

## BIBLIOGRAPHY (11/28/01)

### **Clinical and Research Applications of Rhenium-188 from the Tungsten-188/Rhenium-188 Generator System**

#### **Published or In Press 2001:**

Andocs, G., Balogh, L., Bodo, K., Polyak, A., Methé, D. and Janoki, G. "Pharmacokinetic Evaluation of  $^{188}\text{Re}$ -HEDP in Healthy Beagle Dogs and Dogs Having Spontaneous Osteosarcoma," *For*, EANM Congress, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med.*, *in press* (2001).

Bacher, K., Thierens, H., Van de Putte, S., Brans, B., Monsieurs, M., and Dierckx, R. A. " $^{188}\text{Re}$ -Lipiodol: Prediction of the Patient Dose Based on  $^{131}\text{I}$ -Lipiodol Bi-Planar Scanning and Monte Carlo Simulation," *For*, EANM Congress, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med.*, *in press* (2001).

Bender, H., Guhlke, S., Ezzidin, S., Bangard, M., Palmedo, H., Zamora, P. S. and Biersack, H. J. "Biodistribution of  $^{188}\text{Re}$ -Labeled Somatostatin Analogue RC160 After Intrapleural Injection in Patients," *J. Nuc. Med.*, 42, 312P (2001).

Bender, H., Guhlke, S., Ezzidin, S., Bangard, M., Palmedo, H., Zamora, P. S. and Biersack, H. J. "Local Ablation of Solitary Metastases of Melanoma by  $^{188}\text{Re}$ -Labeled Somatostatin Analogue RC160," *J. Nuc. Med.*, 42, 312P (2001).

Bolzati, C., Sanimaria, M., Bosch, A., Uccelli, L., Duati, A., Riva, P. and Piffanelli, "An Improved Procedure for the Efficient Labeling of Antibodies with Re-188," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S564-S566 (2001).

Buchman, I., Bunjes, D., Rattat, D., Glatting, G., Kotzerke, J., Doehner, H., Martin, H. and Reske, S. N. "Myeloablative Radioimmunotherapy with  $^{188}\text{Re}$ -Labeled Anti-CD66-MAb Prior to Stem Cell Transplantation of Leukemia Patients: Correlation of Bone Marrow Dose and Engraftment as Well as Probability of Relapse," *J. Nuc. Med.*, 42, 123P (2001).

Chang, Y. S., Jeong, J. M., Baek, M. Y., Lee, S. J., Kim, J. K., Lee, D. S., Chung, J.-K. and Lee, M. C. "Development of  $^{188}\text{Re}$ -Tin Colloid-Coated Balloon for the Prevention of Coronary Restenosis," *J. Nuc. Med.*, 42, 71P (2001).

Chen, F. D., Hsieh, B. T., Wang, H. E., Ou, Y. H., Yang, W. K., Whang-Peng, J., Liu, R. S., Knapp, F. F., Ting, G. and Yen, S. H. "Efficacy of Re-188-Labelled Sulfur Colloid on Prolongation of Survival Time in Melanoma-Bearing Animals," *Nucl. Med. Biol.*, 28, 835-844 (2001).

Cheng, Z., Chen, J. Q., Quinn, T. P. and Jurrison, S. S. "Radioidination of Rhenium Cyclized "MSH Analogs Via D-Lysine," *J. Nuc. Med.*, 42, 112P (2001).

Chung, J.-K., Kim, Y. J., Jeong, J. M., Lee, Y.-S., Lee, D. S., Suh, Y.-G., and Lim, M. C. "Preparation of Lipiodol Solution of  $^{188}\text{Re}$ -4-Hexadecyl-2,2,9,9-Tetramethyl-4,7-Diaza-1,10-Decanethiol (HTDD) for Treatment of Liver Cancer," *For*, EANM Congress, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med.*, *in press* (2001)

Crudo, J. L., Edreira, M. M., Obenau, E. R., and de Castiglia, S. G. "Labeling of the Anti-Melanoma 14F7 Monoclonal Antibody with Rhenium-188 using a Pre-Labeled MAG3 Chelate: Optimization, *In Vitro* and *In Vivo* Analysis," *For*, EANM Congress, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med.*, *in press* (2001).

Fassbender, M., Phillips, D. R., Ott, K. C. and Arterburn, J. B. "Non-Carrier-Added  $^{186,188}\text{Re}$ -Labeled 17'-Ethynylestradiol: A Potential Breast Cancer Imaging and Therapy Agent," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S657 (2001).

Gali, H., Hoffman, T. J., Sieckman, G. L. Owen, N. K., Katti, K. V. and Volkert, W. A. "Synthesis, Characterization, and Labeling with  $^{99m}\text{Tc}/^{188}\text{Re}$  of Peptide Conjugates Containing a Dithia-bisphosphine Chelating Agent," *Bioconj. Chem.*, 12, 354-363 (2001).

Garcia-Salinas, L., Ferro-Flores, G., Artega-Murphy, C., Pedraza-Lopez, M., Hernandez-Gutierrez, S. and Azorin-Nieto, J. "Uptake of the  $^{188}\text{Re(V)}$ -DMSA Complex by Cervical Carcinoma Cells in Nude Mice: Pharmacokinetics and Dosimetry," *Appl. Radiat. Isot.*, 54, 413-418 (2001).

Gestin, J. F., Loussouram, A., Berdies, M., Gautherot, E., Gruaz-Guyon, A., Sai-Maurel, C., Barbet, J., Curtet, C., Chatal, J. F. and Faivre-Chauvet, A. "Two-Step Targeting of Xenografted Colon Carcinoma Using Bispecific Antibody and  $^{188}\text{Re}$ -Labeled Bivalent Hapten: Biodistribution and Dosimetry Studies," *J. Nucl. Med.*, 42, 146-153 (2001).

Hafeli, U., Roberts, W. K., Pauer, G. J., Kraeft, S.-K. and Macklis, R. M. "Stability of Biodegradable Radioactive Rhenium (Re-186 and Re-188) Microspheres After Neutron-Activation," *Appl. Radiat. Isot.*, 54, 869-879 (2001).

Hausleiter, J., Li, A., Makkar, R., Berman, D., Robinson, A., Litvack, F., Eigler, N. and Whiting, J. "Leakage of a Liquid  $^{188}\text{Re}$ -Filled Balloon System During Intracoronary Brachytherapy. A Case Report," *Cardiovasc. Radiat. Med.*, 2, 7-10 (2001).

Jeong, J. M., Kim, Y. J., Lee, Y.-S., Lee, D. S., Chung, J. K., Cho, J.-H., Suh, Y. G. and Lee, M. C. "Introduction of Long Alkyl Group Helps Uptake and Retention of Lipiodol Solution of  $^{188}\text{Re}$ -N2S2 Derivatives in the Tissues," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S532-S533 (2001).

Jeong, J. M., Kim, Y. K., Lee, Y. S., Ko, J. I., Son, M., Lee, D. S., Chung, J.-K., Park, J. H. and Lee, M. C. "Lipiodol Solution of a Lipophilic Agent,  $^{188}\text{Re}$ -TDD, for the Treatment of Liver Cancer," *Nucl. Med. Biol.*, 28, 197-204 (2001).

Kim, Y. J., Lee, Y. S., Joeng, J. M., Lee, D. S., Chung, J.-K. and Lee, M. C. "Increased Tissue Uptake and Retention of Lipiodol Solution of  $^{188}\text{Re-N}_2\text{S}_2$  Derivatives After Introduction of Long Chain Alkyl Groups," *J. Nuc. Med.*, 42, 116P (2001).

Knapp, F. F., Jr., Spencer, R. and Kropp, J. "Intravascular Radiation Therapy with Radioactive Liquid-Filled Balloons for inhibition of Restenosis After Angioplasty - A New Opportunity for Nuclear Medicine ?," *J. Nucl. Med.*, 42, 1384-1387 (2001).

Knapp, F. F., Jr. "Therapeutic Applications of Rhenium-188 - New Opportunities for Nuclear Medicine, Oncology and Interventional Cardiology," *IAEA Training Course on Nuclear Oncology*, European Nuclear Medicine Congress, Naples, Italy, August 24-29, 2001 (*Invited*).

Knapp, F. F., Jr. "Rhenium-188-Labeled Radiopharmaceuticals," *For, 25<sup>th</sup> International Symposium on Radioactive Isotopes in Clinical Medicine and Research*, Bad Gastein, Austria, January 8-11, 2002 , *Invited*.

Lee, T. S., Ahn, S. H., Lim, S. J., Chung, W. S., Lee, S. J., Woo, K. S., Choi, C. W., and Lim, S. M. "Comparison of the Preparation and *In Vivo* Stability Between  $^{188}\text{Re-MAG3-Lym-1}$  and  $^{188}\text{Re-HYNIC-LYM-1}$  Immunoconjugates for Radioimmunotherapy," *For, EANM Congress*, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med., in press* (2001).

Liepe, K., Hliscs, R., Kropp, J., Runge, R., Knapp, F. F. and Franke, W. G. "Radiation Adsorbed Dose pf Rhenium-188-HEDP in Bone Metastases, Bone Marrow and Bone Surface," *For, EANM Congress*, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med., in press* (2001).

Lim, S. J., Woo, K. S., Kim, E. H., Chung, W. S., Lee, S. J., Lee, T. S., Choi, C. W. and Lim, S. M. "G2 Arrest and Apoptosis of Cultured RAJI Cells by Continuous Low Dose Rate Beta Particle Irradiation Therapy with  $^{188}\text{Re-Perrhentae}$ ," *For, EANM Congress*, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med., in press* (2001).

Lisic, E. C., Philips, M., Ensor, D., Nash, K. L., Beets, A. L. and Knapp, F. F., Jr. "Synthesis of a New Bisphosphonic Acid Ligand (SEDP) and Preparation of a  $^{188}\text{Re-(Sn)SEDP}$  Bone Seeking Radiotracer," *Nucl. Med. Biol.*, 28, 419-424 (2001).

Makker, R., Whiting, J., Li, A., Hidehiko, H., Fishbein, M. C., Knapp, F. F., Jr., Litvack, F. and Eigler, N. L. "Effects of  $\beta^-$ -Emitting Liquid Isotope (Rhenium-188) Filled Balloon in Stented Porcine Coronaries: An Angiographic, Intravascular Ultrasound and Histomorphometric Follow-up Study," *Circulation*, 102, 117-3123 (2001).

Melendez-Alafort, L. and Mather, S. J. " $^{188}\text{Rhenium-Labelling of HYNIC-[Tyr}^3\text{]Octreotide}$ ," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S685-S687 (2001).

Murray, A., Simms, M. S., Schofield, D. P., Vincent, R. M., Denton, G., Bishop, M. C., Prince, M. R. and Pekins, A. C. "Production and Characterization of  $^{188}\text{Re-C595}$  Antibody for Radioimmunotherapy of Transitional Cell Baldder Cancer," *J. Nucl. Med.*, 42, 726-732 (2001).

Murray A., Scholfield, D. P., Schibli, R., Novak, I., Waibel, R., Vincent, R. M. and Perkins, A. C. "A Preliminary Comparison of methods for Production of <sup>188</sup>Re-C595 Antibody for Radioimmunotherapy of Bladder Cancer," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S573-S575 (2001).

Murphy, C. A., Ferro-Flores, G., Pedraza-Lopez, M., Melendez-Alafort, L., Croft, B. Y., Raimrez, F. M. and Padilla, J. "Labelling of Re-ABP with <sup>188</sup>Re for Bone Pain Palliation," *Appl. Radiat. Isot.*, 54, 435-442 (2001).

Nowak, B., Goergen, T., Meyer, J., Block, S., Schaefer, W., Hoecker, H., Guenther, R. and Buell, U. "Development and Dosimetry of a <sup>188</sup>Rhenium-Labelled Vascular Stent," *J. Nuc. Med.*, 42, 161P (2001).

Oh, S. J., Moon, D. H., Ha, H.-J., Park, A. W., Hong, M. K., Park, S. J., Choi, T. H., Lim, S. M., Choi, C. W., Knapp, F. F., Jr. and Lee, H. K. "Synthesis of Highly Concentrated <sup>188</sup>Re-MAG3 and Automation for Intracoronary Radiation Therapy," *Appl. Rad. Isot.*, 54, 419-427 (2001).

Oh, S. J., Moon, D. H., Park, S. W. and Lee, H. K. "A New Automated System for Routine Preparation of <sup>188</sup>Re-Labeled Radiopharmaceuticals," *J. Nuc. Med.*, 42, 265P (2001).

Paeng, J. C., Jeong, J. M., Cheon, C. J., Kim, Y. K., Chung, J.-K., Lee, M. C., Lee, K. H. and Park, J. H. "Dosimetry of <sup>188</sup>Re-N<sub>2</sub>S<sub>2</sub>-Lipiodol in Liver Cancer-Bearing Rabbits After Transhepatic Arterial Administration," *J. Nuc. Med.*, 42, 246P (2001).

Park, S.-J. "4R: Korean Clinical Trial Using Rhenium-188 Liquid-Filled Balloons," In, *Proceedings, Cardiovascular Radiation Therapy V Syllabus*, Washington, D.C., February 4-7, 2001.

Pedone, C., Morelli, G., De Luca, S., Dolmella, A., Mazzi, U., Saviano, M., Tesauro, D. and Visentin, R. "New Peptide Conjugates As Ligand for Cholecystokinin Receptor Labelled with Rhenium," For, EANM Congress, Naples, Italy, August 24-29, 2001, *Eur. J. Nucl. Med.*, *in press* (2001).

Pirmettis, I., Limouris, G. S., Bouziotis, P., Papadopolous, M., Knapp, F. F., Jr. and Chiotellis, E. "Pentavalent Rhenium-188 Dimercaptosuccinic Acid: A New Kit Formulation and its Initial Evaluation in Mice," *Radiochimica Acta*, 89, 115-118 (2001).

Reske, S. N., Bunjes, D., Buchmann, I., Seitz, U., Glatting, G., Neumaier, B., Kotzerke, J., Buck, A., Martin, H., Doehner, H. and Begemann, L. "Targeted Bone Marrow Ablation in the Conditioning of High-Risk Leukaemia Prior to Stem Cell Transplantation," *Eur. J. Nucl. Med.*, 28, 807-815 (2001).

Savio, E., Gaudiano, J., Robles, A., Martinez, G., Leon, A., Verdera, S., Muniz, S., Hermida, J. C. and Knapp, F. F., Jr. "Rhenium-188 HEDP: Pharmacokinetic Characterization in Osseous Metastatic Patients and Clinical Evaluation," *Eur. J. Nucl. Med.*, submitted.

Schibli, R., Alberto, R., Petrig, J., Ortner, K., Schmalle, H., Sigrisi, B., Stahel, J., Schwarzbach, R. and Schubiger, P. A. "Making the Step from Diagnosis to Therapy: Improved <sup>99m</sup>Tc/<sup>188</sup>Re-Tricarbonyl Preparation for High Specific Activity Labeling of Biomolecules," *J. Lab. Cmpds. Radiopharm.*, 44, Suppl. 1, S723-S725 (2001).

Schoetzig, U., Schrader, H., Schoenfled, E., Guenther, E. and Klein, R. "Standardization of <sup>177</sup>Lu and <sup>188</sup>Re," *Appl. Radit. Isot.*, 55, 89-96 (2001).

Schuelen, H., Eigler, N., Whiting, J. S., Haubner, R., Hausleiter, J., Dirhinger, J., Kastrati, A., Schwaiger, M. and Schoemig, A. "Usefulness of Intracoronary Brachytherapy for In-Stent Restenosis with a <sup>188</sup>Re Liquid-Filled Balloon," *Amer. J. Cardiol.*, 87, 463-466 (2001).

Turner, J. H., Faivre-Chauvert, A., Loussouran, A., Rose, A. H., Gestin, J.-F., Barbert, J. and Chatal, J.-F. "Preclinical 2-Step Radioimmunotherapy in a Large Animal Model: F6 679 Antibody: <sup>188</sup>Re AG 8-0 Hapten in Human Colony Cancer Xenografts in Sheep," *J. Nuc. Med.*, 42, 316P (2001).

Waksman, R. "Rhenium and W-188 Cather-Based Systems," *In, Proceedings, Cardiovascular Radiation Therapy V Syllabus*, Washington, D.C., February 4-7, 2001.

Wang, S. J., Zhang, C. L., Yu, L. Z., Bai, Y. and Guo, Y. F. "Labeling Study and Bio-Activity Evaluation of Re-188-Anti Bladder Cancer Monoclonal Antibody BDI-1," *For, EANM Congress, Naples, Italy, August 24-29, 2001, Eur. J. Nucl. Med.*, *in press* (2001).

Wang, S. J., Lin, W. Y., Chen, M. N., Chen, J. T., Ho, W.-L., Hsieh, B.-T., Huang, H., Shen, L.-H., Ting, G. and Knapp, F. F., Jr. "Histologic Study of Effects of Radiation Synovectomy with Rhenium-188 Microsphere," *Nucl. Med. Biol.*, 28, 727-732 (2001).

Wang, S. J., Lin, W. Y., Chen, M. N., Hsieh, B. T., Huang, H., Shen, L. H. and Ting, G. "Histologic Study of the Effects of Radiation Synovectomy with Rhenium-188 Microsphere," *EANM Congress, Naples, Italy, August 24-29, 2001, Eur. J. Nucl. Med.*, 28, 1244 (2001) (Abstract).

R. Wang, Zhang, C., Yu, L., Guo, Y. and Bai, Y. "Radiochemical Synthesis and Preliminary Evaluation of Anti-Bladder Cancer Monoclonal Antibody BDI-1 labeled with Rhenium-188," *J. Label. Cmpds. Radiopharm.*, 44, 437-444 (2001).

Weinberger, J. and Knapp, F. F., Jr. "Use of Liquid-Filled Balloons for Coronary Irradiation," *In, Vascular Brachytherapy*, R. Waksman, Editor, *Third Edition*, Futura Publishing Co., Inc., Armonk, NY, *in press*.

Weinberger, J. "Human Experience with Rhenium-188 Liquid-Filled Balloon," *In, Proceedings, Cardiovascular Radiation Therapy V Syllabus*, Washington, D.C., February 4-7, 2001.

Whiting, J. "Dosimetry Calculations for Liquid-Filled Balloons," *In, Proceedings, Cardiovascular Radiation Therapy V Syllabus*, Washington, D.C., February 4-7, 2001.

Wong, E., Bennett, S., Lawrence, B., Fauconnier, T., Lu, L. F. L., bell, R. A., thornback, J. R> and Eschima, D. "Tuftsin receptor-Binding Peptide Labeled with technetium: Chemistry and Preliminary receptor-Binding Study," *Inorg. Chem.*, 40, 5695-5700. (I.e. Cold Re-complex also described).

Wohlfstrom, M., Kotzerke, J., Kamena, J., Eble, M., Hess, B., Wohrle, J., Reske, S. N., Hombach, V., Hanke, H. and Hoher, M. "Endovascular Irradiation with the Liquid Beta-Emitter Rhenium-188 to Reduce Restenosis After Experimental Wall Injury," *Cardiovasc. Res.*, 49, 169-176 (2001).

Zinn, K. R., Coan, P. N., Pearson, D. A., Azure, M. T., Guaraldi, M. T., Manchanda, R., Lister-James, J. and Dean, R. T. "Dosimetry Evaluation of <sup>188</sup>Re P2045 in Primates as Determined by Necropsy and Scintigraphic Region of Interest Analysis Biodistribution Methods," *J. Nuc. Med.*, 42, 69P (2001).

***Published in 2000:***

Azure, M. Guaraldi, M. T., Zinn, K. R., Coan, P. N., Pearson, A., Wilson, D. M., Cyr, J. E., Manachada, R., Lister-James, J. and Dean, R. T. "Dosimetry Evaluation of Rhenium <sup>188</sup>Re-P2045 in Primates as Determined by Necropsy and Scintigraphic Region of Interest Analysis Biodistribution Methods," *In, Proceedings, 2000 international Chemical Congress of Pacificchem Basin Societies*, Honolulu, Hawaii, December 14-19, 2000.

Banerjee, S., Samuel, G., Das, T., Sarma, H. D., Kothari, K. and Pillai, M. R. A., "A Novel N<sub>2</sub>S<sub>2</sub> Bifunctional Chelating Agent and its Radiolabeling with <sup>99m</sup>Tc and <sup>188</sup>Re," *J. Nucl. Med.*, 41 (Supplement), 248P (2000).

Bernhardt, P., Benjegard, S. A., Koelby, L., Johanson, V., Nilsson, O., Ahlman, H. and Forssell-Aronsson, E. "Dosimetric Comparison of Radionuclides for Therapy of Somatostatin Receptor-Expressing Tumors," *Nucl. Med. Commun.*, 21, 566 (2000).

Blower, P. J., Kettle, A. G., O'Doherty, M. J. O., Coakley, A. J. and Knapp, F. F., Jr. "<sup>99m</sup>Tc(V)DMSA Quantitatively Predicts <sup>188</sup>Re(V)DMSA Distribution in Patients with Prostate Cancer Metastatic to Bone," *Eur. J. Nucl. Med.*, 27, 1405-1409 (2000).

Blower, P. J. and Prakash, S. "The Chemistry of Rhenium in Nuclear Medicine," *In, Perspectives on Bioinorganic Chemistry*, JAI Press, Inc., 91-143 , 2000.

Blower, P. J., Kettle, A. G., O'Doherty, M. J., Coakley, A. J. and Knapp, F. F., Jr. "<sup>99m</sup>Tc(V)DMSA Quantitatively Predicts <sup>188</sup>Re(V)DMSA Distribution," 28<sup>th</sup> Annual Meeting, British Nuclear Medicine Society, Brighton, UK, April 10-12, 2000.

Blower, P. J., Kettle, A. G., O'Doherty, M. J. and Knapp, F. F., Jr. "Quantitative Prediction of <sup>188</sup>Re(V)DMSA Distribution from <sup>99m</sup>Tc(V)DMSA Scans for Targeted Radiotherapy Planning," *J. Nucl. Med.*, 41 (Supplement), 274P (2000).

Boch, M., Bruchertseifer, F., Haubner, R., Senekowitsch-Schmidtke, R., Kessler, H., Schwaiger, M. and Wester, H. J. "<sup>99m</sup>Tc, <sup>188</sup>Re and <sup>90</sup>Y-Labelled ",-\$-Antagonists: Promising Tracers for Tumor Induced Angiogenesis," *J. Nucl. Med.*, 41 (Supplement), 41P (2000).

Bolzati, C., Boschi, A., Uccelli, L., Duatti, A., Franceschini, R. and Piffanelli, A. "An Alternative Approach to the Preparation of <sup>188</sup>Re Radiopharmaceuticals from Generator-Produced [<sup>188</sup>ReO<sub>4</sub>]:

Efficient Synthesis of <sup>188</sup>Re(V)-meso-2,3-Dimercaptosuccinic Acid," *Nucl. Med. Biol.*, 29, 309-314 (2000).

Buchman, I., Bunjes, D., Kotzerke, J., Seitz, U., Glatting, G., Rattat, D., Martin, H. J., Doehner, H. and Reske, S. N. "Radioimmunotherapy with <sup>188</sup>Re Labelled Anti-CD36 Antibody for Myeloablation Prior to Stem Cell transplantation in High Risk Leukemia Patients," *J. Nucl. Med.*, 41 (Supplement), 31P (2000).

Buchman, I., Bunjes, D., Seitz, U., Neumaier, B., Kotzerke, J., Bergmann, L. and Reske, S. N. "Radioimmunotherapy for Myeloablation Prior to Stem Cell Transplantation with Re-188 CD 66 a,b,c,d,e Antibody in High Risk Leukemia Patients," *Eur. J. Nucl. Med.*, 27, S81 (2000).

Buck, A. K., Schirrmeyer, H., Guhlmann, I., Glatting, G., Kotzerke, J. and Reske, S. N. "Acute Side Effects of Radioimmunotherapy with <sup>188</sup>Re-Labeled Anti-CD-66 A,B,C,E Antibody for Conditioning to Bone Marrow Transplantation in Acute Leukemia," *J. Nucl. Med.*, 41 (Supplement), 79P (2000).

Cha, I.-H., Lee, M. M., Sung, J. D., Kim, H. S., Sohn, D. W., Oh, B. H., Park, Y. B., Choi, Y. S., Lee, Y. W., Lee, M. C., Chung, J.-K. and Lee, D. S. "Intracoronary Irradiation with <sup>188</sup>Re-Filled Balloon System to Reduce Restenosis after Coronary Interventions," *J. Nucl. Med.*, 41 (Supplement), 128P (2000).

Chen, S. L. "Treatment of Metastatic Bone Pain with <sup>188</sup>Re-HEDP," *J. Nucl. Med.*, 41 (Supplement), 265P (2000).

Cheon, G. J., Jeong, J. M., Song, Y. W., Lee, E. B., Lee, Y. T., Son, M., Yeo, J. S., Lee, D. S., Chung, J.-K. and Lee, Y. T. "Safety and Effectiveness of <sup>188</sup>Re Tin Colloid for Radiation Synovectomy in the Steroid Non-Responsive Rheumatoid Arthritis Patients," *J. Nucl. Med.*, 41 (Supplement), 94P (2000).

Coursey, B. M., Colle', R., Zimmerman, B. E. and Cessna, J. T. "National Radioactivity Standards for Beta-Emitting Radionuclides Used in Intravascular Brachytherapy," *Int. J. Radiat. Oncol. Biol. Physics, in press*

Dean, R. T. "Progress in Targeted Radiotherapy: Improving the Therapeutic Index," *In, Proceedings, 2000 international Chemical Congress of Pacificchem Basin Societies, Honolulu, Hawaii, December 14-19, 2000.*

Dinkelborg, L. M., Tepe, G., Noll, B., Muschik, P. and Duda, S. H. "<sup>186</sup>Re-Labeled Stents for Prophylaxis of Restenosis: First Animal Results," *J. Nucl. Med., 41* (Supplement), 7P (2000).

Du, J., Marques, M., Hiltunen, J., Nilsson, S. and Holmberg, A. R. "Radiolabeling of Dextran with Rhenium-188," *Appl. Radiat. Isot., 53*, 443-448 (2000).

Eidherr, H., Miiterhauser, M., Krcal, A., Bartosch, E., Zettining, G., Knapp, F. F., Jr. and Dudczak, R. "Evaluation of the <sup>188</sup>W/<sup>188</sup>Re Generator and Online Concentration System," *In, Proceedings, 24<sup>th</sup> International Symposium on Radioactive Isotopes in Clinical Medicine and Research, Bad Gastein, Austria, January 11-14, 2000; Eur. J. Nucl. Med., 27*, S92 (2000).

Eigler, N., Whiting, J., Makkar, R., Honda, H., Knapp, F. F., Jr. Livack, F. and Li, A. "Radian<sup>TM</sup> Liquid Isotope Intravascular Radiation Therapy System," *In, Proceedings, Cardiovascular Radiation Therapy IV Syllabus, Washington, D.C. February 18-20, 2000, p. 514-517.*

Faintuch, B. L., Pereia, N. S. and Silva, C. P. "Optimization of Labeling of Lanreotide and Octreotide with <sup>188</sup>Re for Radioimmunotherapy," *J. Nucl. Med., 41* (Supplement), 253P (2000).

Fox, R. A. and Henson, P. W. "The Dosimetry for a Coronary Artery Stent Coated with Radioactive <sup>188</sup>Re and <sup>32</sup>P," *Phys. Med. Biol., 45*, 3643-3655 (2000).

Glatting, G., Kotzerke, J., Wller, R., Seitz, U., Neumaier, B., Buchmann, I., Bunjes, D. and Reske, S. N. "Radioimmunotherapy Before Stem Cell Transplantation: Dependence of Dosimetry on the Length of the Measured Time Interval," *J. Nucl. Med., 41* (Supplement), 239P (2000).

Granadas, O. H., Stevens, S. L., Donnell, R. L., Costanza, M. J., Spencer R. H., Knapp, F. F., Jr., Shoieb, A. M., Brown, K. J., Reddick, T. T., Freeman, M. B. and Goldman, M. H. "Effect of Intravascular Radiation on the Distribution of Macrophages, Platelet-Derived Growth Factor and Transforming Growth Factor in the Swine Iliac Artery," *Annals Vasc. Surg., in press*.

Guhlke, S., Beets, A. L., Mirzadeh, S., Biersack, H.-J. and Knapp, F. F. (Russ), Jr. "Tandem Cation/Anion Column Treatment of Ammonium Acetate Eluants of the Alumina-Based Tungsten-188/Rhenium-188 Generator: A New Simple Method for Effective Concentration of Rhenium-188 Solutions," *J. Nucl. Med., 41*, 1271-1278 (2000).

Guhlke, S., Beets, A. L., Mirzadeh, S., Biersack, H.-J. and Knapp, F. F. (Russ), Jr. "Tandem Cation/Anion Column Treatment of Ammonium Acetate Eluants of the Alumina-Based

Tungsten-188/Rhenium-188 Generator: A New Simple Method for Effective Concentration of Rhenium-188 Perrhenate Solutions," *J. Nucl. Med.*, 41, 1271-1278 (2000).

Hafeli, U., Pauer, G. J. and Erzurum, V. Z. "Local Application of  $\gamma$ -Emitting Rhenium-188 to Reduce Venous Intimal Hyperplasia in PTFE AV Grafts," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 16-18, 2000; *Abstract 23* (2000).

Hafeli, U. O., Roberts, W. K., Meier, D. S., Ciezki, J. P., Pauer, G. J., Lee, E. J. and Weinhous, M. S. "Dosimetry of a W-188/Re-188 Beta Line Source for Endovascular Brachytherapy," *Med. Phys.*, 27, 668-675 (2000).

Haubner, R., Wester, H. J., Bock, M. Bruchersifer, F., Senekowitsch-Schmidtko, R., Kessler, H. and Schwaiger, M. "Targeting of  $\alpha_5\beta_1$  Integrins Using Cyclic RGD-Peptides labeled with [ $^{123/131}\text{I}$ ]Iodine, [ $^{18}\text{F}$ ]-fluorine, [ $^{99m}\text{Tc}$ ]Technetium, [ $^{188}\text{Re}$ ]Rhenium and [ $^{88/90}\text{Y}$ ]Yttrium," *Nucl. Med. Commun.*, 21, 571 (2000).

Hoher, M., Woerle, J., Wohlfom, M. Hanke, H., Voisard, R., Osterhues, H., Kochs, M., Reske, S. N., Hombach, V. and Kotzerke, J. "Intracoronary  $\gamma$ -Irradiation with a Liquid  $^{188}\text{Re}$ -Filled Balloon," *Circulation*, 101, 2355-2360 (2000).

Hoher, M. Wohrie, J., Schutte, C., Reske, S. N. and Kotzerke, J. "Intracoronary Radiotherapy with Liquid Rhenium-188 to Prevent Restenosis Following Balloon Angioplasty - First Results from a Randomized Trial," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 16-18, 2000, *Abstract 34* (2000).

Hsieh, B.-T., Leung, S. W., Iin, W.-Y., Huang, H.-T., Ting, G., Wang and S.-J. "Rhenium-188-Labeled DTPA for Intravascular Radiation Therapy," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 16-18, 2000, *Abstract 33* (2000).

Huang, G. and Ren, Q. "The Relation Between Irradiation Dose of  $^{188}\text{Re}$  and Smooth Muscle Cells Proliferation and Apoptosis," *J. Nucl. Med.*, 41 (Supplement), 1P (2000).

Jeong, J. M., Lee, Y. J., Kim, Y. J., Chang, Y. S., Lee, D. S., Chung, J.-K., Song, Y. W. and Lee, M. C. "Preparation of Rhenium-188-Tin Colloid as a Radiation Synovectomy Agent and Comparison with Rhenium-188-Sulfur Colloid," *Appl. Radiat. Isot.*, 52, 851-855 (2000).

Karacay, H., McBride, Griffiths, G. L., Sharkey, R. M., Barbet, J., Hansen, H. and Goldenberg, D. M. "Experimental Pretargeting Studies of Cancer with a Humanized anti-CEA x Murine Anti-[In-DTPA] Bispecific Antibody Construct and a ( $99m\text{Tc}/188\text{Re}$ )-Labeled Peptide," *Bioconj. Chem.*, 11, 842-854 (2000).

Karacay, H., McBride, W. J., Sharkey, R. M., Griffiths, G. L., Spiegelman, H., Hansen, H. and Goldenberg, D. M. "Humanized Anti-CEA X Chimeric Anti[Indium-DTPA]Bispecific Antibody (bisMAb) Conjugates for Radioimmunotherapy of CEA-Positive Tumors with  $^{188}\text{Re}$ ," *J. Nucl. Med.*, 41 (Supplement), 120P (2000).

Knapp, F. F., Jr., Mirzadeh, S. and Beets, A . L. "Tungsten-188/Rhenium-188 Generators Using Tungsten-188 Reactor-Produced from Irradiation of Natural Tungsten Targets," *J. Nucl. Med.*, 41 (Supplement), 149P (2000).

Knapp, F. F., Jr. "Rhenium-188 Labeled Radioactive Particles and Other Radiopharmaceuticals for the Treatment of Liver Cancer," In, *Proceedings, IAEA Workshop on Radionuclide Treatment of Liver Cancer*, Singapore, February 14-18, 2000.

Kotzerke, J., Glatting, G., Seitz, U., Rentschler, M., Neumaier, B., Bunjes, D., Duncker, C., Dohr, D., Bergmann, L. and Reske, S. N. "Radioimmunotherapy for the Intensification of Conditioning Before Stem Cell Transplantation: Differences in Dosimetry and Biokinetics of <sup>188</sup>Re- and <sup>99m</sup>Tc-Labeled Anti-NCA-95 Mabs," *J. Nucl. Med.*, 41, 531-537 (2000).

Kotzerke, J., Woehrle, J., Hanke, H., Hombach, V., Reske, S. N. and Hoher, M. "Successful Prevention of Restenosis after PTCA by <sup>188</sup>Re-Filled Balloon Catheter - Preliminary Results from the ECRIS-2 Trial," *J. Nucl. Med.*, 41 (Supplement), 128P (2000).

Lee, J. L., Lee, D. S., Kim, K. M., Yeo, J. S., Cheon, G. J., Kim, S. K., Ahn, J. Y., Jeong, J. M., Chung, J. K. and Lee., M. C. "Dosimetry of Rhenium-188 Diethylenetriaminepentaacetic Acid for Endovascular Intra-Balloon Brachytherapy After Coronayr Angioplasty," *Eur. J. Nucl. Med.*, 27, 76-82 (2000).

Lee, J., Lee, D. S., Kim, K. M., Yeo, J. S., Cheon, S. Y., Kim, S. K., Ahn, J. Y., Jeong, J. M., Chung, J.-K. and Lee, M. C. "Dosmietry of Rhenium-188 Diethylenetriaminepentaacetic Acid for Endovascular Intra-Balloon Brachytherapy After Coronary Angioplasty," *Eur. J. Nucl. Med.*, 27, 76-82 (2000).

Lee, J. S., Choi, C. W., Kim, B. I., Yang, W. I., Lim, S. M. and Hong, S. W. "Evaluation of Adsorbed Dose of <sup>188</sup>Re-HEDP in Patients with Bone Metastases Using Gamma Camera," *J. Nucl. Med.*, 41 (Supplement), 239P (2000).

Liepe, K., Hliscs, R., Kropp, J., Ningl, T. G., Rungel, R., Koch, R., Knapp, F. F., Jr. and Franke, W.-G. "Rhenium-188-HEDP in the Palliative Treatment of Bone Metastases," *Eur. J. Nucl. Med.*, submitted.

Liepe, K., Kropp, J., Hliscs, R., Runge, R., Knapp, F. F., Jr. and Franke, W.-G. "Radiation Dosimetry of Rhenium-188-HEDP in the Therapy of Painful Bone Metastases," *Eur. J. Nucl. Med.*, submitted.

Liepe, J. K., Kropp, J., Hliscs, R., Runge, R., Knapp, F. F., Jr. and Franke, W. G. "Radiation Dose of <sup>188</sup>Re in Bone Metastases," *J. Nucl. Med.*, 41 (Supplement), 266P (2000).

Limouris, G. S., Pirmetiis, I., Frantzis, A. P., Shukla, S. K., Voliotopolous, V., Lyra, M., Dardoufas, K., Kouvaris, I., Knapp, F. F., Jr., Stavraka, A. and Vlahos, I. "Rhenium-188 (Sn)-Labeled HEDP and -(V)-DMSA in the Treatment of Painful Osseous and Disseminated Soft Tissue Metastases," In, *Proceedings, 24<sup>th</sup> International Symposium on Radioactive Isotopes in Clinical Medicine and Research*, Bad Gastein, Austria, January 11-14, 2000; *Eur. J. Nucl. Med.*, 27, S85 (2000).

Lin, W. Y. and Wang, S. J. "Evaluation of the Biodistribution and Excretion Kinetics of Three  $^{188}\text{Re}$ -Candidates for Intravascular Radiation Therapy with Liquid-Filled Balloons to Prevent Restenosis," *J. Nucl. Med.*, 41 (Supplement), 175P (2000).

Lin, W.-Y., Hsieh, J.-F., Tsai, S.-C., Yen, T.-C., Wang, S.-J. and Knapp, F. F., Jr. "A Comprehensive Study of Thyroid and Gastric Uptake of  $^{188}\text{Re}$ -Perrhenate in Endovascular Irradiation Using Liquid-Filled Balloons to Prevent Restenosis," *Nucl. Med. Biol.*, 27, 83-87 (2000).

Makkar, R., Whiting, J., Honda, H., Li, A., and Cordero, H. "Inhibition of In-Stent Restenosis by  $\gamma$ -Emitting Rhenium-188 Balloon is Dose-Dependent and Injury Dependent," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 17-19, 2000, *Abstract 40* (2000).

Mihailescu, G., Lungu, V. V., Niculae, D., Manolescu, N. and Comisel, V. "Labelling Lanreotide with Rhenium-188," *Nucl. Med. Commun.*, 21, 574 (2000).

Mirzadeh, S., Du., M., Beets, A. L. and Knapp, F. F., Jr. "Thermoseparation of Neutron-Irradiated Tungsten from Re and Os," *Indust. Engineering Chem. Res.*, 39, 3169-3172 (2000).

Mushtaq, A., Pervez, S. and Haider, I. "Preparation of  $^{188}\text{Re}$ -Lantreotide Peptide and its Quality Control," *Radiochim. Acta*, 88, 495-498 (2000).

Nogorodova, A. F., Bruchertseifer, F., Brockmann, J., Lebedev, N. A. and Roesch, F. "Thermochromatographic Separation of No-Carrier-Added  $^{186}\text{Re}$  and  $^{188}\text{Re}$  from Tungsten Targets Relevant to Nuclear Medical Applications," *Radiochim. Acta*, 88, 163-167 (2000).

Oh, S. J., Moon, D. H., Park, S.-W., Hong, M.-K., Park, S.-J. Knapp, F. F., Jr. and Lee, H. K. "Automated Synthesis of Highly Concentrated Re-188-MAG3 for Intracoronary Radiation Therapy," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 16-18, 2000, *Abstract 35* (2000).

Oh, J. S., Moon, D. H., Ryu, J. S., Park, S. W., Hong, M. K., Park, S. J. and Lee, H. K. "Semi-Automated Synthesis of Highly Concentrated  $^{188}\text{Re}$ -Labeled Radiopharmaceuticals for Intracoronary Radiation Therapy," *J. Nucl. Med.*, 41 (Supplement), 255P (2000).

Oh, J. S., Moon, D. H., Park, S.-W., Hong, M.-K., Park, S.-J., Knapp, F. F., Jr., and Lee, K. "Automated Synthesis of Highly Concentrated Re-188-MAG3 for Intracoronary Radiation Therapy," *In, Proceedings, Cardiovascular Radiation Therapy IV Syllabus*, Washington, D.C. February 18-20, 2000, p. 54.

Palmedo, H., Guhlke, S., Bender, H., Schoemich, G., Gruenwald, F., Knapp, F. F., Jr. and Biersack, H.-J. "Dose Escalation Study with Rhenium-188-HEDP in Prostate Cancer Patients with Osseous Metastases," *Eur. J. Nucl. Med.*, 27, 123-130 (2000).

Park, A.-W., Hong, M.-K., Monn, D. H., Oh, S. J. and Park, S.-J. "Rotational Atherectomy and Radiation Therapy with  $^{188}\text{Re}$ -MAG3-Filled Balloon for In-Stent Resetenosis (R4 Trial)," *In, Proceedings, Cardiovascular Radiation Therapy III*, Washington, D.C., February 17-19, 2000, *Abstract 25* (2000).

Schmaljohan, J., Guhlke, S., Dudczak, R. and Biersack, H. J. "Kit Preparation of  $^{188}\text{Re}$ -HEDP: Comparison of Three Different Formulations," *J. Nucl. Med.*, 41 (Supplement), 255P (2000).

Spear, S. K., Griffin, S. T., Huddleston, J. G. and Rogers, R. D. "Radiopharmaceutical and Hydrometallurgical Separations of Perrhenate Using Aqueous Biphasic Systems and the Analogous Aqueous Biphasic Chromatographic Resins," *Indust. Engineering Chem. Res.*, 39, 3173-3180 (2000).

Toth, G. Y., Koemyei, J. and Baranyai, L. "Medium Flux Reactor Production of W-188 and Mo-99 Providing Carrier-Free Re-188 and Tc-99m," *Eur. J. Nucl. Med.*, 27, S96 (2000).

Waibel, R., Stichelberger, R., Alberto, R., Schubiger, P. A., Chester, K. A. and Begent, R. H. J. "Site-Directed Labelling of Single Chain Antibodies with Tc-99m and Re-188," *Eur. J. Nucl. Med.*, 27, S89 (2000).

Wirskirchen,, J., Dittmann, H., Schoeber, W., Dinkelborg, L., Tepe, G., Claussen, C. D. and Duda, H. "Dose Dependent Effects of 188-Rhenium to Inhibit Cell Growth of Human Aortic Smooth Muscle Cells in Order to Prevent Restenosis After Transluminal Angioplasty - An *In Vitro* Study," *In, Proceedings, Cardiovascular Radiation Therapy IV*, Washington, D.C., February 16-18, 2000, *Abstract 20* (2000).

Wunderlich, G., Pinkert, J., Franke, W.-G., Knapp, F. F., Jr. and Kropp, J. "Preparation and Biodistribution of Rhenium-188-Labeled Albumin Microspheres: A Promising New Agent for Endoradiotherapy of Tumors," *Appl. Radiat. Isot.*, 52, 63-68 (2000).

Wuu, C. S., Weinberger, J., Maryanski, M., Ranade, M., Borzillary, S. and Schiff, P. B. "Dosimetry Study of Re-188 Liquid Balloon for Intravascular Brachytherapy Using Optical Laser CT Scanning of Polymer Gel Dosimeters," *In, Proceedings, Cardiovascular Radiation Therapy IV*, Washington, D.C., February 16-18, 1999, *Abstract 18* (2000).

Yu, J., Zhang, R., Dai, X., Min., X., Xu, J., Yin, S., X., H., Wang, Y. and Knapp, F. F., Jr. "Intratumoral Injection with [ $^{188}\text{Re}$ ]-Rhenium Sulfide Suspension for Treatment of Transplanted Human Liver Carcinoma in Nude Mice," *J. Amer. Can. Soc.*, submitted.

Zamora, P. O., Osaki, S., Som, P., Ferretti, J. A., Choi, J. S., Hu, C., Tsang, R., Kuan, H. M., Singletary, S., Stern, R. A. and Oster, Z. H. "Radiolabeling Brachytherapy Sources with Re-188 Through Chelating Microfilms:Stents," *J. Biomed. Mater. Res.*, 53, 244-251 (2000).

Zamora, P. O., Kim, H. S., Ferretti, J. A., Choi, J. S., Tio, F. O., Bhargava, B., Osaki, S., Som, P., Waksman, R., Kuan, H. M. and Oster, Z. H. " $^{188}\text{Re}$ -Stents for Prevention of Restenosis," *J. Nucl. Med.*, 41 (Supplement), 8P (2000).

Zettiner, G., Kirisits, C., Preitfellner, J., Mitterhauser, M., Eidherr, H., Kreal, A., Cejna, M., Wexberg, P., Havlik, E., Aigner, H., Poetter, R. and Dudczak, R. "Gafchromic Film Dosimetry of Balloons Filled with Rhenium-188: Preliminary Results," *Eur. J. Nucl. Med.*, 27, S87 (2000).

**Published in 1999:**

Azure, M. T., Jones, W. B., Cyr, J. E., De Rosch, M. A., Zinn, K. R. and Bush, L. R. "High Specific Activity Rhenium-188 Labeled Somatostatin Analogue for Tumor Eradication," In, *Proceedings, ACS Symposium on Bioconjugate Chemistry in Nuclear Medicine*, Anaheim, CA, March 21-15, 1999.

Bartis, J., Liu, S. and Edwards, D. S. "Hynic Technology for Therapeutic Rhenium Radiopharmaceuticals," In, *Proceedings of the Fifth International Symposium on Technetium in Chemistry and Nuclear Medicine*, Bressanone, Italy, Sept. 6-8, 1998; Technetium, Rhenium and other Metals in Chemistry and Nuclear Medicine, SGEditorali, Padova, 1999; M. Nicolini and U. Mazzi, editors, pp. 409-417.

Beets, A. L., Guhlke, S., Biersack, H.-J. and Knapp, F. F., Jr. "Availability of Very High Radiopurity Rhenium-188 from a Clinical-Scale Generator Using a "Tandem" Concentration System," European Association of Nuclear Medicine Congress, Barcelona, Spain, Oct. 9-13, 1999; *Eur. J. Nucl. Med.*, 26, 1010 (1999).

Blower, P. J. and Prakash, S. "The Chemistry of Rhenium in Nuclear Medicine," In, *Perspectives on Bioinorganic Chemistry*, Vol. 4, pp. 91-143; JAI Press, Inc. (1999).

Bruchertseifer, F., Brockman, J., Novgorodov, A. F., Lebedev, N. A. and Roesch, F. "Thermochromatographic Separation of  $^{186}/^{188}$ Re from Tungsten Targets Used to Design a  $^{188}\text{W}/^{188}\text{Re}$  Generator or to Separate  $^{186}\text{Re}$  as Produced via the  $^{186}\text{W}(\text{p},\text{n})$  Reaction," *J. Label. Cmpds. Radiopharm.*, 42 (Suppl. 1) S930-933 (1999).

Eigler, N., Whiting, J., Makkar, R., Honda, H., Knapp, F. F., Jr., Litvack, F., and Li, A. "The  $^{188}\text{Re}$  Generator Approach," In, *Syllabus, Cardiovascular Radiation III Conference*, Washington, D. C., February 17-19, 1999, pp 391-397.

Ferro-Flores, G., Pimentel-Gonzales, G., Gonzales-Zavala, M. A., de Murphy, C. A., Melendez-Alafort, L., Tendilla, J. I. and Croft, B. Y. "Preparation, Biosdistribution and Dosimetry of  $^{188}\text{Re}$ -Labeled MoAb ior ceal and Its  $\text{F}(\text{ab}')_2$  Fragments by Avidin-Biotin Strategy," *Nucl. Med. Biol.*, 26, 57-62 (1999).

Fox, R. A. Barker, P. and Smart, G. "The Use of GAFchromic Film to Determine the Absolute Activity of Beta Emitters," *Phys. Med. Biol.*, 44, 833-842 (1999).

Fox, R. A. and Henson, P. W. "The Effect of Contrast Medium and Balloon Shape on Dosimetry for Arterial Irradiation with  $^{188}\text{Re}$ ," *Med. Phys.*, 26, 771-776 (1999).

Gaudiano, J., Savio, E., Robles, A., Muniz, S., Leon, A., Verdera, S., Martinez, G., Hermida, J. C. and Knapp, F. F., Jr. "Rhenium-188-HEDP in the Treatment of Pain in Bone Metastases," *In, Proceedings (TECDOC)*, International Seminar on Therapeutic Applications of Radiopharmaceuticals (IAEA-SR-209), Hyderabad, India, January 18-22, 1999, *in press*.

Guhlke, S., Scheithauer, S., Bender, H., Knapp, F. F., Jr. and Biersack, H.-J. "Rhenium-188 DMSA: *In vitro* and *in vivo* Evaluation of the Individual Isomers," Annual Meeting, Society of Nuclear Medicine, Los Angeles, CA, June 6-10, 1999; *J. Nucl. Med.*, 40, 315P (1999).

Guhlke, S., Scheithauer, S., Bender, H., Knapp, F. F., Jr. and Biersack, H.-J. "Rhenium-188-DMSA: Animal Experiments with the Three Stereoisomers," 37<sup>th</sup> Annual Meeting of the German Society of Nuclear Medicine, Ulm, Germany, April 14-17, 1999 (*in German*).

Hafeli, U. O., Casillas, S., Dietz, D. W., Pauer, G. J., Rybicki, L. A., Conzone, S. D. and Day, D. E. "Hepatic Tumor Radioembolization in a Rat Model Using Radioactive Rhenium (<sup>186</sup>Re/<sup>188</sup>Re) Glass Microspheres," *Int. J. Radiat. Oncol. Biol. Phys.*, 44, 189-199 (1999).

Hausleiter, J., Li, A., Knapp, R., Eigler, N. and Whiting, J. "Low Body Exposure in Cases of Radioactive Balloon Leakage - A Biodistribution and Elimination Study of Rhenium-188 in Pigs," *J. Amer. Coll. Cardiol.*, 33, Suppl. A, 44A (1999).

Hausleiter, J., Li, A., Knapp, R., Eigler, N. and Whiting, J. "Low Body Exposure in Case of Radioactive Balloon Leakage - A Biodistribution and Elimination Study of Rhenium-188 in Pigs," *Proceedings, Cardiovascular Radiation Therapy III Conference*, Washington, D. C., February 17-19, 1999; p 32.

Hsieh, B. T., Lin, W. Y., Wang, S. J., Hunag, H. T., Kuan, P. L., Leung, S. W., Ting, G. and Knapp, F. F., Jr. "A New Potential Radiopharmaceutical for Intravascular Radiation Therapy - Rhenium-188-DTPA," *Third Annual Symposium on Radiotherapy to Reduce Restenosis*, La Jolla, CA, January 15-16, 1999.

Hsieh, B. T., Hsieh, J. F., Tsai, S. C., Lin, W. Y., Huang, H. T., Ting, G. and Wang, S. J. "Rhenium-188-Labeled DTPA: A New Radiopharmaceutical for Intravascular Radiation Therapy," *Nucl. Med. Biol.*, 26, 967-972 (1999).

Hsieh, B. T., Hsieh, J. F., Tsai, S. C., Lin, W. Y., Wang, S. J. and Ting, G. "Comparison of Various Rhenium-188-Labeled Diphosphonates for the Treatment of Bone Metastases," *Nucl. Med. Biol.*, 26, 973-976 (1999).

Jeong, J. M., Lee, Y. J., Kim, Y. J., Lee, D. S., Chung, J.-K. and Lee, M.C. "Comparison of Rhenium-188-Tin Colloid and Rhenium-188 Sulfur Colloid as a Radionuclide Therapeutic Agent," *J. Nucl. Med.*, 40, 317P (1999)

Kim, B. K., Jeong, J. M., Hong, M. K., Lee, D. S., Chung, J.-K. and Lee, M. C. "A Study of Stability of High Specific Activity Rhenium-188-Labeled Antibody," *J. Nucl. Med.*, 40, 316P (1999)

Klein, J., Du, M., Mirzadeh, S., Beets, A. L. and Knapp, F. F., Jr. "Tungsten-188/Rhenium-188 Production at Oak Ridge National Laboratory," *In, Proceedings, 3<sup>rd</sup> International Conference on Isotopes, Vancouver, Canada, September 6-10, 1999.*

Knapp, F. F., Jr., Guhlke, S., Beets, A. L., Lin, W.-Y., Stabin, M., Amols, H. and Weinberger, J. "Endovascular Beta Irradiation for Prevention of Restenosis Using Solution Radioisotopes: Pharmacologic and Dosimetric Properties of Rhenium-188 Compounds," *Cardiovasc. Rad. Med., 1*, 86-97 (1999).

Knapp, F. F., Jr., Spencer, R. H. and Stabin, M. "Use of Rhenium-188 Liquid-Filled Balloons for Inhibition of Coronary Restenosis After PTCA - A New Opportunity for Nuclear Medicine," *In, Radionuclides for Myocardium - Current Status and Future Aspects, Mediterra-Publishers, Athens, Greece, 1999, pp 61-72 (ISBN 960-85227-9-X).*

Knapp, F. F., Jr., Beets, A. L., Pinkert, J., Kropp, J., Lin, W.-Y. and Wang, S.-Y. "Rhenium Radioisotopes for Radiopharmaceutical Development," *In, Proceedings (TECDOC), International Seminar on Therapeutic Applications of Radiopharmaceuticals (IAEA-SR-209), Hyderabad, India, January 18-22, 1999, in press.*

Knapp, F. F., Jr., "Use of Rhenium-188 Liquid-Filled Balloons for Inhibition of Coronary Restenosis After PTCA," *Invited Lecture, Proceedings, 9<sup>th</sup> Mediterranean Meeting on Nuclear Medicine and Radiopharmaceuticals - Radionuclides for the Heart, Cyprus, May 13-17, 1998, Mediterrea, Athens, pp 61-72 (1999).*

Knapp, F. F., Jr. "The Tungsten-188/Rhenium-188 Generator - An Attractive System for Therapy - Current Status and Expected Applications," European Community Working Group, Brussels, Belgium, May 21, 1999 (*Invited*).

Knapp, F. F., Jr., Guhlke, S., Beets, A. L., Lin, W.-Y., Stabin, M., Amols, H. and Weinberger, J. "Endovascular Beta Irradiation for Prevention of Restenosis Using Solution Radioisotopes: Pharmacologic and Dosimetric Properties of Rhenium-188 Compounds," *Cardiovasc. Rad. Med., 1*, 86-97 (1999).

Knapp, F. F., Jr. "Production and Availability of Beta-Emitting Radioisotopes for Vascular Radiation Therapy," *Proceedings, Cardiovascular Radiation Therapy III Conference, Washington, D. C., February 17-19, 1999, pp 140-143 (Invited).*

Knapp, F. F., Jr. "Rhenium-188 - An Important Generator-Derived Radioisotope for Therapy," *Invited, For, Seminar on Therapeutic Radiopharmaceuticals, IAEA , Hyderabad, India, January 18-22, 1999.*

Knapp, F. F., Jr. "Beta-Emitting Radionuclides for Coronary Restenosis Therapy," High Country Nuclear Medicine Conference Vail, Colorado, February 26-March 3, 1999 (*Invited*).

Knapp, F. F., Jr. "Use of Beta-Emitting Radioisotope Sources for Inhibition of Coronary Restenosis after High Pressure Balloon Angioplasty," *Invited Lecture, For, Categorical Seminar on Recent Developments in Therapeutic Nuclear Medicine, Annual Meeting, Society of Nuclear Medicine, Los Angeles, CA, June 6, 1999 (Invited).*

Kothari, K. K., Banerjee, S., Samuel, G., Unni, P. R., Sarma, H. D., Ventakesh, M and Pillai, M. R. A. "Rhenium-186 and Rhenium-188 Phosphonate Ligands," *J. Nucl. Med.*, 40, 228P (1999).

Kotzerke, J., Wohrle, J., Hombach, V., Reske S. N. and Hoher, M. "Can Restenosis Following PTCA Be Prevented by Irradiation From Rhenium-188-Filled Balloon Catheter ? " *J. Nucl. Med.*, 40, 85P (1999).

Kotzerke, J., Seitz, U., Neumaier, B., Glatting, G., Bunjes, D., Duncker, C., Bergmann, L., Dohr, D. and Reske, S. N. "Use of Rhenium-188-Labeled Anti NCA-95 Antibodies in Treatment of Leukemia: First Results," *J. Nucl. Med.*, 40, 65P (1999).

Kotzerke, J., Woehrie, J., Hombach, Y., Reske, S. N. and Hoher, M. "Endovascular Brachytherapy with a Rhenium-188-Filled Balloon Catheter for the Prevention of Restenosis After PTCA - First Results," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Kotzerke, J., Seitz, L., Bunjes, D., Neumajer, R., Glatting, G., Duncker, C., Bergmann, L., Dohr, D. and Reske, S. N. "Radioimmunotherapy of Bone Metastases with Leukemia," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Lee, S., Shin, A., Chung, J.-K., Lee, M. M., and Lee, M. C. "Rhenium-188-DTPA Liquid-Filled Balloon to Inhibit Restenosis After Angioplasty: Development of Software of Dose Calculation and Application," *J. Nucl. Med.*, 40, 181P (1999).

Li, A. N., Hausleiter, J., Knapp, F. F., Jr., Eigler, N. and Whiting, J. S. "A Biodistribution and Elimination Study of Rhenium-188 in Pigs," *J. Nucl. Med.*, 40, 88P (1999).

Liepe, K., Hiliscs, R., Runge, R., Kropp, J., Knapp, F. F., Jr. and Franke, W. G. "Dose Calculation and Clinical Efficacy of Rhenium-188-HEDP in Bone Metastases," European Association of Nuclear Medicine Congress, Barcelona, Spain, Oct. 9-13, 1999; *Eur. J. Nucl. Med.*, *Eur. J. Nucl. Med.*, 26, 1052 (1999).

Liepe, K., Kropp, J., Knapp, F. F., Jr., Hilscs, R., Kuehne, A. and Franke, W. G. "Kinetics and Therapeutic Effect of Rhenium-188 in Palliative Treatment of Metastatic Bone Pain," Annual Meeting, Society of Nuclear Medicine, Los Angeles, CA, June 6-10, 1999; *J. Nucl. Med.*, 40, 219P (1999).

Limouris, G. S., Pirmettis, I., Frantziz, A. P., Shukla, S. K., Gouliamos, A., Voliotopoulos, V., Lyra, M., Chiotellis, E., Knapp, F. F., Jr. and Stavraka, A. "Rhenium-188-Labelled HEDP and (V)-DMSA in the Treatment of Painful Osseous and Disseminated Soft Tissue Metastases," European Association of Nuclear Medicine Congress, Barcelona, Spain, Oct. 9-13, 1999; *Eur. J. Nucl. Med.*, *Eur. J. Nucl. Med.*, 26, 1208 (1999).

Lin, C.-P., Lin, W.-Y., Hsieh, B.-T., Ting, G., Wang, S.-J., Yen, T.-C., Knapp, F. F., Jr. and Yeh, S.-J. "Effect of Reaction Conditions on Preparation of Rhenium-188 Hydroxyethylidene Diphosphonate Complexes," *Nucl. Med. Biol.*, 26, 455-459 (1999).

Melendez-Alafort, L., Ferro-Flores, G., Arteaga-Murphy, C., Pedraza-Lopez, M., Gonzales-Zavala, M. A., Tendilla, J. L. and Garcia-Salinas, L. "Labeling Peptides with Rhenium-188," *Int. J. Pharm.*, 25, 165-172 (1999).

Oh, S. J., Moon, D. H., Park, S. W., Lee, B. Y., Hong, M. K., Park, S. J., Kim, E. H., Lim, S. M., Choi, T. H., Choi, H., and Lee, H. K. "Radiation Dosimetry of a Balloon Filled with Rhenium-188 and ionic Contrast for Endovascular Radiation Therapy," *J. Nucl. Med.*, 40, 309P (1999)

Oh, S. J., Moon, D. H., Park, S. W., Hong, M. K., Shin, J. W., Shin, S. K., Kim, E. H., Lim, S. M., Choi, C. A., Choi, T. H., and Lee, H. K. "Comparison of Radiation Adsorbed Dose of Rhenium-188 Radiopharmaceuticals for Intracoronary Radiation Therapy in Case of Balloon Rupture," *J. Nucl. Med.*, 40, 41P (1999).

Oh, S. J., Moon, D. H., Ha, H. J., Park, S. W., Choi, T. H., Lim, S. M., Choi, C. W. and Lee, H. K. "Synthesis and Automation of <sup>188</sup>Re-Labeled Radiopharmaceuticals for Intracoronary Radiation Therapy," *J. Label. Cmpds. Radiopharm.*, 42 (Suppl. 1) S850-852 (1999).

Palmedo, H., Guhlke, S., Bender, H., Sartor, J., Schoeneich, G., Risze, J., Gruenwald, F., Knapp, F. F., Jr. and Biersack, H.-J. "Dose Escalation Study with Rhenium-188 HEDP in Prostate Cancer Patients with Osseous Metastases," *J. Nucl. Med.*, 40, 218P (1999).

Palmedo, H., Guhlke, S., Schoencich, G., Bender, H., Risze, J., Gruenwald, F., Knapp, F. F., Jr. and Biersack, H.-J. "Pain Therapy with Rhenium-188-HEDP of the Bone Metastases from Prostate Carcinoma," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Palmedo, H., Guhlke, S., Bender, H., Sartor, J., Schoeneich, G., Risze, J., Gruenwald, F., Knapp, F. F., Jr. and Biersack, H.-J. "Dose Escalation Study with Re-188-HEDP in Prostate Cancer Patients with Osseous Metastases," Annual Meeting, Society of Nuclear Medicine, Los Angeles, CA, June 6-10, 1999; *J. Nucl. Med.*, 40, 218P (1999).

Pinkert, J., Wunderlich, G., Franke, W.-G., Andreef, M., Kropp, J. and Knapp, F. F., Jr. "Rhenium-188 Labeled Micropheres for Intraarterial Radioembolization," Australian & New Zealand Society of Nuclear Medicine, 1999.

Pinkert, J., Wunderlich, G., Kropp, J. and Franke, W.-G. "Rhenium-188 Labeled Particles for the Intararterial Tumor Embolization," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Pinkert, J., Wunderlich, G., Franke, W.-G., Bergman, R., Hiliscs, R. Kropp, J. and Knapp, F. F., Jr. "Re-188-Labeled HSA Microspheres for Radioembolization," European Association of Nuclear Medicine Congress, Barcelona, Spain, Oct. 9-13, 1999; *Eur. J. Nucl. Med., Eur. J. Nucl. Med.*, 26, 1010 (1999).

Pinkert, J., Wunderlich, G., Franke, W.-G., Andreef, M., Kropp, J. and Knapp, F. F., Jr. "Re-188-Labeled Microspheres for Intraarterial Radioembolization," Australian & New Zealand Society of Nuclear Medicine, 1999.

Runge, R., Andreef, M., Kropp, J., Wunderlich, G., Knapp, F. F., Jr., and Franke, W. G. "Two Years Experience with Quality Control of the Tungsten-188/Rhenium-188 Generator with High Levels of Activity," Annual Meeting, Society of Nuclear Medicine, Los Angeles, CA, June 6-10, 1999; *J. Nucl. Med.*, 40, 316P (1999).

Sietz, U., Neumaier, B., Galting, G., Kotzerke, J., Bunjes, SD. And Reske, S. N. "Preparation and Evaluation of the Rhenium-188-Labelled Anti-ONCA Antigen Monoclonal Antibody BW 250/183 for Radioimmunootherapy of Leukemia," *Eur. J. Nucl. Med.*, 26, 1265-1273 (1999).

Spencer, R. H., Granadas, O. S., Stevens, S. L., Donnell, R. L., Stabin, M., Knapp, F. F., Jr., Costanza, M., Shoieb, A. H., Reddick, T. T., Freeman, M. B., Brown, K. and Goldman, M. H. "Dosimetry Considerations of Rhenium-188 Perrhenate Liquid-Filled Balloons in the Prevention of Restenosis of Injured Swine Iliac Arteries," American Heart Association Meeting, Atlanta, Georgia, Nov. 7-10, 1999.

Waibel, R., Alberto, R., Willuda, J., Finnern, R., Scibli, R., Stichelberger, A., Egli, A., Abram, U., Mach, J.-P., Plueckthun and Schbiger, A. "Stable One-Step technetium-99m Labeling of His-Tagged Recombinant Proteins with a Novel Tc(I)-Carbonyl Complex," *Nature Biotech.*, 17, 897-901 (1999).

Weinberger, J. and Knapp, F. F., Jr. "Use of Liquid-Filled Balloons for Coronary Irradiation," Chapter 45, *In, Vascular Brachytherapy*, R. Waksman, Editor, Second Edition, Futura Publishing Co., Inc., Armonk, NY, 1999, pp. 521-535 (ISBN 0-87993-4131).

Weinberger, J., Amols, H. I., Schiff, P. B., Trichter, F., Wang, T. S-T., Berke, A., Brogno, S., Flier, J., Knapp, F. F., Jr. and Wasserman, H. S. "Initial Results of the CURE Safety Trial Coronary Brachytherapy With Radioactive Liquid-Filled Balloons," Amer. Coll. Card. Meet., New Orleans, LA, March 6-11, 1999; *J. Amer. Coll. Cardiol.*, 33, No. 2, Suppl. A, 94A (1999).

Weinberger, J., P. B. Schiff, Trichter, F., Wu, C.-S., Knapp, F. F. and Schwartz, A. "Results of the Columbia Safety and Feasibility (CURE) Trial of Liquid Radioisotopes for Coronary Vascular Brachytherapy," American Heart Association Meeting, Atlanta, Georgia, Nov. 7-10, 1999.

Weinberger, J., Giedd, K. N., Simon, A. D., Marboe, C., Knapp, F. F., Jr., Trichter, F. and Amols H. "Radioactive Beta-Emitting Solution-Filled Balloon Treatment Prevents Porcine Coronary Restenosis," *Cardiovasc. Rad. Med.*, 1, 252-256 (1999).

Weinberger, J. and Knapp, F. F., Jr. "Use of Liquid-Filled Balloons for Coronary Irradiation," *In, Vascular Brachytherapy*, R. Waksman, Editor; Future Pub. Co., Armonk, NY, 1999; Chapter 45, pp. 521-535 (1999).

Wiskirchen, J., Dittman, H., Schoeber, W., Dimkelborg, L., Tepe, G., Claussen, C. D. and Duda, S. H. "Dose Dependent Effects of 188-Rhenium to Inhibit Cell Growth of Human Aortic Smooth Muscle Cells in order to Prevent Restenosis After Transluminal Angioplasty - An *In Vitro* Study,"

*In, Proceedings, Cardiovascular Radiation Therapy III, Washington, D.C., February 17-19, 1999, Abstract 20 (1999).*

Wohlfstrom, M., Kamenz, J., Kotzerke, J., Eble, M., Hess, B., Schultz, C., Lunz, C., Hembach, V., Reske, S. N., and Hanke, H. "Proliferation from Endovascular Brachytherapy with Rhenium-188: Animal Experiment Dose Estimates," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Wunderlich, G., Pinkert, J. and Franke, W.-G. "Studies on the Processing and in vivo stability of Re-188 Labelled Microspheres," *In, Proceedings of the Fifth International Symposium on Technetium in Chemistry and Nuclear Medicine, Bressanone, Italy, Sept. 6-8, 1998; Technetium, Rhenium and other Metals in Chemistry and Nuclear Medicine, SGEditorali, Padova, 1999; M. Nicolini and U. Mazzi, Editors, pp. 709-712.*

Yu, J., Yin, D., Min, X., Guo, Z., Zhang, J., Wang, Y. and Knapp, F. F., Jr. "Preparation of [<sup>188</sup>Re]-Rhenium Sulfide Suspension and its Biodistribution Following Intra-Tumoral Injection in Mice," *J. Lab. Compds. Radiopharm.*, 42, 233-243 (1999).

Yu, J., Duanzhi, Y., Xiaofeng, M. Zili, G., Jiong, Z., Yongxian, W. and Knapp, F. F., Jr. "[<sup>188</sup>Re]Rhenium Sulfide Suspension: A Potential Radiopharmaceutical for Tumor Treatment Following Intra-Tumor Injection," *Nucl. Med. Biol.*, 26, 573-579 (1999).

Zimmerman, B. E., Cessna, J. T., Unterweger, M. P., Li, A. N., Whiting, J. S. and Knapp, F. F., Jr. "A New Experimental Determination of the Dose Calibrator Setting for Rhenium-188," *J. Nucl. Med.*, 40, 1508-1516 (1999).

Zinn, K. R., Bush, L. R., Mountz, J. M., Chaudhuri, T. R., Hwang, S. B., Dean, R. T. and Azure, M. T. "Dose-Dependent Tumor Suppression in Nude Mice by Radiotherapy with Rhenium-188-Labeled P829, A Somatostatin Receptor (SSTR) Avid Peptide," *J. Nucl. Med.*, 40, 223P (1999).

#### ***Published in 1998:***

Amols, H. I., Trichter, F. and Weinberger, J. "Intracoronary Radiation for Prevention of Restenosis - Dose Perturbations Caused by Stents," *Circulation*, 98, 2024-2029 (1998).

Basmonov, V., Kolesnik, O. and Lisichkina, N. "The Development of Chromatographic W-188/Re-188 Generators for Therapy," *In, Proceedings, Radioactive Isotopes in Clinical Medicine and Research, 23<sup>rd</sup> International Symposium, Badgastein, Austria, January 13-16, 1998; Eur. J. Nucl. Med.*, 25, S6 (1998) (Abstract).

Basmonov, V., Kolesnik, O. and Ignatova, A. "Rhenium-188 Chromatographic Generator and Therapeutic Radiopharmaceutical," *Eur. J. Nucl. Med.*, 25, 1043 (1998) (Abstract).

Blower, P. J., Lam, A. S. K., O'Doherty, M. J., Kettle, A. G., Coakley, A. J. and Knapp, Jr., F. F. "Biodistribution and Dosimetry of Pentavalent Rhenium-188-Dimercaptosuccinic Acid In Patients with Disseminated Bone Metastasis," *Eur. J. Nucl. Med.*, 25, 613-621 (1998).

Chang, Y. S., Jeong, J. M., Lee, D. S., Chung, J.-K and Lee, M. C. "Quality Control of the Tungsten-188/Rhenium-188 Generator," *Korean Journal of Nuclear Medicine*, 32, 425-432 (1998) (*in Korean; Abstract in English*).

Chen, J. and Quinn, T. P. "Alpha-Melanocyte Stimulating Hormone Analogues - Tc-99m/Re-188 Labeling and Their Pharmacokinetics in Malignant Melanoma-Bearing Mice," *J. Nucl. Med.*, 39, 222P (1998) (*Abstract*).

Chen, J.-Q., Strand, S.-E., Tennvall, J., Lidgren, L., Hindorf, C. and Sjoegren, H.O. "Extracorporeal Immunoabsorption Compared to Avidin Chase: Enhancement of Tumor-to-Normal Tissue Ratio for Biotinylated Rhenium-188-Chimeric BR96," *J. Nucl. Med.*, 38, 1934-1939 (1998).

Chung, Y. S., Jeong, J. M., Lee, D. S., Chung, K.-K., Lee, M. C., Koh, C.-S., Yu, H.-J., Cho, J. H. and Knapp, F. F., Jr. "Effect of Carrier on Labeling and Biosdistribution of Re-188-Hydroxyethylidene Diphosphonate (HEDP) in Mice and Rats," *J. Nucl. Med.*, 39, 235P (1998) (*Abstract*).

Conzone, S. D., Hafeli, U. O., day, D. E. and Ehrhardt, G. J. Preparation and Properties of Radioactive Rhenium Glass Microspheres Intended for *In Vivo* Radioembolization Therapy," *J. Biomed. Mater. Res.*, 42, 617-625 (1998).

Eigler, N., Whiting, J., Chernomorsky, A., Jackson, J., Knapp, F. F., Jr. and Litvack, F. "RADIANT™ Liquid Isotope Intravascular Radiation Therapy System," *In, Proceedings, Second Annual Symposium on Radiotherapy to Reduce Restenosis*, Sponsored by Scripps Clinic and Research Foundation, La Jolla, CA, January 16-17, 1998.

Escobar, N.-I. "<sup>188</sup>Re-Direct Labeling of Monoclonal Antibodies for Radioimmunotherapy of Solid Tumors: Biodistribution, Normal Organ Dosimetry, and Toxicology," *Nucl. Med. Biol.*, 25, 441-447 (1998).

Fox, R., Barker, P. and Smart, G. "The Measurement of the Activity of <sup>188</sup>Re Using GAF Film and Liquid Scintillation Counting," *In, Proceedings, Advances in Cardiovascular Radiation Therapy II*; March 8-10, 1998, Washington, D.C. , 35 (1998).

Fox, R., Guy, D., Barker, P., Hedland-Thomas, B., Dufty, A., Mew, G. and Gibbons, F. "Protection Problems Associated with the Use of <sup>188</sup>Re," *In, Proceedings, Advances in Cardiovascular Radiation Therapy II*; March 8-10, 1998, Washington, D.C. , 44 (1998).

Fox, R. and Henson, P. "Effect of Contrast Media and Elliptical Arteries on the Radiation Dose Delivered by <sup>188</sup>Re," *In, Proceedings, Advances in Cardiovascular Radiation Therapy II*; March 8-10, 1998, Washington, D.C. , 20 (1998).

Guhlke, S., Schaffland, A., Zamora, P. O., Sartor, J., Diekmann, D., Bender, H., Knapp, Jr., F. F. and Biersack, H.-J. "Rhenium-188 and Technetium-99m Labeling of Peptides via Mercaptoacetyltriglycyl (MAG<sub>3</sub>) Conjugates and Applications for Labeling the RC-160 Somatostatin Analogue," *Nucl. Med. Biol.*, 25, 621-632 (1998).

Hafeli, U. O., Warburton, M. C> and Landau, U. "Electrodeposition of Radioactive Rhenium onto Stents to Prevent Restenosis," *Biomaterials*, 19, 925-933 (1998).

Hong, M. K., Jeong, J. M., Yeo, J. S., Kim, K. M., Chang, Y. S., Lee, Y. L., Lee, D. S., Chung, J.-K., Lee, M. C. and Lee, S. J. "In Vitro Properties and Biodistribution of Tc-99m and Re-188-Labeled Monoclonal Antibody CEA79.4," *Korean Journal of Nuclear Medicine*, 32, 516-524 (1998) (in Korean; Abstract in English).

Hosono, M. N., Hosono, M., Zamora, P. O., Guhlke, S., Harberberger, T., Bender, H., Knapp, F. F., Jr. and Biersack, H.-J. "Localization of Colorectal Carcinoma by Rhenium-188-Labeled B72.3 Antibody in Xenografted Mice," *Ann. Nucl. Med.*, 12, 83-88 (1998).

Hoher, M., Wohrie, J., Schults, C., Reske, S. N. and Kotzerke, J. "Intracoronary Radiotherapy with Liquid Rhenium-188 to Prevent Restenosis Following Balloon Angioplasty - First Results from a Randomized Trial," *Circulation*, Supplement I, I-65 (1998) (Abstract ).

Iznaga-Escobar, N., Luis, I., Amador, J. F., Lopez, A., Izquierdo, J. C., and Perez, R. "Radioimmunotherapy of <sup>188</sup>Re-Labeled Anti-Human EGF-R Antibody ior egf/r3 in H-125 Human Lung Adenocarcinoma Xenografted Nude Mice," *Eur. J. Nucl. Med.*, 25, 890 (1998) (Abstract ).

Jeong, J. M., Kim, Y.-J., Lee, Y.-L., Lee, D. S., Chung, J.-K., Lee, M. C. and Koh, C. S. "Colloidal Rhenium-188 Entrapped Chitosan for Radionuclide Therapy," *J. Nucl. Med.*, 39, 235P (1998) (Abstract ).

Juweid, M., Sharkey, R. M., Swayne, L. C., Griffiths, G. L., Dunn, R., Siegel, J. and Goldenberg, D. M. "Pharmacokinetics, Dosimetry and Toxicity of anti-CEA Monoclonal Antibody, MN-14, Labeled with Rhenium-188 in Patients with Gastrointestinal Cancer," *J. Nucl. Med.*, 39, 34-42 (1998).

Kariemo, K. J., Stromberg, S., Nikula, T. K. and Karonen, S. L. "Expression Profile of Vascular Cell Adhesion Molecule-1 (CD1-6) in Inflammatory Foci Using Rhenium-188 Labelled Monoclonal Antibody in Mice," *Cell. Adhes. Commun.*, 5, 325-333 (1998).

Kim, Y. K., Jeong, J. M., Chang, Y. S., Lee, D. S., Chung, J.-K., Lee, M. C. and Koh, C.-S. "Study of 188Re(V)-DMSA for Treatment of Cancer: Radiolabeling and Biodistribution," *Korean Journal of Nuclear Medicine*, 32, 81-88 (1998) (in Korean; Abstract in English).

Kim, Y. J., Jeong, J. M., Chang, Y. S., Lee, Y. J., Lee, D. S., Chung, J.-K., Lee, M. C. and Song, Y. W. "Preparation and Biodistribution of Rhenium-188 Sulfur Colloid," *Korean Journal of Nuclear Medicine*, 32, 298-304 (1998) (in Korean; Abstract in English).

Kim, Y.-J., Jeong, J. M., Kim, S. K., Lee, D. S., Chung, J.-K., Lee, M. S. and Koh, C.-S. "Rhenium-188 Sulfur Colloid Suspended in Lipiodol: A Capillary-Blocking Radiopharmaceutical for Targeting Liver Cancer," *J. Nucl. Med.*, 39, 235P (1998) (*Abstract*).

Knapp, F. F., Jr., Beets, A. L., Pinkert, J., Kropp, J., Lin, W.-L. and Wang, S.-Y. "Therapeutic Applications of Rhenium-188 - A Readily Available Generator-Derived Radioisotope," *Invited Paper*, International Seminar on Therapeutic Applications of Radiopharmaceuticals (IAEA-SR-209), Hyderabad, India, January 18-22, 1998, *in press*.

Knapp, F. F., Jr., Beets, A. L., Guhlke, S., Weinbereger, J., Kotzerke, J. and Stabin, M. "Rhenium-188 Liquid-Filled Balloons for Vascular Therapy - Tungsten-188/Rhenium-188 Generator Performance and Concentration of Re-188 to High Specific Volumes," *In*, Proceedings of Advances in Cardiovascular Radiation Therapy II; March 8-10, 1998, Washington, D.C. , 48 (1998).

Knapp, F. F., Beets, A. L., Guhlke, S., Biersack, H.-J., Stabin, M. and Spencer, R. "Liquid-Filled Balloons for Coronary Restenosis Therapy - Strategy and Dosimetry for Use of Rhenium-188," *Eur. J. Nucl. Med.*, 25, 883 (1998) (*Abstract* ).

Knapp, F. F., Jr. Beets, A. L., Guhlke, S., Gledd, K. N., Marboe, C., Amols, H. and Weinberger, J. "Rhenium-188 Liquid-Filled Balloons Effectively Inhibit Restenosis in a Swine Coronary Overstretch Model - A Simple New Method Bridging Nuclear Medicine and Interventional Cardiology," *J. Nucl. Med.*, 39, 48P (1998).

Knapp, F. F., Jr., Beets, A. L., Mirzadeh, S. and Guhlke, S. "Use of a New Tandem Cation/Anion Exchange System with Clinical Scale Generators Provides High Specific Volume Solutions of Technetium-99m and Rhenium-188," *In*, Proceedings, Symposium on International Trends in Radiopharmaceuticals for Diagnosis and Therapy, Organized by the International Atomic Energy Agency (IAEA); Lisbon, Portugal, March 30-April 2, 1998; IAEA, pp. 419-425.

Knapp, F. F., Jr. "Rhenium-188 - An Attractive Therapeutic Radioisotope Available from a Long Shelf-Life Generator for Use in Liquid-Filled Balloons for Inhibition of Restenosis After Coronary Angioplasty and for Palliation of Bone Pain from Skeletal Metastases," *Invited Lecture*, *In*, Proceedings, Symposium on International Trends in Radiopharmaceuticals for Diagnosis and Therapy, Organized by the International Atomic Energy Agency (IAEA); Lisbon, Portugal, March 30-April 2, 1998; IAEA, pp. 485-495.

Knapp, Jr., F. F., Beets, A. L., Mirzadeh, S. and Guhlke, S. "Concentration of Perrhenate and Pertechnetate," U.S. Patent No. 5,729,821, Issued March 17, 1998.

Knapp, F. F., Jr., Mirzadeh, S., Beets, A. L., O'Doherty, M., Blower, P. J., Verdera, E. S., Gaudiano, J. S., Kropp, J., Guhlke, J., Palmedo, H. and Biersack, H.-J. "Reactor-Produced Radionuclides from the ORNL-HFIR for Treatment of Bone Pain," *Symposium for Radionuclides Used in Bone Pain Palliation Therapy* ; Held under the Auspices of the Council on Ionizing Radiation Measurements and Standards (CIRMS), National Institute for Standards and

Technology (*NIST*), Gaithersburg, Maryland; September 27, 1996; *Appl Radiat Isot.*, 49, 379-382 (1998).

Knapp, F. F., Jr. "Rhenium-188 - A Generator-Derived Radioisotope for Cancer Therapy," *Cancer Biotherapy and Radiopharm.*, 13, 337-349 (1998).

Kolesnik, O. and Basmanov, V. "Investigation of a Rhenium Complex Formation for Development of Bone-Seeking Kit for W-188/Re-188 Generator," Proceedings of Radioactive Isotopes in Clinical Medicine and Research, 23<sup>rd</sup> International Symposium, Bagastein, Austria, January 13-16, 1998; *Eur. J. Nucl. Med.*, 25, S21 (1998) (*Abstract*).

Kotzerke, J., Gertler, R., Bauer, R., Ickrath, O., Both, A., Hombach, V., Reske, S. N. and Voisard, R. "Inhibition of Proliferative Activity of Human Coronary Vascular Cells After Radiation From a Balloon Catheter Filled with Liquid Rhenium-188," *Eur. J. Nucl. Med.*, 25, 883 (1998) (*Abstract*).

Kotzerke, J., Rentschler, M., Glatting, G., Schneider, E., Knapp, F. F., Jr. and Reske, S. N. "Radiation Dose Measurements of a Balloon Catheter-Filled with Liquid Rhenium-188 by Means of a TLD System," *J. Nucl. Med.*, 39, 84P (1998) (*Abstract*).

Kotzerke, J., Fenchel, S., Guhlmann, A., Stabin, M., Renstchler, M., Knapp, F. F., Jr. and Reske, S. N. "Pharmacokinetics of Tc-99m-Pertechnetate and Re-188-Perrhenate After Oral Application of Perchlorate - Option of Subsequent Care Using Liquid Re-188 in a Balloon Catheter," *Nucl. Med. Commun.*, 19, 795-801 (1998).

Kotzerke, J., Rentschler, M., Schneider, E., Stabin, M., Knapp, F. F., Jr. and Reske, S. N. "Dosimetric Fundamentals of Endovascular Brachytherapy Using Re-188 to Prevent Restenosis after Angioplasty," *Nuklearmedizin*, 37, 68-72 (1998) (*In German*).

Kotzerke, J., Fenchel, S., Stabin, M., Knapp, F. F., Jr. and Reske, S. N. "Oral Application of Perchlorate Can Reduce Radiation Dose After Artificial Release of Re-188-Perrhenate into the Circulation," *In, Proceedings, Advances in Cardiovascular Radiation Therapy II*; March 8-10, 1998, Washington, D.C. ,41 (1998).

Kotzerke, J., Rentschler, M., GlattIng, G., Schneider, E., Knapp, F. F., Jr. and Reske, S. N. "Confirmation of Radiation Dose Calculations of a Balloon Catheter Filled With Liquid Re-188 by Means of a TLD System," *In , Proceedings , Advances in Cardiovascular Riadation Therapy II*; March 8-10, 1998, Washingttn, D.C. , 10 (1998).

Kramer, A., Alberto, R., Egli, A., Novak-Hofer, I., Hegetschweiler, K., Abram, U., Bernhardt, P. V. and Schubiger, A. "Derivatives of 1,3,5-Triamino-1,3,5-Tridexoy-cis-Inositol as Versatile Pentadentae Ligands for Protein Labeling with Re-186/188. Prelabeling, Biodistribution and X-ray Structural Studies," *Bioconj. Chem.*, 9, 691-7092 (1998).

Kushita, K. N. and Du, J. "Radioactivity Measurement of <sup>188</sup>Re by Cherenkov Counting," *Appl. Radit. Isot.*, 49, 1069-1072 (1998).

Lee, J., Lee, D. S., Jeong, J. M., Lee, M. Y., Kim, Y. J., Chang, S. A., Shin, S. A., Lee, M. M. , Chang, J.-K. and Lee, J.-K. "Dosimetry and MIRD of Re-188-DTPA for Endovascular Balloon Brachytherapy Against Restenosis after Coronary Angioplasty: Comparison with Re-188-Perrhenate," *Eur. J. Nucl. Med.*, 25, 1137 (1998) (*Abstract* ).

Lee, J., Lee, D. S., Kim, Y. J., Chang, Y. S., Jeong, J. M., Shin, S.-A., Chung, J.-K., Lee, M. C. and Koh, C.-S. "Rhenium-188-DTPA," *Korean Journal of Nuclear Medicine*, 32, 427-432 (1998) (*in Korean; Abstract in English*).

Li, A. N., Zimmerman, B. E., Knapp, F. F., Jr., Amols, H. I. and Whiting J. S. "Reconciliation of Directly Measured Re-188 Balloon Dosimetry with Calculations Based on a New NIST Activity Calibration," *Proceedings*, Second Annual Symposium on Radiotherapy to Reduce Restenosis, Sponsored by Scripps Clinic and Research Foundation, La Jolla, CA, January 16-17, 1998.

Liepe, K., Hilsex, R., Kropp, J., Kuehnig, A. and Franke, W.-G. "Rhenium-188-HEDP for the Palliative Therapy of Osseous Metastases," German Nuclear Medicine Meeting, Ulm, Germany, April 1999 (*in German*).

Liepe, K. Kropp, J., Knapp, F. F., Jr., Hiscs, R., Kuehne, A. and Franke, W. G. "Rhenium-188 In Comparison to Rhenium-186 and Strontium-89 in the Treatment of Bone Metastases," *Eur. J. Nucl. Med.*, 25, 861 (1998) (*Abstract* ).

Makkar, R., Whiting, J., Honda, H., Li, A., Cordero, H., Chernomorsky, A., Litvack, F. and Eigler, N. "Inhibition of Stent Restenosis by \$-Emitting Rhenium-188 Balloon is Dose Dependent and Injury-Independent," *Circulation*, Supplement I, I-65 (1998) (*Abstract* ).

Makkar, R., Honda, H., Li, A., Cordero, H., Sebastien. M., Chernomorsky, A., Whiting, J., Litvack, F. and Eigler, N. "Brachytherapy with \$-Emitting Rhenium-188 Balloon Following Stent Implantation Inhibits Restenosis," *Circulation*, Supplement I, I-65 (1998) (*Abstract* ).

Maxon, H. R., Schroder, L. E., Washburn, L. C., Thomas, S. R., Samarantuga, R. C., Biniakiewicz, D., Moulton, J. S., Cummings, D., Ehrhardt, G. J. and Morris, V. "Rhenium-188 (Sn)HEDP for Treatment of Osseous Metastases," *J. Nucl. Med.*, 39, 659 (1998).

Milner, R. J., Dormehl, I. C., Louw, W. K. A., Chaparro, F. and Kilian, E. "The Bisodistribution, Pharmacokinetics, Bone Localization and Therapeutic Effect of Rhenium-188-HEDP in Normal Dogs and Dogs with Osteosarcoma of the Appendicular Skeleton," *Eur. J. Nucl. Med.*, 25, 1109 (1998) (*Abstract* )

Palmedo, H., Guhlke, S., Bender, H., Sartor, J., Knapp, F. F., Jr., Bangard, M., Otte, R. and Biersack, H.-J. "Rhenium-188 HEDP for Multiple Metastases - A Dose Escalation Study," *Nuklearmedizin*, 37, A30 (1998)(*Abstract* ) (*In German* ).

Palmedo, H., Guhlke, S., Bender, H., Sartor, J., Knapp, F. F., Jr., Risse, J. and Biersack, H.-J. "Rhenium-188 HEDP for Palliation of Multiple Bone Metastases - A Dose Escalation Study," *Eur. J. Nucl. Med.*, 25, 1047 (1998) (*Abstract* ).

Peiyong, L., Junfeng, Y. and Zhu, C. "Rhenium-188 Sulfide Suspension: Potential Radiopharmaceutical for Radiation Synovectomy," *Eur. J. Nucl. Med.*, 25, 960 (1998) (*Abstract* ).

Pinkert, J., Wunderlich, G., Franke, W.-G., Andreef, M., Kropp, J. and Knapp, F. F., Jr. "Labeling of Microspheres with Re-188 for Intraarterial Tumor Treatment," *Eur. J. Nucl. Med.*, 25, 894 (1998) (*Abstract* ).

Roka, R., Sera, T., Knapp, F. F., Lang, J., Pajor, L., Turzo, L., Dux, L., Palmedo, H. and Biersack, H.-J. "First Clinical Results on Two-Step Re-188-HEDP Treatment of Metastatic Bone Pain," *Eur. J. Nucl. Med.*, 25, 1133 (1998) (*Abstract* ).

Schmidt, P., Smith, S. V. and Bundesen, P. G. "<sup>188</sup>Re DD-3B6/22 Fab' for Use in Therapy of Ovarian Cancer: Labelling and Animal Studies," *Nucl. Med. Biol.*, 25, 639-650 (1998).

Wang, S.-J., Lin, W.-Y., Chen, M.-N., Chi, C.-S., Chen, J.-T., Ho, W.-L., Hsieh, B.-T., Shen, L.-H., Tsai, Z.-T., Ting, G., Mirzadeh, S. and Knapp, F. F., Jr. "The Efficacy of Intratumoral Injection of Rhenium-188 Microsphere in An Animal Model with Hepatoma," *J. Nucl. Med.*, 39, 1752-1756 (1998).

Wang, S. J., Lin, W. Y., Chen, M. N., Hsieh, B. T., Shen, L. H., Tsai, Z. T., Ting, G., Chen, J. T., Ho, W. L., Mirzadeh, S. and Knapp, F. F., Jr. "Rhenium-188 Microspheres: A New Radiation Synovectomy Agent," *Nucl. Med. Commun.*, 19, 427-433 (1998).

Wang, T. S. T., Fawwaz, R. A. and Van Heertum, R. L. "A Study of the Preparation, Quality Control, and *In Vitro* Stability of Re-188-MAG3: A Potential Agent for Inhibition of Restenosis after PTCA," *Eur. J. Nucl. Med.*, 25, 978 (1998) (*Abstract* )

Woods, M. J., Keightley, J. D., Ciocanel, M. and Walsh, C. P. "NPL Secondary Standard Radionuclide Calibrator: New Calibration Figures for <sup>106</sup>Ru, <sup>153</sup>Sm and <sup>188</sup>Re," *Appl. Radiat. Isot.*, 49, 1191-1193 (1998).

Zierbus, M., Bangard, M., Guhlke, S., Pizzrulli, L., Hagendorff, A., Knapp, F. F., Jr., Biersack, H.-J. and Luederitz, B. "A New Method fo Applying Intravasacular Brachytherapy Using Re-188-Perrhenate and Commercially Available Balloon Catheter Systems," *Circulation*, Supplement I, I-65 (1998) (*Abstract* ).

#### ***Published in 1997:***

Alberto, R., Schibli, R., Abram, U., Egli, A., Knapp, F. F., Jr. and Schubiger, P. A. "Potential of the Organometallic "[M(CO)<sub>3</sub>]<sup>+</sup>" (M = Re, Tc) Fragment for the Labelling of Proteins and Small Molecules," *Radiochimica Acta*, 79(2), 99-104 (1997).

Bogatzky, J., Guhlke, S., Bender, H., Sartor, J., Knapp, Jr., F. F. and Biersack, H.-J. "Receptor Binding Studies with Rhenium-RC-160, A Directly-Labeled Somatostatin Analog, with

Membranes of the Colon Cancer Cell Line HT29 and CHO Cells," *Second International Conference on Isotopes*, Sydney, Australia, October 12-16, 1997.

Dadachova, M. S. and Lambrecht, R. M. "Synthesis and Crystal Structure of Zirconium Tungstate  $ZrW_2O_7(OH,Cl)_2 \bullet H_2O$ ," *J. Mater. Chem.*, 7(9), 1867-1870 (1997).

Dadadchova, E. and Mirzadeh, S. "The Role of Tin in the Direct Labelling of Proteins with Rhenium-188," *Nucl. Med. Biol.*, 605-607 (1997).

Demaimay, F., Dazord, L., Roucoux, A., Noiret, N., Patin, H. and Moisan, A. "Rhenium-188 and Technetium-99m Nitridobis(N-ethoxy-N-ethylidithiocarbamate) Leucocyte Labeling Radiopharmaceuticals: [ $^{188}ReN(NOET)_2$ ] and [ $^{99m}Tc(NOET)_2$ ] NOET = Et(EtO)NCS<sub>2</sub>: Their *In Vitro* Localization and Chemical Behaviour," *Nucl. Med. Biol.*, 24(8), 701-706 (1997).

Elder, R. C., Yuan, J., Helmer, B., Pipes, D., Deutsch, K. and Deutsch, E. "Studies of the Structure and Composition of Rhenium-1,1-Hydroxyethylidenediphosphonate (HEDP) Analogues of the Radiotherapeutic Agent  $^{186}Re$ -HEDP," *Inorg. Chem.*, 36, 3055-3063 (1997).

Fox, R. A. "Dosimetry of Beta Emitting Radionuclides for Use in Balloon Angioplasty," *Australasian Physical and Engineering Science in Medicine*, 20, 139-146 (1997).

Gaudiano, J., Martinez, G., Hermida, J. C., Robles, A., Verdera, S., Leon, A., Savio, E. and Knapp, F. F., Jr. "188-Re-HEDP: Tratamiento Del Dolor En Metasasis Oseas - Experiencia Clinica Inicial," ALASBAMIN 97, 44 (1997)(Abstract) (*in Spanish*).

Giedd, K. N., Amols, H., Marboe, C., Knapp, Jr., F. F. and Weinberger, J. "Effectiveness of Beta-Emitting Liquid-Filled Perfusion Balloon to Prevent Restenosis," American Heart Association 70<sup>th</sup> Scientific Meeting, Orlando, Florida, November 9-12, 1997; *Circulation*, 96, I-200 (1997)

Grillenberger, K. G., Glatz, S. and Reske, S. N. "Rhenium-188 Labeled Hydroxyapatite and Rhenium-188 Sulfur Colloid," *Nuklearmedizin*, 36, 71-75 (1997) (*in German*).

Guhlke, S., Beets, A. L., Biersack, H.-J. and Knapp, F. F., Jr. "Elution of Re-188 from W-188/Re-188 Generators With Salts of Weak Acids Permits Efficient Concentration to Low Volumes Using A New Tandem Cation/Anion Exchange System," Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-6, 1997; *J. Nucl. Med.*, 38, 125P (1997).

Guhlke, S., Oetjen, K., Beets, A. L., Knapp, Jr., F. F. and Biersack, H.-J. "188-Rhenium (V) Dimercaptosuccinic Acid: Separation and Stability Studies of Stereoisomers and Preliminary *In Vivo* Studies with the Individual Isomers in Rats," *Second International Conference on Isotopes*, Sydney, Australia, October 12-16, 1997.

Guhlke, S., Zamora, P. O., Sartor, J., Knapp, F. F., Jr. and Biersack, H.-J. "Ascorbic Acid Stabilization of Re-188- and I-131-Labeled Peptides for Radiotherapy," *Radiochimica Acta*, 79(2), 93-98 (1997).

Guhlke, S., Palmedo, H., Sartor, J., Beets, A. L., McPherson, D. W., Knapp, F. F., Jr. and Biersack, H.-J. "Re-188-HEDP for the Palliative Therapy of Bone Pain: Preparation, Radiochemistry and *In Vivo* Quality Control in Mice and Rats," *Nuklearmedizin*, 36, A76 (1997) (*Abstract; In German*).

Guhlke, S., Oetjen, K., Beets, A. L., Bender, H., Knapp, F. F., Jr. and Biersack, H.-J. "Rhenium(V)Dimercaptosuccinic Acid: Isolation and Stability Evaluation of the Stereoisomers and Initial Studies of the Various Isomers in Rats," *Nuklearmedizin*, 36, A76 (1997) (*Abstract; In German*).

Guhlke, S., Knapp, F. F., Jr., Zamora, P. O., Sharon, S., Beets, A. L., Oetjin, K., Palmedo, H., Bender, H. and Biersack, H.-J. "Clinical-Scale Tungsten-188/Rhenium-188 Generators Routinely Provide > 18 GBq (500 mCi/ml) Specific Volume Solutions of Carrier-Free Rhenium-188: Recent Generator Improvements and First Clinical Applications," *In, Proceedings, Boettstein Colloquim 1997: 11<sup>th</sup> Meeting of the International Research Group in Immunoscintigraphy and Immotherapy (IRIST), Villigen, Switzerland, March 21-22, 1997.*

Guhlke, A., Beets, A. L., Oetjin, K., Sartor, J., Mirzadeh, S., Knapp, Jr., F. F. and Biersack, H.-J. "Convenient Concentration of Rhenium-188 and Technetium-99m Eluates from Tungsten-188/Rhenium-188 or (n,γ)-Produced Molybdenum-99/Technetium-99m Generators to High Specific Volumes," *In, Proceedings, XII International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden, June 15-19, 1997*, pp 294-297.

Guhlke, S., Zamora, P. O., Sartor, J., Knapp, Jr., F. F., Rhodes, B. A. and Biersack, H.-J. "Stabilization of Rhenium-188 and Iodine-131-Labeled Peptides for Radiotherapy," European Nuclear Medicine Congress, Glasgow, Scotland, August 23-27, 1997; *Eur. J. Nucl. Med.*, 24, 1059 (1997).

Hamby, C. V., Chinol, M., Manzo, C. and Ferrone, S. "Purification by Affinity Chromatography with Anti-Idiotypic Monoclonal Antibodies of Immunoreactive Monoclonal Antibodies Following Labeling with <sup>188</sup>Re," *Hybridoma*, 16, 27-31 (1997).

Hashimoto, K. "Labelling of Aminomethylenephosphonate Derivatives with Generator-Produced <sup>188</sup>Re, and a Study of Their Stability," *Appl. Radiat. Isot.*, 51, 307-313 (1997).

Knapp, F. F., Jr., Guhlke, S., Weinberger, J., Beets, A. L. Amols, H., Palmedo, H. and Biersack, H.-J. "High Specific Volume Rhenium-188 - Clinical Potential of a Readily Available Therapeutic Radioisotope," *Invited Lecture, 35<sup>th</sup> International Meeting of the German Society of Nuclear Medicine, Kassel, Germany, April 16-19, 1997; Nuklearmedizin*, 36, A38 (1997).

Knapp, F. F., Jr. "Clinical Therapeutic Applications of Reactor-Produced Radioisotopes," *Invited Paper, Symposium on Isotope Production and Applications, American Nuclear Society, 1997 Winter Meeting, Albuquerque, New Mexico, November 16-20, 1997; ANS Trans.*, 77, 539-540 (1997).

Knapp, F. F., Jr., Beets, A. L., Guhlke, S., Zamora, P. O., Bender, H., Palmedo, H. and Biersack, H.-J. "Rhenium-188-Labeled Agents for Breast Cancer Treatment," *Seventh*

*Mediterranean Symposium of Nuclear Medicine and Radiopharmaceuticals*, Athens, Greece, May 7-12, 1997, Mediterrean Pub., Athens, Greece.

Knapp, Jr., F. F., Guhlke, S., Beets, A. L., Amols, H. and Weinberger, J. "Rhenium-188 - Attractive Properties for Intravascular Brachytherapy for Inhibition of Coronary Restenosis After PTCA," *3rd International Conference of Nuclear Cardiology*, Florence, Italy, April 6-9, 1997; *J. Nucl. Cardiol.*, 4, S-118 (1997).

Knapp, F. F., Jr., Guhlke, S., Beets, A. L., Amols, H. and Weinberger, J. "Intraarterial Irradiation with Rhenium-188 for Inhibition of Restenosis After PTCA - Strategy and Evaluation of Species for Rapid Urinary Excretion," Annual Meeting of the Society of Nuclear Medicine, San Antonio, Texas, June 1-6, 1997; *J. Nucl. Med.*, 38, 124P (1997) (Abstract).

Knapp, F. F., Jr., Beets, A. L., Guhlke, S., Zamora, P. O., Bender, H., Palmedo, H. and Biersack, H.-J. "Development of the Alumina-Based Tungsten-188/Rhenium-188 Generator and Use of Rhenium-188-Labeled Radiopharmaceuticals for Cancer Treatment," *Anticancer Research*, 17, 1783-1796 (1997).

Lin, W.-Y., Lin, C.-P., Hsieh, B.-T., Tsai, Z.-T., Yen, T.-C., Wang, S.-J., Ting, G., Yeh, S.-J. and Knapp, Jr., F. F. "Rhenium-188 HEDP: A New Potential, Generator-Produced Radiotherapeutic Drug for Bone Metastases," *Eur. J. Nucl. Med.*, 24, 590-595 (1997).

Martinez, G., Savio, E., Robles, A., Leon, A., Verdera, S., Muniz, S., Knapp, F. F., Jr. and Gaudiano, J. "Caracterizacion Farmacocinetica De 188-Re-HEDP en Pacientes Metastasis Oseas," ALASBAMIN 97, 51 (1997)(Abstract )(in Spanish).

Mirzadeh, S., Beets, A. L. and Knapp, Jr., F. F. "Production of Rhenium-186 and Rhenium-188 in the ORNL-HFIR," Symposium on Rhenium, Orlando, FL, February 9-13, 1997 (Abstract ).

Mirzadeh, S., Beets, A. L. and Knapp, F. F., Jr. "HFIR-Produced Radioisotopes of Current Medical Interest," *In, Proceedings, Sixth Workshop on Targetry and Chemistry*, Vancouver, B. C., Canada, August 17-19, 1995; J. M. Link and T. J. Ruth, Editors, pp. 129-131 (1996).

Mirzadeh, S., Knapp, F. F., Jr. and Lambrecht, R. M. "Burn-up Cross Section of <sup>188</sup>W," *Radiochimica Acta*, 77, 99-102 (1997).

Palmedo, H., Guhlke, S., Beets, A. L., Sartor, J., Knapp, Jr., F. F. Bogatsky, J. and Biersack, H.-J. "Rhenium-188-HEDP for Pain Palliation of Bone Metastases: First Clinical Results," European Nuclear Medicine Congress, Glasgow, Scotland, August 23-27, 1997; *Eur. J. Nucl. Ed.*, 24, 962 (1997).

Safavy, K., Khazaeli, M. B., Qin, H. and Buchabaum, D. J. "Synthesis of Bombesin Analogues for Radiolabeling with Rhenium-188," *Cancer*, 80, 2354-2359 (1997).

Sikes, T. R., Somayaji, V., Bier, S., Woo, T. K., Kwok, C. S., Sniecklus, V. and Noujaim, A., "Radiolabeling of Monoclonal Antibody B43.13 with Rhenium-188 for Immunoreactivity," *Appl. Radiat. Isot.*, 48, 899-906 (1997).

Verdera, E. S., Gaudiano, J., Leon, A., Martinez, G., Robles, A., Savio, E., Leon, E., McPherson, D. W. and Knapp, Jr., F. F. "Rhenium-188-HEDP: Kit Formulation and Quality Control," *Radiochimica Acta*, 77(2), 113-118 (1997).

Weinberger, J., Mirzadeh, S., Knapp, Jr., F. F. and Amols, H. "Beta Irradiation for Restenosis After Stent Implantation: Dose Variations Among Differing Stents," 46<sup>th</sup> Annual Scientific Sessions, American College of Cardiology, Anaheim, CA, March 16-19, 1996; *J. Amer. Coll. Cardiol.*, 29, No. 2 (Suppl. A), 238A, 1997 (*Abstract # 973-59*).

Zamora, P. O., Marek, M. J. and Knapp, Jr., F. F. "Preparation of Re-188-RC-160 Somatostatin Analog: A Peptide for Regional Radiotherapy," *Appl. Radiat. Isot.*, 48, 305-310 (1997).

Zamora, P. O., Marek, M. J., and Knapp, Jr., F. F. "Preparation of Re-188-RC-160 Somatostatin Analog: A Peptide for Regional Radiotherapy," *Appl. Radiat. Isot.*, 48, 305-310 (1997).

Zamora, P. O., Bender, H., Guhlke, S., Marek, M. J., Knapp, Jr., F. F., Rhodes, B. A. and Biersack, H.-J. "Pre-Clinical Experience with Re-188-RC-160, A Radiolabeled Somatoatostatin Analog for Use in Peptide-Targeted Radiotherapy," *Anticancer Research*, 17, 1803-1808 (1997).

***Published in 1996:***

Alberto, R., Schibli, R., Egli, A., Schubiger, A., and Knapp, Jr., F. F. "Potential of the Organometallic "[M(CO)<sub>3</sub>]<sup>+</sup>" (M=Re,Tc) Fragment for the Labeling of Proteins and Small Molecules," *Symposium on Radiochemistry and Radioimmunotherapy*, American Chemical Society Annual Meeting, Orlando, FL, August 25-29, 1996 (*Abstract*).

Akhtar, M., Mushtaq, A. and Karim, H. M. A. "Separation of No-Carrier Added <sup>188</sup>Re from Neutron-Irradiated Natural Tungsten," *Sep. Sci. Tech.*, 31, 1997-2000 (1996).

Amols, H. I., Weinberger, J., Mirzadeh, S., and Knapp, Jr., F. F. "Beta Irradiation for Restenosis: Considerations for Stent Implantation," Annual Meeting of the American Heart Association, New Orleans, Louisiana, November 10-13, 1996; *Circulation*, 94, Suppl. I, I-210 (1996) (*Abstract*).

Arteburn, J. B., Fogarty, I. M., Hall, K. A., Ott, K. C. and Byron, J. C. "Functionalized Organoimidorhenium(V) Complexes as Potential Radiopharmaceuticals: Synthesis of Glycine Derivatives and the Structure Determination of a Rhenium Analogue of Chlorambucil," *Angew. Chem. Int. Ed. Eng.*, 35, 2877-2879 (1996).

Blower, P. J., Lam, A., Knapp, Jr., F. F., O'Doherty, M. J., and Coakley, A. J. "Preparation, Biodistribution and Dosimetry of Re-188-DMSA In Patients with Disseminated Bone Metastases," British Nuclear Medicine Society Meeting 1996, Brighton, England; April 1-3, 1996; *Nucl. Med. Comm.*, 17, 258 (1996) (*Abstract*).

Dadachova, E., Smith, S. V. and Mirzadeh, S. "Electrolytic Reduction of Carrier-Free Rhenium-188," *Appl. Radiat. Isot.*, 47, (3), 361-364 (1996).

Franceschini, R., Chinol, M., Pecorale, A., Deleide, G., Knapp, F. F., Jr. and Paganelli, G. "Industrial Production of a W-188/Re-188 Generator and its Validation by Preparation of Re-188-MDP Using Carrier-Free Re-188," *In, Proceedings of the 2<sup>nd</sup> National Joint Congress of the Radiochemistry Interdivisional Group (SIRR) and the Italian Chemical Society (GIR), Palermo, Italy, September 11-14, 1996;* pp 317-322 (1996).

Hashimoto, K. and Yoshihara, K. "Rhenium Complexes Labeled With <sup>188,186</sup>Re For Nuclear Medicine," *In, Topics in Current Chemistry, 176*; K. Yoshihara and T. Omori, Editors; Springer Verlag, Berlin/Heidelberg/New York, 1996, pp. 275-292.

Hosono, M. N., Hosono, M., Mishra, A. K., Faivre-Chauvet, A., Barbet, J., Gautherot, E., Knapp, Jr., F. F., Yamada, R., Machida, K. and Chatal, J. F. "Localization of Small-Cell Lung Cancer Xenografts by Re-188-Labeled Monoclonal Antibodies," *1996 Congress of the European Association of Nuclear Medicine, Copenhagen, Denmark, September 14-18, 1996;* *Eur. J. Nucl. Med., 23,* 1109, (1996) (Abstract).

Hosono, M. N., Hosono, M., Mishra, A. K., Faivre-Chauvet, A., Barbet, J., Gautherot, E., Knapp, Jr., F. F., Yamada, R. and Chatal, J. F. "Targeting of Small-Cell Lung Cancer Xenografts by Re-188-Labeled Monoclonal Antibodies," *The 6<sup>th</sup> Asia and Oceania Congress of Nuclear Medicine and Biology, Kyoto, Japan, September 30-October 4, 1996, Ann. Nucl. Med., 10,* 573 (1996) (Abstract).

Hosono, M., Hosono, M. N., Haberberger, T., Zamora, P. O., Guhlke, S., Bender, H., Knapp, Jr., F. F. and Biersack, H.-J. "Localization of Small-Cell Lung Cancer Xenographs with Iodine-125, Indium-111 and Rhenium-188-Somatostatin Analogs," *Jpn. J. Cancer Res., 87,* 995-1000 (1996).

Rhodes, B. A., Lambert, C. R., Marek, M. J., Knapp, Jr., F. F. and Harvey, E. B. "Rhenium-188-Labeled Antibodies," *Appl. Radiat. Isot., 47,* 7-14 (1996).

Hsieh, B.-T., Hsieh, H. T., Shen, L. H., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "The Study of Preparation of Tungsten-188/Rhenium-188 Generators," *In, Proceedings of the International Conference on Isotopes, Beijing, China, May 7-12, 1995;* *J. Radioanalyt. Nucl. Chem., 205,* 93-100 (1996).

Hsieh, B.-T., Callahan, A. P., Beets, A. L., Ting, G. and Knapp, Jr., F. F. "Ascorbic Acid/Saline Eluant Increases Re-188 Yields After "Wet" Storage of W-188/Re-188 Generators," *Appl. Radiat. Isot., 47,* 23-26 (1996).

Knapp, Jr., F. F., Mirzadeh, S. and Beets, A. L. "Reactor Production and Processing of Therapeutic Radioisotopes for Applications in Nuclear Medicine," *J. Radioanalyt. Nucl. Chem. Lett., 205,* 93-100 (1996).

Mirzadeh, S. and Knapp, Jr., F. F. "Biomedical Radionuclide Generators Systems," *Invited Review, Centennial Issue - Discovery of Radioactivity, In, J. Radioanalyt. Nucl. Chem., 203,* 469-486 (1996).

Mushtaq, A. "Recovery of Enriched  $^{186}\text{W}$  from Spent  $^{188}\text{W}/^{188}\text{Re}$  Generators," *Appl. Radiat. Isot.*, 47, 727-729 (1996).

Sartor, J., Schaffland, A., Bogatsky, J., Guhlke, S., Knapp, Jr., F. F. and Biersack, H-J. "Tc- $99m$  and Re-188-Labeling of a D-Lys $^6$ -LHRH Analogue Using MAG $_3$ -p-Nitrophenylesters," European Association of Nuclear Medicine Congress, Copenhagen, Denmark, September 14-18, 1996, *Eur. J. Nucl. Med.*, 23, 1142 (1996) (*Abstract* ).

Zamora, P. O., Bender, H., Knapp, Jr., F. F., Marek, M. J. and Biersack, H.-J. "Regional, Tumor Radiotherapy with Re-188-RC-160 Somatostatin Analog," 43rd Annual Meeting, Society of Nuclear Medicine, Denver, CO, June 3-6, 1996, *J. Nucl. Med.*, 37, P236 (1996) (*Abstract* ).

Zamora, P. O., Guhlke, S., Rhodes, B. A., Marek, M. J., Bender, H., Biersack, H.-J., Mirzadeh, S. and Knapp, Jr., F. F. "Radiotherapy Using the Re-188-Labeled RC-160 Peptide," *Symposium on Radiochemistry and Radioimmunotherapy*, American Chemical Society Annual Meeting, Orlando, FL, August 25-29, 1996 (*Abstract* ).

Zamora, P. O., Bender, H., Rhodes, B. A., Knapp, Jr., F. F. and Biersack, H. J. "Peptides for Tumor Radiotherapy; Applications Based on Re-188-RC-160, A Somatostatin Analogue," *Immunological Approaches to Tumor Therapy. III. International Meeting on Idiotypic Network and Tumor Therapy*, Drug Targeting and Photodynamic Therapy, Bonn, Germany, February 29-March 2, 1996 (*Abstract* ).

Wang, S. J., Lin, W. Y., Chen, M. N., Hsieh, B.-T., Shen, L. H., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "Biodistribution of Rhenium-188 Lipiodol Infused via the Hepatic Artery of Rats with Hepatic Tumors," *Eur. J. Nucl. Med.*, 23, 13-17 (1996).

Zamora, P. O., Guhlke, S., Bender, H., Diekmann, B. A., Rhodes, H. J., Biersack, H.-J. and Knapp, Jr., F. F. "Radiotherapy of Intrathoracic Carcinoma Xenographs with  $^{188}\text{Re}$ -RC-160, A Somatostatin Analogue," *Tumor Targeting*, 2, 49-59 (1996).

Zamora, P. O., Guhlke, S., Bender, H., Diekmann, D., Rhodes, B. A., Biersack, H.-J. and Knapp, Jr., F. F. "Experimental Radiotherapy of Receptor-Positive Human Adenocarcinoma with  $^{188}\text{Re}$ -RC-160, A Directly-Radiolabeled Somatostatin Analog," *International Journal of Cancer*, 65, 214-220 (1996).

Verdera, E. S., Gaudiano, J., Leon, A., Martinez, G., Robles, A., Savio, E., McPherson, D. W. and Knapp, Jr., F. F. "Rhenium-188-HEDP-Kit Formulation/Quality Control," American Chemical Society Annual Meeting, Orlando, FL, August 25-29, 1996 (*Abstract* ).

Wang, S. J., Lin, W. Y., Chen, M. N., Hsieh, B.-T., Shen, L. H., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "Radiolabeling of Lipiodol with Generator-Produced Rhenium-188 for Hepatic Tumor Therapy," *Appl. Radiat. Isot.*, 47, (3) 355-359 (1996).

#### ***Published prior to 1995:***

Balchot, J., Herment, J. and Moussa, A. "Generator for W-188/Re-188," *Int. J. Appl. Radiat., Isot.*, 20, 467-470 (1969) (*In French*).

Barfeld, P. A. "Radionuclide Irradiation of the Choroid Plexus and Central Nervous System," In, Therapy in Nuclear Medicine, R. P. Spencer, ed., Grune and Stratton, New York, 1977; Chapter 14, pp. 167-174.

Bardfeld, A. P. and Shulman, K. "Transport and Distribution of  $^{188}\text{Re}$  in the Central Nervous System", *Experimental Neurology*, 50, 1 (1976).

Binney, S. E., Walker, R. J. and Jordheim, D. P. "Production of  $^{188}\text{W}/^{188}\text{Re}$  in a Research Reactor," Oregon State University, Department of Nuclear Engineering, Report # OSU-NE-MED-9003, December 1990.

Bisunadan, M. M., Blower, P. J., Clarke, S. E. M., Singh, J., and Wend, M. J. "Synthesis and Characterization of [ $^{186}\text{Rh}$ enium(V)dimercaptosuccinic Acid: A Possible Tumour Radiotherapy Agent", *Appl. Radiat. Isot.*, 42, 167-171 (1991).

Blower, P. J., Singh, J. Clarke, S. E. M., Lazarus, C. R., Reghibe, K., Callahan, A. P. and Knapp, Jr., F. F. "Optimization of Simple Methods for Preparation of  $^{186/188}\text{Re(V)DMSA}$  for Assessment as Tumor Radionuclide Therapy Agents," *European Symposium on Radiopharmacy and Radiopharmacology*, Cambridge University, Cambridge, England, March 1993 (Abstract ).

Botros, N., El-Garny, M., Abdulla, S. and Aly, H. F. "Comparative Studies on the Development of a W-188/Re-188 Generator", *Isotopenpraxis*, 22, 368 (1986).

Brodkaya, G. A. and Gapurova, O. U. "Development of a High Activity  $^{188}\text{W}-^{188}\text{Re}$  Generator," Translated, From, *Radiokhimiya*, 35, No. 3, 92-97 (1993).

Callahan, A. P., Rice, D. E. and Knapp, F. F., Jr. "Re-188 for Therapeutic Applications from an Alumina Based W-188/Re-188 Radionuclide Generator System," *NucCompact*, 20, 3-6 (1989).

Callahan, A. P., Mirzadeh, S. and Knapp, F. F., Jr. "Large-Scale Production of Tungsten-188," *Radioact. & Radiochem.*, 3, 46-48 (1992).

Carter, T. E., Barfeld, P. A. and Shulman, K. "The Uptake of Rhenium-188 in the Choroid Plexus and Its Effect on CSF Production," In, Cisternography and Hydrocephalus, Harbert, et al., Editors; Charles Thomas, 1977; Chapter 10, pp. 131-140.

Chen, M. N., Lin, W. Y., Wang, S. J., Hsieh, B. T., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "Rhenium-188 Labeling of Lipiodol for Hepatoma Therapy," European Association of Nuclear Medicine Congress, Brussels, Belgium, August 23-28, 1995, *Eur. J. Nucl. Med.*, 22, 886 (1995) (Abstract # 647).

Coursey, B. M., Calhoun, J. M., Cessna, J., Hoppe, D. D., Schima, F. J., Unterweger, M. P., Golas, D. B., Callahan, A. P., Mirzadeh, S. and Knapp, F. F., Jr. "Assay of the Eluent from the Alumina-Based W-188/Re-188 Generator", *Radioact. & Radiochem.*, 2, 39 (1990).

Dadachova, E., Mirzadeh, S., Lambrecht, R. M. and Kamioki, H. "Alumina-Based  $^{188}\text{W}$ - $^{188}\text{Re}$  Biomedical Generator: Physical and Chemical Study of Tungstate Ion Adsorption on  $\text{Al}_2\text{O}_3$ ," Synthesis and Applications of Isotopically labeled Compounds, John Wiley and Sons, 1994, pp. 232-235.

Dadachova, E., Smith, S. V., Schmidt, P. F. and Mirzadeh, S. "Electrochemical Reduction of  $^{188}\text{Re}$  for Protein Labeling," *XIth International Symposium on Radiopharm. Chem.*, Vancouver, Canada, Aug 13-17, 1995; *J. Lab. Cmpds. Radiopharm.*, 37, 524-525 (1995)(Abstract ).

Dadachova, E., Kamioki, H., Lambrecht, R. M. and Mirzadeh, S. "Alumina-Based  $^{188}\text{W}$ - $^{188}\text{Re}$  Biomedical Generator-Physical and Chemical Study of Tungstate Ion Adsorption on  $\text{Al}_2\text{O}_3$ ," International Symposium on Synthesis and Preparation of Radioisotopes, Strasbourg, France, June, 1994 (Abstract ).

Dadachova, E., Mirzadeh, S. and Lambrecht, R. M. "Tungstate-Ion-Alumina Interaction in a  $^{188}\text{W}$ /  $^{188}\text{Re}$  Biomedical Generator," *J. Phys. Chem.*, 99, 10976-10981 (1995).

Deutsch, E., Libson, K., Vanderheyden, J. -L., Ketering, A. and Maxon, H. R. "The Chemistry of Rhenium and Technetium as Related to the Use of Isotopes of the Elements in Therapeutic and Diagnostic Nuclear Medicine," *Nucl. Med. Biol.*, 13, 465-477 (1986).

Early, J. F., Durack, L., Williams, D. and Vanderheyden, J.-L. "Considerations for Imaging Re-188 and Re-186 Isotopes," *Clin. Nucl. Med.*, 15, 911-916 (1990).

Ehrhardt, G. J., Ketering, A. R. and Liang, Q. "Improved W-188/Re-188 Zirconium Tungstate Gel Radioisotope Generator Chemistry," *Radioact. & Radiochem.*, 3, 38-41 (1992).

Ehrhardt, G. J., Turpin, T. A., Razavi, M. S., Vanderheyden, J. -L., Su, F. M. and Fritzberg, A. R., "A Convenient W-188/Re-188 Generator for Therapeutic Applications Using Low Specific Activity W-188," In, *Technetium and Rhenium in Chemistry and Nuclear Medicine 3*, (M. Nicolini and G. Bandoli, eds.) Cortina International, Verona, Italy - Raven Press, New York, pages 631-634 (1990).

Ehrhardt, G. J., Ketrting, A. R., Turpin, T. A., Razavi, M. S., Vanderheyden, J. -L. and Fritzberg, A. R. "An Improved W-188/Re-188 Generator for Radiotherapeutic Applications," *J. Nucl. Med.*, 28, 656 (1987) (Abstract).

Griffiths, G. L., Goldenberg, D. M., Jones, A. L. and Hansen, H. J. "Radiolabeling of Monoclonal Antibodies and Fragments with Technetium and Rhenium," *Bioconjugate Chemistry*, 3, 91-99 (1992).

Griffiths, G. L., Goldenberg, D. M., Sharkey, R. M., Knapp, F. F., Jr., Callahan, A. P., Tejada, G. and Hansen, H. -J. "Evaluation of a  $^{188}\text{W}/\text{Re}$  Generator System as a Ready Source of  $^{188}\text{Re}$  for Use in Radioimmunotherapy (RAIT)," *Radioact. & Radiochem.*, 3, pp. 33-37 (1992).

Griffiths, G. L., Knapp, F. F., Jr., Callahan, A. P., Chang, C. -H., Hansen, H. J. and Goldenberg, D. M. "Direct Radiolabeling of Monoclonal Antibodies with Generator-Produced Rhenium-188 for Radioimmunotherapy," *Cancer Research*, 51, 4594 (1991).

Guhlke, S., Diekmann, D., Zamora, P. O., Knapp, Jr., F. F. and Biersack, H.-J. "Development of MAG<sub>3</sub> p-Nitrophenyl Ester for Technetium-99m and Rhenium-188 Labeling of Amines and Peptides," *Fourth International Symposium on Technetium in Chemistry and Nuclear Medicine*, Bressanone, Italy, September 12-14, 1994; SG Editorial, Padova, pp. 363-366 (1995).

Haberberger, T., Zamora, P. O., Hosono, M., Hosono, M. N., Bender, H., Guhlke, S., Knapp, Jr., F. F. and Biersack, H.-J. "Direct Radiolabeling of the Somatostatin Analogs RC-160 and Octreotide with <sup>99m</sup>Tc and <sup>188</sup>Re: Initial Results with Stannous Reductions," *Fourth International Symposium on Technetium in Chemistry and Nuclear Medicine*, Bressanone, Italy, September 12-14, 1994; SG Editorial, Padova, pp. 367-372 (1995).

Hafeli, U., Tiefenauer, L. X., Schubiger, P. A. and Weber, H. G. "A Lipophilic Complex with <sup>186</sup>Re/

<sup>188</sup>Re Incorporated in Liposomes Suitable for Radiotherapy," *Int. J. Appl. Instrument.* B., 18, 449-454 (1991).

Hafeli, V., Tiefenauer, L. X., Schubiger, P. A. and Weder, H. G. "A Lipophilic Complex with <sup>186</sup>Re/<sup>188</sup>Re Incorporated in Liposomes Suitable for Radiotherapy," *Nucl. Med. Biol.*, 18, 449-454 (1991).

Hayes, R. L. and Rafter, J. J. "Rhenium-188 as a Possible Diagnostic Agent," *J. Nucl. Med.*, 7, 797 (1966) (*Abstract*).

Hayes, R. L. and Rafter, J. J. "Rhenium-188 as a Possible Diagnostic Agent," In, *Research Report*, Medical Division, Oak Ridge Associated Universities, pp. 74-77, 1966.

Hosono, M., Hosono, M. N., Bender, H., Zamora, P. O., Guhlke, S., Knapp, Jr., F. F. and Biersack, H.-J. "Scintigraphic Detection of Colorectal Carcinoma Xenografts With Re-188 Labeled Monoclonal Antibody," 6th World Congress of Nuclear Medicine and Biology, Sydney, Australia, October 23-28, (1994); *Eur. J. of Nucl. Med.*, 21, S26 (1994) (*Abstract*).

Hosono, M., Hosono, M. N., Haberberger, T., Zamora, P. O., Guhlke, S., Bender, H., Knapp, Jr., F. F. and Biersack, H.-J. "Targeting of Small-Cell Lung Cancer By Octreotide Labeled with I-125, In-111 and Re-188 in a Mouse Model," *Eur. J. Nucl. Med.*, 22, 845 (1995) (*Abstract*).

Hosono, M., Hosono, M. N., Haberberger, T., Zamora, P. O., Guhlke, S., Bender, H., Knapp, Jr., F. F. and Biersack, H.-J. "Imaging of Small-Cell Lung Cancer Zenographs with I-125, In-111, and Re-188 Octreotides," 42nd Annual Meeting of The Society of Nuclear Medicine, Minneapolis, MN, June 12-15, 1995; *J. Nucl. Med.*, 36, P72, (1995) (*Abstract*).

Hsieh, B. T., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "The Preparation of W-188/Re-188 Generators for Medical Applications," *Symp. on Isot. and Radiation Applications*, Chung-Hwa Nuclear Science Society, Taiwan, July 6-8, 1994 (*Abstract*).

Kamioki, H., Mirzadeh, S., Lambrecht, R. M., Knapp, Jr., F. F. and Dadachova, E. "Tungsten-188/Rhenium-188 Generator for Biomedical Applications," *Radiochim. Acta*, 65, 39-46 (1994).

Kamioki, H., Mirzadeh, S., Lambrecht, R. M. and Dadachova, E. "Pre-Clinical Evaluation of the <sup>188</sup>W/<sup>188</sup>Re Biomedical Generator," *Synthesis and Applications of Isotopically Labeled Compounds*, John Wiley and Sons, 1994, pp. 237-240.

Kamioki, H., Mirzadeh, S. and Lambrecht, R. M. "Pre-Clinical Evaluation of <sup>188</sup>W/<sup>188</sup>Re Biomedical Generator," *10th International Symposium on Radiopharmaceutical Chemistry*, Kyoto, Japan, October 25-28, 1993; *J. Lab. Cmpds. Radiopharm.*, XXXV, 279-281 (1994) (*Abstract*).

Knapp, Jr., F. F. and Mirzadeh, S. "The Continuing Important Role of Radionuclide Generator Systems for Nuclear Medicine," *Invited Review Article*, *Eur. J. Nucl. Med.*, 21, 1151-1166 (1994).

Knapp, Jr., F. F., Lisic, E. C., Mirzadeh, S. and Callahan, A. P. "Tungsten-188/Carrier-Free Rhenium-188 Perrhenic Acid Generator System," U.S. Patent No. 5,275,802, Issued January 4, 1994.

Knapp, Jr., F. F., Lisic, E. C., Mirzadeh, S. and Callahan, A. P. "Tungsten-188/Carrier-Free Rhenium-188 Perrhenic Acid Generator System," U.S. Patent No. 5,186,913, Issued February 17, 1993.

Knapp, F. F., Jr., Lisic, E. C., Mirzadeh, S., Callahan, A. P. and Rice, D. E. "A New Clinical Prototype Tungsten-188/Rhenium-188 Generator to Provide High Levels of Carrier-Free Rhenium-188 for Radioimmunotherapy (RAIT)," *In, Proceedings*, European Association of Nuclear Medicine Meeting, Wien, Austria, September 1-5, 1992; Schattauer Verlag, pp. 290-294 (1993).

Knapp, Jr., F. F. "Radionuclide Generator Systems," Nuclear Medicine - Diagnosis and Therapy, J. C. Harbert, W. C. Eckelman, R. D. Neuman, Editors; Chapter 10, pp. 203-213, Editors, Thieme Medical Publishers, Inc., New York, 1995.

Knapp, Jr., F. F., Callahan, A. P., Beets, A. L., Mirzadeh, S. and Hsieh, B.-T. "Processing of Reactor-Produced Tungsten-188 for Fabrication of Clinical Scale Alumina-Based Tungsten-188/Rhenium-188 Generators," *Appl. Rad. and Isot.*, 45, 1123-1128 (1994).

Knapp, Jr., F. F., Beets, A. L., Callahan, A. P., Mirzadeh, M. and Hsieh, B. T. "Optimized Processing of Reactor-Produced Tungsten-188 for Clinical-Scale W-188/Re-188 Generators," World Federation of Nuclear Medicine and Biology Congress, Sydney, Australia, October 23-28, 1994; *Eur. J. of Nucl. Med.*, 21, S201 (1994) (*Abstract*).

Knapp, Jr., F. F., Mirzadeh, Beets, A. L., Sharkey, R., Griffiths, G., and Goldenberg, D. M. "Curie Scale Tungsten-188/Rhenium-188 Generators Can Cost-Effectively Provide Carrier-Free Rhenium 188 for Routine Clinical Applications," *Fourth International Symposium on Technetium and Rhenium in Chemistry and Nuclear Medicine*, Bressanone, Italy, September 12-14, 1994; SG Editoriali, Padova, pp. 319-324 (1995).

Knapp, Jr., F. F. and Mirzadeh, S. "Reactor Production of Radionuclides for Nuclear Medicine," Principles of Nuclear Medicine, 2nd Edition, H. N. Wagner and Z. Szabo, Editors, W. B. Saunders, Co., pp 135-144 (1995).

Knapp, Jr., F. F., Brihaye, C. and Callahan, A. P. "Radionuclide Generator Systems for Nuclear Medicine Applications," Principles of Nuclear Medicine, 2nd Edition, H. N. Wagner and Z. Szabo, Editors, W. B. Saunders, Co., pp 150-165 (1995).

Knapp, Jr., F. F., Mirzadeh, S., Zamora, P., Guhlke, S., Biersack, H.-J., O'Doherty, M. J. and Blower, P. J. "Rhenium-188 - Cost Effective Therapeutic Applications of A Readily Available Generator-Derived Radioisotope," British Nuclear Medicine Society Meeting 1996, Brighton, England, April 1-3, 1996, *Nucl. Med. Comm.* 17, 268 (1996) (*Abstract* ).

Knapp, Jr., F. F., Mirzadeh, S. and Beets, A. L. "Reactor Production and Processing of Radioisotopes for Therapeutic Applications in Nuclear Medicine," *International Conference on Isotopes*, Beijing, China, May 7-12, 1995 (*Abstract* ).

Kodina, G., Tulskaya, T., Gureev, E. Brodskaya, G., Gapurova, O. and Drosdovsky, B., "Production and Investigation of Rhenium-188," In, *Technetium and Rhenium in Chemistry and Nuclear Medicine\_3*, (M. Nicolini and G. Bandoli, Editors) Cortina International, Verona, Italy - Raven Press, New York; pages 635-641 (1990).

Lewis, R. E. and Eldridge, J. S. "Production of 70-day W-188 and Development of a 17-hour Re-188 Radioisotope Generator," *J. Nucl. Med.*, 7, 804-805 (1966) (*Abstract* ).

Lin, W. Y., Chen, M. N., Wang, B. T., Hsieh, B. T., Tsai, Z. T., Ting, G. and Knapp, Jr., F. F. "Biodistribution of Rhenium-188 Lipiodol in Rats Following Hepatic Arterial Injection," *Eur. J. Nucl. Med.*, 22, 891 (1995) (*Abstract* ).

Lisic, E. C., Callahan, A. P., Mirzadeh, S. and Knapp, F. F., Jr. "The Tandem Tungsten-188/Rhenium-188 Perrhenate/Perrhenic Acid Generator System," *Radioact. & Radiochem.*, 3, 42-45 (1992).

Lisic, E. C., Mirzadeh, S. and Knapp, F. F., Jr. "Synthesis of Carrier-Free Rhenium-188(V)DMSA Using Triphenyl Phosphine as a Facile Reducing Agent," *J. Labl. Cmpd.*, 33, pp. 65-75 (1992).

Maxon, H. R., III., Schroder, L. E., Hertzberg, V. S., Thomas, S. R., Englano, E., E., Samaratuga, R., Smith, H., Moulton, J. S., Williams, C. C., Ehrhardt, G. J. and Schneider, H. J., "Rhenium-186(Sn)HEDP for Treatment of Painful Osseous Metastases: Results of a Double-Blind Crossover Comparison with Placebo," *J. Nucl. Med.*, 32, 1877 (1991) (*Abstract* ).

Mikheev, N. B., Popvich, V. B., Rumer, I. A., Savelev, G. I. and Volkova, N. C., "Re-188 Generator," *Isotopenpraxis*, 8, 248-251 (1972) (*In Russian*).

Mirzadeh, S., Knapp, Jr., F. F. and Alexander, C. W. "Evaluation of Neutron Inelastic Scattering for Radioisotope Production," American Chemical Society Biannual Meeting, Denver, CO, March 28-April 2, 1993 (*Abstract*).

Mirzadeh, S. "Advances in the  $^{188}\text{W}$ - $^{188}\text{Re}$  Generator," *In*, Proceedings of the International Symposium on Advances in Radiopharmaceuticals, Sydney, Australia, February 5, 1993 (*Abstract*).

Mirzadeh, S., Knapp, F. F., Jr. and Callahan, A. P. "Production of Tungsten-188 and Osmium-194 in a Nuclear Reactor for New Clinical Generators," *In*, *Proceedings*, International Conference on Nuclear Data for Science and Technology (S. M. Qaim, ed.), Julich, Germany, May 1991, p. 595 (*Abstract*).

Mirzadeh, S., Dadachova, E., Hetherington, E., Knapp, Jr., F. F. and Lambrecht, R. M. "Evaluation of  $^{188}\text{W}$ / $^{188}\text{Re}$  Biomedical Generator," *International Symposium on Synthesis and Preparation of Radioisotopes*, Strasbourg, France, June 1994 (*Abstract*).

Reilly, R. M. "Radioimmunotherapy of Malignancies," *Clin. Pharm.*, 10, 359-375 (1991).

Schaffland, A., Guhlke, S., Knapp, Jr., F. F., Zamora, P. O. and Biersack, H.-J. "Pre-and Post-Conjugate Labeling of Amines and Peptides with  $^{188}\text{Re}$  Using the  $\text{MAG}_3$  Chelate," XIth International Symp. on Radiopharmaceutical Chem., Vancouver, Canada, Aug 13-17, 1995; *J. Lab. Cmpds. Radiopharm.*, 37, 493-495 (1995) (*Abstract*).

Sharkey, R. M., Goldenberg, D. W., Levine, G., Vagg, R., Ahmad, M., Pawlyk, D., Siegel, J. A., Griffiths, G. L., Hansen, H. J., Callahan, A. P. and Knapp, Jr., F. F. "Phase I Radioimmunotherapy (RAIT) Using A Rhenium-188-Labeled Murine Monoclonal Antibody (MAb)," Society of Nuclear Medicine 40th Annual Meeting, Toronto, Canada, June 7-11, 1993, *J. Nucl. Med.*, 34, 54 (1993) (*Abstract*).

Singh, J., Powel, A. K., Clarke, S. E. M. and Blower, P. J. "Crystal Structure and Isomerism of a Tumour Targeting Radiopharmaceutical:  $[\text{ReO}(\text{dmsa})_2]$ ," *Chem. Soc. Chem. Commun.*, 1115 (1991).

Singh, J., Reghebi, K., Lazarus, C. R., Clarke, S. E. M., Callahan, A. P., Knapp, Jr., F. F. and Blower, P. J. "Studies on the Preparation and Isomeric Composition of  $^{[186]\text{Re}}$ - and  $^{[188]\text{Re}}$ -Pentavalent Rhenium Dimercaptosuccinic Acid Complex," *Nucl. Med. Commun.*, 14, 197-203 (1993).

Skaddan, M. B. and Katzenellenbogen, J. A. "Integrated "3+1" Oxorhenium(V) Complexes as Estrogen Mimics," *Bioconj. Chem.*, 10, 199-129 (1999).

Tsang, B. W., Rebenspies, J. and Martell, A. E. "Rhenium(V)-Oxo Complexes of Neutral and Monoanionic Tetraazamacrocycles," *Inorg. Chem.*, 32, 988 (1993).

Vanderheyden, J. -L., Fritzberg, A. R., Rao, J. N., Kasina, S., Srinivasan, A., Reno, J. M. and Morgan, A. C., Jr. "Rhenium Labeling of Antibodies for Radioimmunotherapy," *J. Nucl. Med.* 28, 465 (1987).

Vanderheyden, J. -L., Rao, T. N., Kasina, S., Wester, D., Su, F.-M. and Fritzberg, A. R. "Structural and Biological Equivalence of Technetium and Rhenium Diamide Dithiolate Complexes: Application to Antibody Labeling," Fourth International Symposium on Technetium in Chemistry and Nuclear Medicine, Bressanone, Italy, September 12-14, 1994; SG Editorial, Padova, pp. 623-629 (1995).

Venkatesan, P. P., Shortkroff, S., Zalustsky, M. R. and Sledge, C. B. "Rhenium Heptasulfide: a Potential Carrier System for Radiation Synovectomy," *Nucl. Med., Biol.* 17, 357 (1990).

Wang, S.-J., Lin, W.-Y., Hsieh, B.-T., Ting, G. and Knapp, Jr., F. F. "Rhenium-188 Sulfur Colloid as a Radiation Synovectomy Agent," *Eur. J. Nucl. Med.*, 22, 505-507 (1995) (*Abstract*).

Wang, S. J., Lin, W. Y., Hsieh, B. T., Tsai, Z. T., Ting, G., and Knapp, Jr., F. F. "Studies On Re-188 Sulfur Colloid for Use as a Radiation Synovectomy Agent," *Eur. J. Nucl. Med.*, 22, 898 (1995).

Zamora, P. O., Guhlke, S., Bender, H., Diekman, D., Rhodes, Biersack, H. J. and Knapp, Jr., F. F. "Radiotherapy With Re-188-RC-160, A Directly-Labeled Somatostatin Analog in Athymic Mice With PC-3 Tumors (Human Prostate Carcinoma)," 42nd Annual Meeting of The Society of Nuclear Medicine, Minneapolis, MN, June 12-15, 1995; *J. Nucl. Med.*, 36, p. 42, (1995) (*Abstract*).

Zamora, P. O., Bender, H., Knapp, Jr., F. F. and Biersack, H.-J. "Interim Report on Intrathoracic Radiotherapy of Human Small-Cell Carcinoma in Nude Mice with Re-188-RC-160," *Fifth Mediterranean Symposium of Nuclear Medicine and Radiopharmaceuticals*, Athens, Greece, May 23-28, 1995, Mediterrean Pub., Athens, pp. 199-208, ISBN-960-85227-4-9 (1995).