycylglycine) rhenate (V). Inorganica Chim. Acta, 180:63-67, 1991.
63. Rao, T.N., Brixner, D.I., Srinivasan, A., Kasina, S., Vanderheyden, J-L., Wester, D.W., Fritzberg, A.R. Synthesis and Characterization of Diamide Dithiol Complexes of Technetium(V) and Rhenium(V). Assignment of the Stereochemistry of the Chelate Epimers by NMR Spectroscopy. Int. J. Appl. Rad. Isot., Appl., Radiat. Isot. 42:525-530, 1991.
64. Gustavson, L.M., Rao, T.N., Jones, D.S., Fritzberg, A.R., and Srinivasan, A. Synthesis of a New Class of Tc Chelating Agents: N2S2 Monoaminemonoamide (MAMA) Ligands. Tet. Lett.;32:5485-5488, 1991.
65. Yorke, E.D., Beaumier, P.L., Wessels, B.W., Fritzberg, A.R., Morgan, A.C., Jr. Optimal Antibody-Radionuclide Combinations for Clinical Radioimmunotherapy: a Predictive Model Based on Mouse Pharmacokinetics. In J. Rad. Appl. Instrum.;18:827-35, 1991.
66. Kasina, S., Rao, T.N., Srinivasan, A. Sanderson, J.A., Fitzner, J.N., Reno, J.M., Beaumier, P.L., Fritzberg, A.R. Development and Biologic Evaluation of a Kit for Preformed Chelate. J. Nucl. Med., 32:1445-51, 1991.
67. Beaumier, P.L., Vanderheyden, J-L, Venkatesan, P., Kunz, L.L., Duke, S.P., Abrams, P.G., Morgan, A.C., Fritzberg, A.R. Concurrent ¹⁸⁶Re Radioimmunotherapy and Chemotherapy of Experimental Small Cell Lung Cancer. Antibody Immunoconjugates, and Radiopharmaceuticals, 4:735-744, 1991.
68. Rao, T.N., Gustavson, L.M., Srinivasan, A., Kasina, S., and Fritzberg, A.R. Kinetics and Mechanism of Reactions of S-protected Dithiol Monoaminemonoamide (MAMA) ligands with Technetium-Thiolate-Thioether-MAMA Complex, a Kinetic Intermediate of the Reaction. Nucl. Med. Biol.;19: 889-895, 1992.
69. Fritzberg, A.R., Beaumier, P.L. Targeted proteins for diagnostic imaging: Does chemistry make a difference? J. Nucl. Med. 33:394-397, 1992.
70. Breitz, H.B., Weiden, P.L., Vanderheyden, J-L, Appelbaum, J.W., Bjorn, M.B., Fer, M.F., Wolf, S.B., Ratliff, B.A., Seiler, C.A., Foisie, D.C., Fisher, D.R., Schroff, R.W., Fritzberg, A.R., Abrams, P.G. Clinical Experience with Rhenium-186-labeled Monoclonal Antibodies for Radioimmunotherapy: Results of Phase I Trials. J. Nucl. Med. 33:1099-1112, 1992.
71. Anderson, D.C., Manger, R., Schroeder, J., Woodle, D., Barry, M., Morgan, A.C., and Fritzberg, A.R. Enhanced In Vitro Tumor Cell Retention and Internalization of Antibody Derivatized with Synthetic Peptides. Bioconjugate Chem. 4:10-18, 1993.
72. Anderson, D.C., Nichols, E., Manger, R., Woodle, D., Barry, M., Fritzberg, A.R. Tumor Cell Retention of Antibody Fab Fragments is Enhanced by an Attached HIV TAT Protein-Derived Peptide. Biochem Biophys Res Commun; July 30;194(2):876-84, 1993.

73. Weiden, P.L., Breitz, H.B., Seiler, C.A., Bjorn, M.J., Ratliff, B.A., Mallett, R.W., Beaumier, P.L., Appelbaum, J.W., Fritzberg, A.R., Salk, D.J. Rhenium (^{186}Re) Labeled Chimeric Antibody NR-LU-13: Pharmacokinetics, Biodistribution and Immunogenicity Relative to Murine Analogue NR-Lu-10. Journal of Nuclear Medicine;34:2111-2119, 1993.
74. Fritzberg, A.R., Beaumier, P.L., Reno, J.M. Approaches to Improved Antibody and Peptide Mediated Targeting for Imaging and Therapy of Cancer. Journal of Controlled Release; 28:167-173, 1994.
75. Fritzberg, A. R. Tissue perfusion of copper-62-PTSM: relevance of studies in animal models as predictors of clinical radiopharmaceutical performance. Journal Nuclear Medicine:36:1456-7, 1995.
76. Fritzberg, A.R. Biorecognition of Antibodies *in vivo*: Potential in Drug Targeting. Journal of Molecular Recognition; Vol. 9 309-315, 1996.
77. Chianelli, Marco, Signore, Alberto, Fritzberg, Alan R., and Mather, Stephen J. The Development of Technetium-99m-Labelled Interleukin-2: A new Radiopharmaceutical for the *In Vivo* Detection of Mononuclear Cell Infiltrates in Immune-Mediated Diseases. Nuclear Medicine & Biology; Vol. 24, pp. 579-586, 1997.
78. Axworthy, D.B., Reno, J.M., Hylarides, M.D., Mallett, R.W., Theodore, L.J., Gustavson, L.M., Su, F.-M., Hobson, L.J., Beaumier, P.L., Fritzberg, A.R. Cure of human carcinoma xenografts by a single dose of pretargeted yttrium-90 with negligible toxicity. Proc. Natl. Acad. Sci.; Vol. 97(4), pp. 1802-1807, February 15, 2000.
79. Rajendran, J. G., Eary, J. F., Bensinger, W., Durack, L. D., Vernon, C., Fritzberg, A. High dose ^{166}Ho -DOTMP in myeloablative treatment of multiple myeloma: pharmacokinetics, biodistribution and absorbed dose estimation. Journal of Nuclear Medicine:43:1383-1390, 2002.
80. Lewis, M. R., Wang, M., Axworthy, D. B., Theodore, L. J., Mallet, R. W., Fritzberg, A. R., Welch, M. J., Anderson, C. J. In vivo evaluation of pretargeted ^{64}Cu for tumor imaging and therapy. Journal of Nuclear Medicine:44:1284-1293, 2003.
81. Yao, Z, Zhang M, Garmestani K, Axworthy, DB, Mallet RW, Fritzberg AR, Theodore LJ, Plascjak PS, Eckelman WC, Waldmann TA, Pastan I, Paik CH, Brechbiel MW, Carrasquillo JA. Pretargeted alpha emitting radioimmunotherapy using (213)Bi 1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid-biotin. Clin Cancer Res. 103137-46, 2004.
82. Miao, Y., Hylarides, M., Fisher, D. R., Shelton, T., Moore, H., Wester, D. W., Fritzberg, A. R., Winkelman, C. T., Hoffman, T., Quinn, T. P. Melanoma therapy via peptide-targeted alpha radiation. Clinical Cancer Research: 11:5616-5621,2005.
83. Su, F-M., Beaumier, P, Atcher, R., Axworthy, D, Fritzberg, A. R., Pretargeted radioimmunotherapy in tumored mice using an In Vivo $^{212}\text{Pb}/^{212}\text{Bi}$ generator. Nuclear Medicine and Biology: 32:741-7, 2005.

Book Chapters

1. Fritzberg, A.R., Huckaby, D.: Development and Results of Routine Quality Control Procedures for Tc-99m Iminodiacetate Hepatobiliary Agents. In Proceedings of 2nd International Symposium of Radiopharmaceuticals, Seattle, Washington, March 1979, pp 545-554.
2. Fritzberg, A.R., Whitney, W.P., Klingensmith, W.C.: Mechanism of Biliary Excretion of Tc-99m-N,(2,6-diethylacetanilide)-iminodiacetate(diethyl-IDA). In Proceedings 2nd International Symposium of Radiopharmaceuticals, Seattle, Washington, March 1979, pp 577-586.
3. Fritzberg, A.R.: The Evaluation of Hepatocyte Function with Radiotracers. In Mechanisms of Localization of Radiotracers, Part B; Study of Cellular Function. Billinghamurst, M.W., ed. CRC Press, Inc., Florida, 1982, pp 73-92.

4. Fritzberg, A.R., Bloedow, D.C.: Animal Models in the Study of Hepatobiliary Radiopharmaceuticals. In Animal Models for Radiopharmaceuticals, Symp. Proc., Miami Beach, Florida, 1983, Springer-Verlag, pp 179-210.
5. Fritzberg, A.R.: Advances in Hepatobiliary Radiopharmaceuticals. In Radiopharmaceuticals: Advances and Clinical Perspective. Fritzberg, A.R., ed., CRC Press, Boca Raton, Florida, 1986, pp 89-116.
6. Fritzberg, A.R.: Advances in Renal Radiopharmaceuticals. In Radiopharmaceuticals: Advances and Clinical Perspective. Fritzberg, A.R., ed., CRC Press, Boca Raton, Florida, 1986, pp 61-87.
7. Fritzberg, A.R., Nunn, A.D.: Radio HPLC Application to Organics and Metal Chelate Chemistry. Analytical and Chromatographic Techniques in Radiopharmaceutical Chemistry, Wieland, D.W., ed., June 1984, Los Angeles, California, Springer-Verlag, 1985.
8. Nunn, A.D., Fritzberg, A.R.: Components for the Design of a Radio-HPLC System. Analytical and Chromatographic Techniques in Radiopharmaceutical Chemistry, Wieland, D.W., ed., June 1984, Los Angeles, California, Springer-Verlag, 1985, pp 103-124.
9. Fritzberg, A.R.: Pharmacology of ^{99m}Tc Hepatobiliary Radiopharmaceuticals. In Current Application in Radiopharmacology, Proc. 4th International Symposium on Radiopharmacology, Billingham, M.W., ed., Pergamon Press, pp 119-131, 1986, pp 183-212.
10. Abrams, P.G., Carrasquillo, J.A., Schroff, R.W., Eary, J.F., Fritzberg, A.R., Morgan, A.C., Wilbur, D.S., Beaumier, P.L., Larson, S.M., Nelp, W.B., Imaging and Therapy of Metastatic Carcinoma with Radiolabeled Monoclonal Antibodies, Principles of Cancer Biotherapy, ed. R.K. Oldham, Raven Press, Ltd., New York, 1987, pp 337-354.
11. Abrams, P., Schroff, R., Fritzberg, A., Morgan, A. Charles, Wilbur, D. Scott, Srinivasan, A., Reno, J., Sivam, G., Kasina, S., Vanderheyden, J-L, Beaumier, P., Salk, D., Fer, M. Controlled Labeling of Monoclonal Antibodies for Imaging Metastatic Cancer: A Prelude to Therapy. Human Tumor Antigens and Specific Tumor Therapy, Alan R. Liss, Inc., 1989, pp 191-197.
12. Ehrhardt, G.J., Ketring, A.R., Turpin, T.A., Razavi, M-S, Vanderheyden, J-L, Su, F.M., Fritzberg, A.R. A Convenient Tungsten-188/Rhenium-188 Generator for Radiotherapeutic Applications Using Low Specific Activity Tungsten-188 (Proceedings of 3rd Intl Symp Technetium in Chem & Nucl Med, Padua, Italy, 1989): Cortina International - Verona, pp 631-634.
13. Fritzberg, A.R., Vanderheyden, J-L., Morgan, A.C., Schroff, R.W., Abrams, P.G. Rhenium-186/-188 labeled antibodies for radioimmunotherapy. Technetium and Rhenium in Chemistry and Nuclear Medicine 3, Cortina International - Verona, pp 615-621, 1990.
14. Vanderheyden, J-L., Rao, T.N., Kasina, S., Wester, D., Su, F-M., Fritzberg, A.R. Structural and Biological Equivalence of Technetium and Rhenium Diamide Dithiolate Complexes: Application to Antibody Labeling. Technetium and Rhenium in Chemistry and Nuclear Medicine 3, Cortina International - Verona, pp 623-629, 1990.
15. Su, F-M, L. Lyen, Breitz, H. B., Weiden P. L., Fritzberg, A. R.: 186Rhenium MAG2GABA Antibody Radiolabelling for High Dose Radioimmunotherapy Studies. In Technetium and Rhenium in Chemistry and Nuclear Medicine, Nicolini, M., Bandoli, G., Mazzi U., eds, SGEEditoriali, Padova, pp. 511-517, 1995.
16. Abrams, P.G., Fritzberg, A.R., Salk, D.J.: Imaging and Therapy of Cancer with Specifically Targeted Radionuclides. In Biological Approaches to Cancer Treatment: Biomodulation. Mitchell, M.S. ed. McGraw-Hill Inc. pp 277-301 (in press).
17. Fritzberg, A.R., Wessels, B.W.: Radionuclide Therapy - General Principles. In Principles of Nuclear Medicine, 2nd Ed., Henry Wagner, ed. W.B. Saunders, In Press.

18. Fritzberg, A.R., Mears, C.F.: Metallic Radionuclides for Radioimmunotherapy. In Radioimmunotherapy of Cancer, Marcel Dekker, Inc. pp 57-79, 2000.
19. Theodore, L.J., Fritzberg, A.R., Schultz, J.E., Axworthy, D.B.: Evolution of a Pretarget Radioimmunotherapeutic Regimen. In Radioimmunotherapy of Cancer, Marcel Dekker, Inc. pp 195-221, 2000

Other Publications

1. Fritzberg, A.R.: Radiopharmaceutical Quality Control. Pharmacy Practice 12:83, 1977.
2. Fritzberg, A.R., Hendee, W.R.: Book Review of Radiopharmaceuticals II: Proceedings 2nd International Symposium on Radiopharmaceuticals. In Health Physics 39:587-588, 1980.
3. Fritzberg, A.R.: Book Review of Progress in Radiopharmacology, Vol. 2. In J. Nucl. Med., January 1982.
4. Dollaghan, H., Fritzberg, A.R.: The Chemistry of Good Cooking. Empire Magazine, The Denver Post, January 23, 1981.
5. Technetium-99m Radiopharmaceutical Contributor, "Highlights of Nuclear Medicine," Society of Nuclear Medicine Annual Meeting, 1979.

Books

1. Billinghamurst, M.W., Fritzberg, A.R.: Chemistry for Nuclear Medicine, Year Book Medical Publishers, September, 1981.
2. Fritzberg, A.R., Editor: Radiopharmaceuticals: Advances and Clinical Perspective, Vols. 1 and 2, editor, CRC Press, Boca Raton, Florida, 1986.
3. Abrams, P.G., Fritzberg, A.R., Editors: Radioimmunotherapy of Cancer, Marcel Dekker, Inc., New York, New York, 2000.